

**Eliminating Preventable Maternal and
Neonatal Morbidity and Mortality:
Critical Components in Building Capacity**



The 1000+ OBGYN Project
Accra, Ghana - February 12-15, 2014

Edited by

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Maternal mortality is people. It is women, women who have names, women who have faces, and we have seen these faces in the throes of agony, distress and despair. They are faces that continue to live in your memory and haunt your dreams. And this is not simply because these are women who die in the prime of their lives, at a time of great expectation and joy. And it is not simply because a maternal death is one of the most terrible ways to die... It is because in almost each and every case, in retrospect, it is an event that could have been prevented.

Dr. Mahmoud Fathalla
Chair, WHO Advisory Committee on Health Research
World Health Day, April 7, 1998

The Challenge: Lack of Access to Critical OBGYN Care

A woman in Sub-Saharan Africa is almost 100 times more likely to die from pregnancy or childbirth-related complications than a woman in a developed country; a 1 in 39 lifetime risk compared to 1 in 3,800. While poverty, AIDS, Ebola, malaria, and violence in Africa have rightly captured the world's attention, the lack of access to critical obstetric care has quietly devastated Sub-Saharan communities in a direct and personal way. These deaths, as well as early neonatal deaths and complications such as fistula, are almost all preventable with skilled obstetric care.

Introduction

At the XX World Congress of the International Federation of Gynecology and Obstetrics (FIGO) held in Rome, 7 – 12 October 2012, a satellite meeting was hosted by the University of Michigan Department of Obstetrics and Gynecology Global Initiatives Program involving a group of OBGYNs from around the world to share ideas and expertise towards reducing the unacceptably high maternal mortality and morbidity that plague sub-Saharan African (SSA) countries. This maiden meeting noted that reducing maternal mortality and morbidity and associated perinatal mortality and morbidity to the barest minimum is dependent on, among other interventions, having a team of highly trained care providers and leaders to prevent and manage the most severe obstetric complications which underlie these deaths. The deliberations therefore centered on how to increase obstetric and women's health capacity in SSA through in-country training, learning from the Ghana success story of improving obstetric capacity using in-country training and academic and professional partnerships.

These ideas unanimously gave birth to the 1000+ OBGYN PROJECT AND CONSORTIUM which seeks to train over 1,000 additional OBGYNs in SSA countries in the next decade. The proceedings of the Rome meeting are published in the book, "Building Academic Partnerships to Reduce Maternal Morbidity and Mortality: A Call to Action and Way Forward" 2014; ISBN 987-1-60785-322-0; also available online at <http://open.umich.edu/education/med/resources/maternal-morbidity-mortality/2013>.

The book you have in your hand today contains the deliberations of a second meeting - the Accra meeting - which was a direct sequel to the Rome meeting. The Accra meeting was held in Accra, Ghana on 12 -14 February 2014 at the premises of the Ghana College of Physicians and Surgeons. There were about 120 participants from around the globe made up of OBGYNs from academic departments in fourteen SSA countries and their colleagues from eighteen existing and emerging partner academic departments from North America and Europe, representatives from the Ministries of Health and Education from the SSA countries, professional societies (ACOG, RCOG, FIGO, AFOG), clinical and educational organizations, and funding organizations.

Deliberations at this meeting were based on the "Call to Action and Way Forward" document. Enthusiasm for building capacity for OBGYN in SSA was renewed among participants and the critical components needed

for a comprehensive OBGYN residency training in SSA as well as country plans were discussed.

From the African participants' perspective, the Accra meeting affirms the significance, benefits, lessons and numerous ripple effects of a SSA in-country OBGYN training. Our new thinking includes: The firm realization that it can be done; the availability of the trainees to provide service whilst in training; the use of outreach level facilities in the districts, sub-districts and community which will expose trainees first hand to clients and their culture whilst also transferring skills, training protocols and guidelines to staff at these levels in support of equity in maternal health care; effective collaboration among state and para-state agencies such as universities, Ministries of Health and Education and many more to provide situationally appropriate high impact interventions for obstetric capacity and women's health; the possibility of training programs in individual countries using sub-regional accreditation and certification bodies.

The WHO post-2015 maternal health agenda is to end preventable maternal mortality (EPMM) by the year 2030. The expectation is to accomplish an average global target of maternal mortality ratio (MMR) of less than 70/100,000 live births by 2030, and ensure that no country will have a MMR greater than 140/100,000 live births (a number that is twice the global target) by 2030. This is a critical challenge for SSA which bears the world's greatest burden of maternal deaths.

The 1000+ OBGYN Project envisages that as we embark on our specific activities and next steps including the formation of a consortium of African academic OBGYN departments, American/European academic OBGYN departments (to support the former) and that of professional societies and funding organizations we will have started the march towards the WHO post-2015 maternal health agenda. We need the support and commitment of all maternal and perinatal health stakeholders, including you!

Kwabena Antwi Danso
Professor of Obstetrics and Gynaecology, KNUST
Consultant Obstetrician and Gynaecologist, KATH
Former Dean, KNUST School of Medical Sciences, Kumasi.

Preface

The WHO has called upon the global health community to “End Preventable Maternal Mortality by 2030”. This book is the 2nd in a series that highlights issues and proposes solutions to maternal mortality by ending the dearth of expert capacity in Obstetrics and Gynecology (OBGYN) for both clinical care and national leadership in Sub-Saharan Africa. Ending preventable maternal and early neonatal mortality will require this critical yet undeveloped component of a comprehensive global public health response.

This volume follows the first, entitled *Building Academic Partnerships to Reduce Maternal Morbidity and Mortality: A Call to Action and Way Forward*, which identified the critical components for capacity building in expert women’s health care. Each chapter of this current edition is organized to address these critical components from multiple perspectives including African obstetrician/gynecologists, Ministries of Health and Education, American/European obstetrician/gynecologists and professional organizations.

Within the pages of this book, readers will encounter the tremendous passion African OBGYNs have for expanding their expertise to deal with the tragedies that befall women on a daily basis. The reader will hear from global OBGYN leaders who represent established university-based OBGYN programs, global and national professional societies, and international clinical organizations. The entire specialty of OBGYN is poised to mobilize the educational resources, experience and expertise to support African OBGYNs in their re-invention of Obstetrics and Gynecology in the African context, for the African continent. I encourage you to take the time to read and absorb the transcribed words from the world’s experts in Global Obstetrics and Gynecology. Their messages cannot be transmitted in sound bites, extracted phrases or bullet points. A complete reading of this book will leave the reader with a deep understanding of the issues and solutions.

The deficit of expert obstetric and gynecologic care in Sub-Saharan Africa leads to the silent suffering of millions of women and families due to unnecessary mortality and debilitating morbidity to women and girls of all ages. Pregnancy and its consequences have significant effects on women, but a life cycle approach to care tells us that women and younger girls need expert and focused care throughout their lifetime. Adolescent girls may experience debilitating menstrual problems; young women require choices

in family planning, STD surveillance and cervical cancer screenings. Women of reproductive age need ectopic pregnancy surveillance, and miscarriage/abortion care. They require high quality prenatal care to detect and act upon pregnancy complications and they deserve safe labor and delivery with the expectation of bearing a live-born infant. Obstetric fistulas when *not* prevented, require expert surgical care and follow up for lasting repair. As women age, menopausal issues, pelvic organ prolapse and urinary incontinence as well as a significant morbidity and mortality from preventable or treatable gynecologic cancers again require expert gynecologic care to improve the quality and longevity of life for the woman and her family.

In 2015, we are rightly focused on maternal, perinatal and early neonatal mortality. This urgent crisis must continue to be aggressively addressed, but a long-term view would demand that targeted interventions must not occur in a vacuum. The same specialists who provide critical and lifesaving obstetric care are the same ones who can diagnose fetal problems, diagnosis and treat ectopic pregnancy both medically and surgically, and treat the myriad medical and surgical issues that face women throughout their lifetime. In essence, they provide the complex, evidence-based interventions that women in most parts of the world enjoy. Current attempts to replace this expert and comprehensive clinical capacity with health workers trained to perform specific tasks has gained favor, and fills an urgent need. But when done without also creating the cadre and institutions for supervision, long-term prospects for effectiveness are poor.

The rich text presented herein will not only tell the story, but will also provide the concrete steps needed replicate the successful Ghana experience – sustainably - in other African countries. The 1000+ OBGYN Project (www.1000obgyns.org) has brought together a vast array of educational resources and a network of university programs, expert clinical organizations and professional societies to implement this collective wisdom. The group is poised for action and is currently raising funds to provide the substantial investments from both national and global funders to jumpstart what will certainly be a critical component in the path to end unexpected stillbirths, and end preventable maternal and neonatal mortality by 2030. We welcome your interest and participation.

Frank W. J. Anderson, MD, MPH
Associate Professor of Obstetrics and Gynecology
Professor of Health Behavior and Health Education
University of Michigan, Ann Arbor, MI, USA

Foreword

This book, “*Eliminating Preventable Maternal and Neonatal Morbidity and Mortality: Critical Components in Building Capacity*,” describes an idea whose time has come. For almost two decades Dr. Frank Anderson has worked to describe a successful model of capacity building in Ghana where, following initial funding from the Carnegie Corporation Postgraduate Training in Obstetrics and Gynecology, training and certification have been sustained by local institutions, including the government (MOH), the teaching hospitals (AMC’s), and the Ghana College of Physicians and Surgeons, to the point of where over 140 obstetrician/gynecologists have now been trained and are practicing in-country. This has inspired others to train nurse midwives, emergency medicine physicians, surgeons, and many other specialists and subspecialists including obstetrician/gynecologist subspecialists in family planning and reproductive health, gynecologic oncology, maternal fetal medicine, and urogynecology. Ethiopia - specifically St. Paul’s Hospital Millennium Medical College - has reproduced this successful model, trained many specialists and begun many advanced technological medical programs with transplant, for example, to begin shortly.

Dr. Anderson has carefully documented the reasons for this capacity building success (Anderson FWJ, Johnson TRB. *Capacity building in Obstetrics and Gynaecology through academic partnerships to improve global women’s health beyond 2015*, BJOG 2015;122:170–173) and, most recently, demonstrated the significant public health benefit of such training of specialists with a true trickledown effect on other health care workers, institutions and communities. (Anderson FW, Obed SA, Boothman EL, Opare-Ado H: *The public health impact of training physicians to become obstetricians and gynecologists in Ghana*, Am J Public Health 104(SUPPL. 1): S159-S165, 2014)

With these successful models in Ghana and Ethiopia and with demonstrated pathways to success as well as a model “Charter for Collaboration” (Anderson F, Donkor P, de Vries R, Appiah-Denkyira E, Dakpallah GF, Rominski S, Hassinger J, Lou A, Kwansah J, Moyer C, Rana GK, Lawson A, Ayettey S: *Creating a charter of collaboration for international university partnerships: the Elmina Declaration for Human Resources for Health*. Academic Medicine : Journal of the Association of American Medical Colleges 89(8): 1125-32, 2014), it is right to now move forward with the training of obstetricians/gynecologists in Sub-Saharan Africa to have a major impact on reducing maternal and early neonatal morbidity and mortality.

Political will, funding, coordination, and development of African OBGYN professional networks are the critical next steps. Existing and new obstetrics and gynecology departments in Sub-Saharan Africa can be further developed in conjunction with global university partners from both the global South and from high-income countries and the large network established through the 1000+ OBGYN project so that the dream and the promise of the Ghana Program can spread across the continent. Academic partnerships, political and economic stability, and incorruptible, inspiring and transformational leadership can help achieve our goal of human and reproductive rights for women, children and all people.

Timothy R. B. Johnson, AB, AM, MD, ScD, DPS, FACOG, FWACS,
FAIUM, FRCOG, FICS, FGCS
Arthur F Thurnau Professor
Bates Professor of the Diseases of Women & Children and Chair,
Obstetrics and Gynecology
Professor, Women's Studies
Research Professor, Center for Human Growth and Development
Faculty Associate, GLOBAL REACH
University of Michigan, Ann Arbor

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Letter Of Invitation To Participate

October 28, 2013

Dear Prospective Attendee,

We would like to formally invite you as a participant to the upcoming meeting “Building Academic Partnerships to train 1000+ OBGYNs in sub-Saharan Africa”. The meeting will be held February 12-14, 2014 at the Ghana College of Physicians and Surgeons building in Accra, Ghana. A half day educational seminar will be available on Saturday February 15th, if you would like to stay.

This meeting is being hosted by the University of Michigan Department of OBGYN Global Initiatives and is generously funded by both the Bill and Melinda Gates Foundation and the Flora Family Foundation.

The core participants of the meeting have been identified and 14 SSA country teams have been formed. Each team includes a US academic OBGYN representative, an African academic OBGYN colleague, a Ministry of Health representative, and a Ministry of Education representative. We are asking that you and your African OBGYN colleagues and ministry representatives send contact information.

This convening has generated a lot of interest among professional organizations such as ACOG, FIGO, APGO, and RCOG, and we expect representation from funding organizations as well. Other interested OBGYNs have been invited to be participants and observers. We have a limit of 120 participants; therefore once we get confirmations, there may be space for additional participants. Please feel free to contact us with the names of interested individuals so that we may add them to the waiting list and accommodate them as space becomes available.

The purpose of this meeting is to bring together OBGYNs from academic institutions in both high and low resource countries in sub-Saharan Africa (SSA), along with professional support organizations, policy makers, and funders to discuss ways to increase obstetric capacity in SSA. We will use the “Call to Action/Way Forward” document created at the FIGO meeting in November 2012 as a guide.

We will discuss ways of creating or improving mutually beneficial academic partnerships to increase post graduate training in OBGYN. The overall

goal is to reduce maternal and neonatal morbidity, mortality, and obstetric fistula in SSA.

Outcomes of the meeting include:

1. Finalizing country plans for improving OBGYN training;
2. The finalization of a Consortium of African Academic OBGYNs;
3. Finalization of a Consortium of North American/European OBGYN departments;
4. Finalization of a Consortium of organizations to support OBGYN training, certification, research, and service.

There are some tasks that need to be completed prior to the meeting including developing the agenda and completing a needs assessment and country interest forms. These will be discussed in the upcoming webinar. Please see the registration information below for more details.

Please contact Madeline Taskier, our meeting manager, with the information regarding your participation.

Email: mtaskier@med.umich.edu
Phone: +1.734.232.0268

We look forward to hearing from you soon and hope to see you at the meeting.

Best,

A handwritten signature in black ink, appearing to read "Frank J. Anderson". The signature is fluid and cursive, with a large initial "F" and "A".

Frank Anderson, MD, MPH
Director of Global Initiatives and Associate Professor of OB/GYN
University of Michigan

Conference Welcome Letter

February 4, 2014

Dear Colleagues,

We are happy to welcome you as a participant of the 1000+ OBGYN meeting to be held in Accra, Ghana on Feb 12-14th at the Ghana College of Physicians and Surgeons. We are looking forward to meeting you all individually and introducing you to each other whilst we create concrete plans to accomplish the goal of training 1000+ new (additional) OBGYNs in sub-Saharan Africa (SSA) within the next 10 years.

Only OBGYNs can train physicians to become OBGYNs, and every SSA country should have center(s) of excellence where the highest quality obstetric care and training occur and a sustained university-based program that provides a source of women's health education, expertise for country-wide training of midwives and health care workers, practice and protocol standards, policy development, research and advocacy. We have heard this from the Call to Action/Way Forward generated at the FIGO meeting in 2012 and now we embark on this journey.

The interest and enthusiasm for this convening is great. By coming together in this way, we have a unique opportunity to impact maternal and neonatal morbidity and mortality by closing the final gap in women's health care capacity- the management of the severe obstetric complications recognized by midwives and health workers.

We would sincerely like to thank the Flora Family Foundation and the Bill and Melinda Gates Foundation for making this meeting possible and thank you for your efforts and your organization's support for bringing you here.

We have finalized the attendance list and we expect approximately 120 people from around the globe to be attending. Participants include obstetricians/gynecologists from university based programs in SSA, North America and Europe, as well as representatives from the Ministries of Health and Education, Professional Societies (ACOG, RCOG, FIGO, AFOG and others), professional clinical and educational organizations, and funding organizations.

The major focus of this meeting is to support the universities and health systems of SSA countries that are committed to - as a part of maternal

mortality reduction activities - the creation of the university-based capacity to train physicians to become obstetricians/gynecologist and to create ways to support and coordinate these efforts and measure their effects.

At this time, there are 17 African – American university partnerships, representing 14 SSA countries that will make up the core of the meeting. A major goal of the meeting is for each of these partnerships to create a written document detailing the plans in the major areas identified by the Call to Action/Way forward created during the FIGO meeting in Rome, 2013. We encourage you to read the proceedings from that meeting *cover to cover* – entitled “Building Academic Partnerships to Reduce Maternal Morbidity and Mortality” – which has been electronically provided, available on the Dropbox folder, and will be available in hard copy at the meeting.

Our meeting will be organized as a series of plenary sessions with brief presentations based on submitted abstracts and noted experts followed by open discussion from all participants. The preliminary agenda is provided in this email. These plenaries will be followed by group work time where each university partnership will work with their academic and ministry delegates to create written plans for each area of work. At the end of the meeting, each partnership will have a comprehensive document from which to proceed. We would ask each partnership to decide what parts of the plan can begin with current resources, and what parts require further funding.

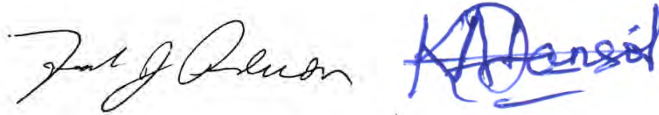
Each partnership will be invited to submit their plans to the 1000+ OBGYN project as we look for support. We will combine all proposals into a larger guiding document that will be a master blueprint for creating university based post-graduate training programs. These blueprints will be useful for all the partnerships in addition to future OBGYN departmental partnerships, other interested medical specialties, and other interested academic partnerships.

The core of development lies within the partnerships that are and will be established between university-based OBGYN programs. The second layer of development arises through the collective efforts of professional associations, societies and clinical support organizations. These institutions can provide the additional inputs necessary to create robust and sustained SSA OBGYN training programs that provide high quality obstetrics and gynecology care, national clinical and programmatic leadership, contribution of research findings to the global community, and advocacy for women’s health and the reduction of maternal and neonatal morbidity.

We would like to continue the 1000+ OBGYN project to coordinate funding and technical support that would bring together expert organizations to create a common curriculum, monitoring and evaluation systems, and faculty development programs for the partnerships creating a larger community of OBGYNs doing the same work and measuring the same outcomes over the next 10 years.

We sincerely look forward to having you in Accra and to take part in this exciting initiative.

Sincerely,

The image shows two handwritten signatures in blue ink. The signature on the left is 'Frank W.J. Anderson' and the signature on the right is 'Kwabena A. Danso'. Both signatures are written in a cursive, flowing style.

Frank W.J. Anderson & Kwabena A. Danso
1000+ OBGYN Meeting Co-Chairs

Acknowledgments

Sincere thanks to The Flora Family Foundation, the Bill and Melinda Gates Foundation, the World Bank and the University of Michigan African Studies Center for providing the financial support for carrying out this important work. The University of Michigan Department of Obstetrics and Gynecology Chair, Timothy R. B. Johnson and faculty members have provided unwavering support to advance maternal mortality reduction throughout the world, and this work would not have been possible without their collective contributions. Gurpreet Kaur Rana provided the impetus to turn these proceedings into a book. Madeline Taskier provided her expert skills in organizing the meeting logistics and assisting in the development of the content for the meeting. In Ghana, Andrew Boakye and Kofi Gyan provided on-the-ground logistics and cultural support without which this meeting could not have occurred. Gaurang Garg transcribed the talks and, along with Kophi Sefa, and Alex O'campo, provided spur of the moment problem solving during the meeting. Alyssa Mouton helped assemble the materials for this book. And thanks to Jasna Markovac and Karen Kost, Learning Design & Publishing, Medical School Information Services, University of Michigan, who were instrumental in preparing this volume for publication. Special thanks to Maureen Martin for the ongoing inspiration and assistance. A final thanks to all the participants for coming together and sharing their passions and creating plans to end preventable maternal mortality.

Frank W. J. Anderson, MD, MPH

Conference Agenda

Wednesday, February 12, 2014

6:15-7:15am *Breakfast at Hotel Novotel*

7:15-7:30am *Buses to Ghana College*

8:00-8:30am *Coffee and Registration*

8:30-9:15am

Introductions and Welcome

- Frank Anderson and Kwabena Danso, conference co-chairs
- Introduction from Ghana College Rector, Dr. David Ofori-Adjei
- Welcome from Tim Johnson, Chair OBGYN Department, University of Michigan
- Welcome from J.B. Wilson
- Welcome from RCOG & ACOG Representatives
- Welcome by Kate Somers, Gates Foundation

9:15-10:30am

Country Introductions, Overview of Existing Program and Goals for the Meeting

- Introduction of the Meeting Framework – Frank Anderson
- Presentation of Needs Assessment Results – Madeline Taskier and Gaurang Garg
- Introduction of World Bank Grant and Online Curriculum Mapping – Diana Curran
- Introduction of Meeting Goals by Date – Frank Anderson
- Introduction of Proposal Worksheet/Template – Frank Anderson
- Introduction to Partnership Development - Ray de Vries

10:30-10:45am *Short Break*

10:45-12:00pm

PANEL: *Partnership Development Process*

Speakers:

- Frank Anderson, University of Michigan
- Ray de Vries, University of Michigan
- Kwabena Danso, KNUST, Ghana
- Samuel Obed, Korle Bu, Ghana

Audience Based Discussion

Critical Components in Building Capacity

12:00-1:00pm *Buffet Lunch*

1:00-2:45pm

PANEL: *Models for Infrastructure and Program Design*

Speakers:

- Senait Fisseha, University of Michigan (SPHMMC), Ethiopia
- Josephat Byamushiga/Meg Autry, UCSF-Makerere, Uganda
- Lise Rehwaldt/John Mulbah, Mt. Sinai-Liberian College of Physicians & Surgeons, Liberia
- Ron Mataya/Grace Chiudzu/Jeff Wilkinson, UNC-University of Malawi, Malawi
- Ray de Vries Comments

Audience Q&A

2:45-3:00pm *Short Break*

3:00-6:00pm

BREAKOUT CONCURRENT SESSIONS

Country Teams Working on Proposals -

(Program Design/Physical Infrastructure/Partnership)

6:00-8:30pm

Dinner for Meeting Participants with Open Mic

Thursday, February 13, 2014

6:15-7:15am *Breakfast at Hotel Novotel*

7:15 and 7:30am *Buses to Ghana College*

8:00-8:30am *Coffee*

8:30-9:00am

Welcome and Recap of Wednesday, Re-establish Goals

9:00-10:30am

PANEL: *Curriculum Development/ Clinical Teaching/ Assessment for OBGYN Residency*

- Hillary Mabeya/Lee Learman, Moi University-Indiana University, Kenya
- Joyce Browne/Renee Filius, Elevate Health, The Netherlands
- Irwin Merkatz, Albert Einstein, USA/Rwanda

Eliminating Preventable Maternal and Neonatal Morbidity and Mortality

- Karen Adams/Diana Curran/Balkachew Nigatu, OHSU/UM/SPHMMC, US & Ethiopia
 - Blair Wylie/Joseph Ngonzi, Mbarara- Harvard/MGH, Uganda
- Audience Q&A

10:30-10:45 *Short Break*

10:45am-12:30pm
BREAKOUT CONCURRENT SESSION
Country teams work on proposals

12:30-1:30pm *Buffet Lunch*

1:30-2:30pm
PANEL: *Deployment of OBGYNs and Working with Ministry, Working with Communities and Other Healthcare Partners*

Speakers:

- Gloria Asare & Ebenezer Appiah-Denkyira, Ghana Health Service, Ghana
- Stephen Kennedy/Bernice Dahn/John Mulbah, Liberia
- Yirgu Gebrehiwot, African Federation of OBGYN & Black Lion, Ethiopia

2:30-3:30

PANEL: *Research, Monitoring, Evaluation and Quality Assessments*

Speakers:

- Blair Wylie/Jospeh Ngonzi, Mbarara-Harvard/MGH, Uganda
- Human Resources for Health Team, Rwanda
- Frank Anderson, University of Michigan

3:30-6:00pm

BREAKOUT CONCURRENT SESSION

Country teams work on proposals
Time for Side meeting and collaborative work

6:00-9:00pm *Dinner with Ghana Society of OBGYN*

Theme: *Partnering with Professional Societies and Support Organizations*

Friday February 14, 2014

6:15-7:15am *Breakfast at Hotel Novotel*

7:15 and 7:30am *Buses to Ghana College*

8:00am *Coffee*

8:00-9:30am

PANEL: Certification and Accreditation of OBGYNs

Speakers:

- Vanessa Dalton/Emmanuel Morhe, University of Michigan/University of Ghana, Ghana
- Dr. Kobina Nkyekyer, Korle Bu Teaching Hospital, Ghana
- TBD

9:30-10:30am

BREAKOUT CONCURRENT SESSION

Academic Teams finalizing plans

10:30-11:00am *Coffee Break*

11:00-1:00pm

BREAKOUT SESSION: Thematic Group Comparison of Plans

- Session 1) African OBGYNs
- Session 2) American OBGYNs
- Session 3) Professional Societies

1:00-2:00pm *Buffet Lunch*

2:00-4:00pm

Group Reporting on Country Proposals and Next Steps

4:00-5:00pm

Final Thoughts from Teams (open mic)

- Cameroon, Ghana, Liberia, Senegal, the Gambia, Uganda, Kenya, Rwanda, Tanzania, Zambia, Malawi, Ethiopia, Botswana, Democratic Republic of Congo, Sierra Leone

5:00pm *Closing*

Saturday February 15, 2014

8:30am *Independent travel to Ghana College*

9:00-1:00pm
Elevate Workshop on OBGYN Curriculum
Hypertensive Disorders Pilot Course

Introductions and Welcome

Opening Remarks – Frank Anderson and Kwabena Danso

Frank Anderson: Good morning! I hope you can all hear me. As I stand here words fall short as I realize the group of people that are here today and the reason that we're here. And the reason that we are here today is because of maternal mortality. We can be here and be happy and be visiting, but if it weren't because maternal mortality is still a major problem in the world we wouldn't be sitting here today. To start with a little bit of a somber note, I want to quote Dr. Mahmoud Fathallah from World Health Day in 1998, when he said,

“For us obstetricians and gynecologists who serve the health needs of women in underserved regions. Maternal mortality is not statistics, it is not numbers, it is not rates or ratios. Maternal Mortality is people. It is women, women who have names, women who have faces. And we have seen these faces in throes of agony, distress, and despair. They are faces that continue to live in your memory and haunt your dreams. And this is not simply because these are women who die in the prime of their lives at a time of great expectation and joy, and it is not simply because a maternal death is one of the most terrible ways to die, be it bleeding to death, the pangs of obstructed labor, or the agony of peripheral sepsis. It is because in almost each and every case, in retrospect, it is an event that could have been prevented. It is an event that should never have been allowed to happen. It is an event that bears and should bear so heavily on our collective conscience.”

So that is what brings us together today. The people who have gathered in this room today have a unique opportunity in history to make a major impact on this issue in sub-Saharan Africa. This is the American Board of Obstetricians and Gynecologists definition of an OBGYN and I thought it might be interesting to bring that issue up today:

"Obstetrician and gynecologists are physicians who by virtue of satisfactory completion of an accredited program of graduate medical education possess special knowledge, skills, and professional capabilities in medical and surgical care of women related to pregnancy

and disorders of the female reproductive system. Obstetricians and gynecologists provide primary and preventive care for women, and service as consultants to other healthcare professionals.”

Only obstetricians can train other physicians to become obstetricians and gynecologists. And I believe that every sub-Saharan African country should have a center of excellence where obstetricians and gynecologists are trained in a sustained university-based program that provides a source of women's health education, expertise for country-wide training of midwives, healthcare workers, practice, protocol standards, policy developments, research and advocacy. We have heard this from the *Call to Action and Way Forward* from our meeting in Rome, and now we embark on this journey. So I would like to welcome you all to Accra from me personally, and I am so excited that you are all here, and let's get to work!

But, before we do that, there are other introductions to make and other people to meet so we all know who is together with us. I would next like to introduce my conference Co-Chair, Dr. Kwabena Danso. Dr. Danso is an obstetrician gynecologist in Ghana. He was part of the original Carnegie training program with the Royal College of OBGYN and the American College of OBGYN; I'm sure you have read about this in your book. Dr. Danso moved on to be the chair of the OBGYN department at Komfo Anokye Teaching Hospital and then became the dean of the medical school at KNUST in Kumasi. Now he is retired, yet still working quite hard. So, Dr. Danso.

Kwabena Danso: Thank you, Frank, for the introduction and I would also welcome you to Ghana and to this meeting. We are grateful to you for your time. Your presence shows your commitment to us in helping to oppress the cost of maternal mortality, which currently still remains in the three-digit range in most of sub-Saharan Africa. We hope that collectively we can bring it down to the double-digit range and finally to the single-digit range.

I would like to introduce some distinguished persons who are going to give us also some short introductions. First, Professor David Ofori-Adjci. Professor Ofori-Adjci is a professor of medicine at the University of Ghana Medical School. He is also a professor of clinical pharmacology at the Center For Tropical Clinical Pharmacology at the University of Ghana. He is the former director of the Noguchi Memorial Institute of Tropical Medicine.

Prof. Ofori-Adjci will be speaking to us. Prof. Ofori-Adjci can you please ... Let's give him a round of applause.

The next person who will be giving us some introduction is Dr. John Sciarra. I believe most of us here would have said that he needs no introduction because he is a well-known figure. He is the former editor-in-chief of the FIGO Journal. He is the former chairman of Northwestern University OBGYN department for well over 25 years, I guess. Right? And he is Emeritus Professor of Northwestern University at the moment. Professor John Sciarra.

We also have Dr. J.B. Wilson, who will soon join us. Dr. J.B. Wilson is the former chair of the Department of OBGYN at the University of Ghana Medical School, Korle Bu Teaching Hospital. He is the former chairman of the Faculty of Obstetricians and Gynecologists of the West African College of Surgeons. At the moment he is working in several ways with maternal mortality in Ghana and with some international organizations. Dr. Wilson is one of the pioneer people who instituted the Ghana Program for In-Country Training of Obstetricians and Gynecologists. And, of course, Dr. Sciarra was one of them and we are delighted to also have him speak to us this morning at the introductory phase.

I cannot end without talking about a few participants. What I'll do will be to call the partnership and when the partnership is mentioned, can we shortly rise up so we know that you are present? By no order of importance:

- Botswana University – University of Pennsylvania
- University of Buea, Cameroon – University of Arizona
- Universite Evangelique d'Afrique – Panzi Hospital, Democratic Republic of Congo
- Hawassa College of Medicine, Ethiopia – University of Wisconsin
- Mekelle University, Ethiopia – Northwestern University
- St. Paul Millenium Hospital, Ethiopia – University of Michigan
- University of Gondar, College of Health Sciences, Ethiopia – Oregon Health & Science University
- University of The Gambia, The Gambia – Drexel University
- Komfo Anokye Teaching Hospital (KNUST), Ghana – The University of Michigan
- The Quarshie Memorial Hospital, GCPS, Ghana – Albert Einstein College of Medicine
- University of Ghana, Korle Bu Teaching Hospital, Ghana -- University of Michigan
- Moi University School of Medicine, Kenya – Indiana University

Critical Components in Building Capacity

- Liberia College of Physician and Surgeons, Liberia – Mt. Sinai
- University of Malawi, Malawi – University of North Carolina
- Central Hospitale De-Kigali, Rwanda
- Makerere University, Uganda – University of California, San Francisco
- Mabara University, Uganda – Harvard University
- University of Zambia, Zambia – University of North Carolina

Ladies and Gentlemen, you are welcome.

Frank Anderson: Just while we are standing, I did want to mention one other group of people that are here who you have heard us talking about. That is Elevate from the University of Utrecht in the Netherlands. We will have more about them but I would like for them to stand up and be recognized as well.

And also for the introductory panel, we have other representatives as well. It is my honor to introduce Dr. Barbara Levy from the American College of Obstetricians and Gynecologists, and she will be giving us a welcome. We are also very honored to have Dr. Hamid Rashwan here from the International Federation of Obstetricians and Gynecologists, who will also give us a welcome. And then Dr. Yirgu, who is the first president of the African Federation of Obstetricians and Gynecologists, who is here with us today. And then Kate Somers from the Gates Foundation, and she will be addressing the podium.

Kwabena Danso: At this point, I would like to call the Director of the Ghana College of Physicians and Surgeons, Professor David Ofori-Adjci to give us an introductory remark.

Welcome from Professor David Ofori-Adjci, Director of the Ghana College of Physicians and Surgeons

Good morning! I'm not an obstetrician gynecologist, but I've had four pregnancies, and therefore I qualify to be amongst you. Officially, I'm the landlord of this edifice, and I think it is very proper that I welcome you to the Ghana College of Physicians and Surgeons. We have been in existence for only 10 years, but I think that we have achieved a lot in that 10-year period. Before we came into existence, postgraduate medical training took place either outside of the country or within the West Africa Postgraduate Medical College System. And, I think it was within that system that the Carnegie Program took off from. In addition to that we also have had

associations with the University of Michigan, including the Emergency Medicine Program and also the Charter Program based on the Elmina declaration. I think you'll find that in your folders.

The College has a structure not unlike that of some of the other colleges that we have, like the Royal College. Although we are the College of Physicians and Surgeons, we actually have two divisions, the division of surgeons and the division of physicians. The current vice president of the division of surgeons is actually an obstetrician gynecologist, and it is his responsibility to deliver when we run into problems with a surgical affiliation. We run a two-tier training system and it is linked to career development within the Ghana Public Health System.

The first three years you do a membership program in any of the twelve faculties that we have, and when you are successful – we don't say successful – when you satisfy your examiners, you then are recognized for appointment as a specialist in your discipline by the Ghana Health Service. And then you take a year out to offer service to community and then come back to do a fellowship program, the length of which on the outreach is two years but may be longer, depending on the sub-specialty you are interested in. I also meant to add that once you are doing your membership program, you spend some time outside of the teaching hospital to gather experience in the district hospital.

So far since we started in 2003, we have enrolled 1018 residents into the program and we have introduced, if that is the correct word, 438 specialists in all. About a fifth of that number are actually obstetricians and gynecologists. Overall in our country, the penetration of specialists in the public health service, the Ghana College of Physicians and Surgeons have provided 33% of the specialists in the Christian Health Association Setting. And, using Komfo Anokye Teaching Hospital as a typical example, about 51% of the specialists working at the Komfo Anokye Teaching Hospital are actually products of this country.

We have also trained specialists from other African countries. We have a very good relationship with the Gambia, where we have trained many specialists, including specialists in obstetrics and gynecology. We also have residents from Sierra Leone and a few from Nigeria, occasionally, and a couple from Eritrea. And so the College is increasingly becoming a place for training people other than specialists, other than Ghanaians. We also work very closely with other English-speaking colleges in the West-African sub-region, particularly the West African Postgraduate Medical College

which includes the College of Physicians and College of Surgeons and also the Nigerian Medical Postgraduate College.

Interestingly, gradually, we are all precipitating towards a model quite like what Ghana runs. Now the West African program is offering a two-tier program, starting with the College of Physicians, but currently the College of Surgeons is also about to do it, and the Nigerian Postgraduate Medical College is also doing the same. Which means that the way we have conducted our postgraduate training program in Ghana has become attractive to other colleges in the sub-region. We have also had discussions with the newborn Liberian College of Physicians and Surgeons, and we have had some discussions that has shared some experience with them.

Essentially you will hear more about the training program throughout the course of this meeting, and I don't think that I will have to bore you with the details at this stage of the meeting. The important thing for me as a non-obstetrician gynecologist is to agree with the fact that maternal mortality should not be looked at in terms of numbers ratios and things ... there is a face to maternal mortality. And although your focus today and in the next two days is on maternal mortality pregnancy, I think we should take a bit of time and look at the product of pregnancy. There is no point in having a very successful pregnancy only to discover that the baby did not make it.

One of the biggest problems we have had in this country is that although we have achieved a reduction in infant mortality, there is a sizable proportion of perinatal deaths and also neonatal deaths. And I think in all that you discuss, you should have somewhere in a small space up there where you will also look at how the practice of obstetrics and gynecology, and particularly pain management of pregnancy, will affect outcomes of pregnancy so that we will have a more holistic approach. The other thing is that listening to the introduction, I realized that every African partner here has a North American collaboration. Within this collaboration, sometimes there is the tendency for of the wealthier of the two, "to be a major driving force." I will urge you to look at the local circumstances when designing some of these interventions, because they will finally determine whether what you want to do will be successful or not. And on these few words I would like to welcome you to again. Enjoy the college; enjoy Accra. It is hot. It is good for you, because it means that you don't have to worry about what is happening at the Eastern Sea Board for now. Don't watch too much television because you may find your house totally covered in white. (laughter) Thank you very much.

Danso: Thank you, we will now call Dr. Sciarra.

Welcome from Dr. John Sciarra, Professor Emeritus in Obstetrics and Gynecology, Northwestern University

Dr. Danso, ladies and gentlemen, thank you very much for inviting me for putting this meeting together. Dr. Tim Johnson - whose department was so instrumental in setting up this program - could not be here with us today and asked me to say a few words of welcome to you on his behalf. When I talked to Tim just before I left Chicago, I said, "What should I tell them?" He said, "Just tell them about what we did in Ghana 25 years ago and inspire them." So, that's what I'm going to try to do.

As the rector mentioned to you, there was no subspecialty of training in this country back about 50 years ago. So I'm going to take you back to the year 1960. In the decades between 1960 and 1980, many of the Ghanaian physicians were sent by the Ministry of Health to both the UK and the US for subspecialty training, particularly for our training in obstetrics and gynecology. During this 20-year period, 30 physicians were sent for training and by the end of the 1980s, guess how many came back?

Audience Member: One!

Jack Sciarra: Three. Three came back. So the situation in terms of subspecialty services in Ghana was really quite critical. As a matter of fact, there were more OBGYN physicians practicing in Queens, New York than in the whole country of Ghana at that time. There were two or three individuals – Tim Johnson was one, the late Tom Elkins was another – who called attention to this problem and were looking to raise funds to begin a training program here in Ghana for Ghanaian physicians. The Carnegie Corporation of New York at that time was quite interested in the situation of maternal mortality in West Africa and so, in conjunction with the Carnegie Corporation, a group of us put together a program. Carnegie was really quite wise in thinking ahead and said, "In order for this program to have real endorsement internationally, it should have the issue, it should have the partnership and support of the American College, and of the Royal College in London. And what we, Carnegie, want you people to do is to put together a program that combines the best of American training and the best of UK training into a new training program that is to be initiated in Ghana." That was in the year 1987.

It took two years to get things organized, and by 1989, we were prepared to begin. I happened to be chair of the International Committee of the

American College of the time, and there was a similar group in the UK; Professor John Lawson was the Vice President of International Affairs. So, a group of people from a UK in a group of people from the United States – and that included Tim Johnson and Tom Elkins – elected me to be head of the external advisory committee for this program, which lasted 10 years. The funding came from Carnegie; the initial grant was about \$7 million. By the end of the 10 years it was about \$10 million. And that did not include the contributions from the departments - the US and the UK departments that were involved. During the initial period of time, we set up a five-year training program here in two hospitals in Ghana. Part of it would be the traditional OBGYN training that you are familiar with, but in addition we incorporated some management experience, we incorporated some rural experience, and we incorporated electives in the UK and the US for short periods of time – 3 to 4 months.

And the five-year program was very successful. The certification was named the West African College of Surgeon certification and by the end of the ten-year period, we had trained 29 obstetricians and gynecologists and all but one, at that point, were practicing in Ghana. We had the support of the Ministry of Health from the very beginning. I think they were quite skeptical back in the early 90's, but ultimately they became very enthusiastic and took over the program. And it has continued. And as a rector pointed out to you now, there are about 150 OBGYN physicians who have been trained in Ghana and virtually all of them are practicing here in this country. So in a relatively short period of time of about 50 years it has been possible to change the delivery of healthcare services in this country in our field.

The original mission was not only to train OBGYN physicians that would practice in Ghana using local resources, but also to allow some of the new advancements in reproductive health to be introduced in this country. And, of course, the reduction of maternal mortality was the ultimate goal and it appears that this is happening.

Now, we had the financial support of Carnegie at the time, and that was very important, but there was also support from the departments involved because many, many of the faculty members from Michigan, from Northwestern, and from other schools spent considerable amounts of time here in Ghana in the early days of setting up the teaching program. Those departments were not compensated. We could do it in the 1990's, but I think it is harder to do today. We have to acknowledge the fact that the departments contributed a great deal in terms resources to the start of this program. And, of course, we had the support of the Ministry of Health.

The other thing that I think was very important was that we were always look at the big picture and were asking, “What was best for Ghana?” Not what was the best for the hospital or for the residents in training, but what was best for Ghana? We limited our approach to one country, to Ghana, and we tried very hard to have the faculty have an exchange program so that we had faculty from Ghana come to visit us at Michigan and Northwestern.

I remember that J.B. Wilson and the late J.O. Marty, when I invited them to Northwestern in what happened to be December, and they were sort of unprepared for the weather. Both of them said that is the coldest that they had ever been in their lives, but that was just Northwestern in December.

The important thing that I mentioned in the beginning was that this was a partnership between the Royal College and the American College and I think that the relationship was very important in developing a program that combines the best of the UK training in the best of the US training. I'd like to see the partnership continued. We are talking about partnerships and I think there are many things that the American College has to offer and many things that the Royal College has to offer.

The proposal of the Royal College last year that we should work together to help our African colleagues set up an African College of Obstetricians and Gynecologists is probably one of those ideas – an organization that could be responsible for setting up a unified African curriculum for endorsing and supporting programs of residency education, for examining residents on a yearly basis, for giving the final certification, and for allowing people to be fellows of an African College with similar credentials to fellows of the American College and fellows of the Royal College, etc. One idea that I think is a good idea was from, Alison Fiander, who is the chair of the Global Health Policy Committee for the Royal College, but could not be here today. I talked with her yesterday by telephone and said that I would try to present some of her thoughts, which I just did to you a moment ago.

So anyway, that's the story of what was happening here when we started the Carnegie program. I think all of us are very, very proud of the accomplishments and are particularly proud of the fact that the whole thing has been turned over to local leadership and is continuing and is a model for training and low resource countries. This is all published in a really good paper that we wrote in the *Grey Journal, American Journal of Obstetrics and Gynecology* in 2003, and it has been quoted and has been spread out over the world many times. So thank you very much for giving me some of your time to do this introduction I do look forward to the meeting.

Kwabena Danso: Thank you, Dr. Sciarra. At this juncture, I will call on Dr. J.B. Wilson; I see him at the end there. While he is coming, there is also the government of the Royal College of Obstetricians and Gynecologists and a representative of the Royal College is here. Professor Dr. Konje. Let's give him a hand.

Welcome from Dr. J.B. Wilson, former chair of the Department of OBGYN at the University of Ghana Medical School, Korle Bu Teaching Hospital, Ghana

Thank you very much. I'm sorry for coming in late because of unexpected traffic. I think a lot of the story Professor Sciarra has talked about, from my own point of view, this program came at a time when we had great difficulty getting a resident from the UK to continue their training. And there were people who had come to the point when they had to move out in order to get their certification from the Royal College. But the government has stopped this trade because many who were trained at the time did not return. So it was a very welcome relief when we discussed with Professor Tim Johnson why we are not training our people locally, and he offered that he will try with his friend, the late Tom Elkins to try to source funding to support the two departments so that they can train people.

Fortunately, after a lot of searching they got the Carnegie Corporation to take up the sponsorship, and the result is what we have today. We have been able to train lots of specialists. The two departments are virtually under teachers who have been trained in the program. Many of our hospitals have specialists who have been trained in the program. The Ghana College Program came out of the slivers of what we did during the Carnegie program. I am excited that we will be able – or hope that we will be able – to extend what has been done here to other countries in the sub-region, because maternal mortality is a major issue and, for us, the obstetrician is a leader to make a mark in reducing mortality. On my own behalf, I would like to welcome all of you to this meeting and wish you all happy discussions. Thank you very much.

Kwabena Danso: Thank you Dr. Wilson. At this time I want to call the representative from the Royal College of Obstetricians and Gynecologists of the UK to give us an intro.

Welcome from Dr. Konje, representative from the Royal College of Obstetricians and Gynecologists

Good morning, everybody. Thank you very much for asking me to make a statement. I'm from Cameroon by birth. I did my basic training in Nigeria and I have come to be an offshoot of the West African training program that Professor Sciarra and others initiated. I'm standing on behalf of the Royal College, so I'm wearing two hats - as an African and also as someone who is working in the UK. One of the things that strikes me as an individual and as a representative of the College is that when we encourage people to go overseas to train, we actually do not provide them with the resources to come back to their countries and work. So the training program that we have overseas is not fit for purpose and that is probably one of the reasons why the people who go overseas, like myself, do not come back to Africa.

The Royal College is very proud to have been involved in the initial program in Ghana, which is a success story, and the college is very proud of what it has done, in terms of supporting training and development in different parts of the world. However, what I see today and what is going to be achieved by this partnership that we are working on today is very different. One of the things that we would like to see as a college is a program that is offered at source where it will be very, very useful, but at the same time, have an expertise that comes from overseas, from the different institutions that are partnering with you. But to me, it is also about sustainability. Looking at the audience that we have here, we have politicians and clinicians, and I think that marriage is important for it to be successful. So I'm just going to say here that I'm really, really pleased to be here. The Royal College has a lot of expertise in terms of training both within sub-Saharan Africa and different parts of the world.

There are lots and lots of partners here but I'm going to say that please, please, please let's not just make this one meeting; it has to be demonstrated that to be successful, reducing maternal mortality will be the main aim but, as the rector said, reducing neonatal mortality should be the ultimate aim. We should reduce the death of mothers but we should also reduce the death of babies. I hope this is a very successful meeting and I wish all of us a fantastic deliberation. Thank you very much.

Frank Anderson: Thank you Dr. Konje. As our day evolves we will be hearing about the Ghana-Michigan program that started to train Ghanaians to be OBGYN's in this building of the Ghana College of Physicians and Surgeons. We have heard from the rector of the Ghana College, and we are

present in this building that represents the capacity of Ghanaians to train OBGYNs.

Now I would like to call Barbara Levy to the stand. Barbara Levy is Vice President of the American College of OBGYNs and is very involved in global programs. We would love to hear her comments and welcome.

Welcome from Dr. Barbara Levy, Vice President of the American College of Obstetrics and Gynecologists

Thanks, Frank. I want to keep this brief. You've heard a lot of history, but I'm here to talk to about the future. And that's how we're all going to work together: three groups, people forming a solid stool that is sustainable. And that means the universities both overseas and here working together, but it also means the Royal College, the American College, the SOGC, the Canadians, the Australians, FIGO, the WHO, and all of us coming together and harmonizing our recommendations so that we have a global sense for what we are trying to accomplish. The last thing we need to do – it's not the last thing but it is another big issue – for sustainability is association development. Once you have that root, that core of obstetrician gynecologists in a country, bringing those folks together as an association and using that association to do maintenance of education.

It is not okay, as we have learned in our country, just to train; but it is also about ongoing education, and how we sustain that. ACOG is here working with the Royal College, working with FIGO, working with the World Health Organization, trying to harmonize things so that the recommendations that we all hear are uniform, that we have a set of guidelines that are based on what you need at your local level. ACOG has 14 years of experience, as Jack Ludmir knows very well, working in Central and South America doing a similar kind of effort. It has been very successful. It has been a lot of hard work. I don't want to minimize how much effort it is on an individual country level to find the educational effort that needs to happen but also the in-service and the development of in-service testing and training, and then the credentialing, and all of these aspects working with the ministries of health to make sure that everyone is aligned.

I'm a consensus-builder; I am somebody that likes to bring everyone together. Look at what Frank has done bringing all of us together here. I am thrilled to be here. I am excited to help support whatever it is that we all decide we need, and I am very anxious for us to work at a grassroots level to establish what that is. Thank you very much.

Frank Anderson: Thanks, Barbara. Now we are going to take it to the international level. We are fortunate to have Hamid Rashwan here with us today, who is the Chief Executive of the International Federation of Obstetricians and Gynecologists. I would like to call him to give his comments.

Welcome from Dr. Hamid Rashwan, Chief Executive of the International Federation of Obstetricians and Gynecologists

Good morning colleagues, ladies, and gentlemen. It is indeed my great pleasure to be here and represent the International Federation of Obstetrics and Gynecology (FIGO), in this, which I consider a very important meeting. Of course, my thanks go to Frank Anderson and his capable team at the University of Michigan. We know that they have made a lot of effort to take this initiative forward and to bring it to this level. We do wish them all success with great support from us.

The mission statement of the International Federation of Gynecology and Obstetrics (FIGO) has two prongs: the first one is the promotion of global women's health and the second is upgrading the practice of obstetrics and gynecology. Both of these aims, as you can see, cannot be achieved without well-trained obstetricians and gynecologists. That is why the initiative, which we are discussing today and tomorrow, is very important and is a determining factor for our success, if we are to achieve our aims.

As you probably all know FIGO conducts its work globally through its 125-member associations. As an organization we do recognize the disparities that exist in the different countries within all the regions of FIGO, especially in the area of maternal and newborn mortality and morbidity.

We do recognize the big disparity between high-income and low-and-middle-income countries, and that is why FIGO considers the reduction of maternal and newborn mortality and morbidity as one of its priority areas that we have been working for the last decade. We also recognize the need for greater efforts and support in sub-Saharan Africa in order to expedite the improvement of maternal and newborn health indicators, which we all know are detrimental here. In this regard, addressing the shortage of human resources for maternal and newborn health should be a priority in the health policies of all our countries in this region. Obstetricians and gynecologists are instrumental in leading such policies forward.

The Society of Obstetrics and Gynecology in sub-Saharan Africa could and should play and be enabled to play an active role in the implementation of

this initiative as a professional body or bodies. Our experience in FIGO over the last five years was very enlightening. So, with a grant, which we are lucky to have from the Bill and Melinda Gates foundation, we worked with eight associations in low- and middle-resource countries – two in Asia and six in sub-Saharan Africa – where maternal mortality and neonatal mortality and morbidity were high. The aim, of course, was not to have a direct effect on maternal mortality, but the aim was to strengthen the Societies of Obstetrics and Gynecology in these countries so that they can play a pivotal role in improving the policies and improving the practice to promote maternal and newborn health. And I must tell you that after five years and after evaluating the project, these societies delivered and made a great impact on the conditions in the countries.

Improving policy and practice, which of course is what you are really trying to do in this initiative, does include improving and strengthening the situation with regard to human resources for maternal newborn health. This would be through the early stages of recruitment: you go to training, you go to certification, deployment in the different areas of the country that you want to succeed, retention – keeping them in place - and of course, continuing medical education.

I hope this initiative will take into consideration all these areas together because the issues cannot be just training and go, or retraining and go, or certification and go. It has to be the whole lot of recruitment, training, certification, and deployment in the areas. That's why it is important to include policymakers with you in these sort of meetings, because the policymakers need to be there to look into the other aspects which professionals cannot address or have not the ability to address.

The aim of this initiative, I think, should be of taking this to ownership in the country, rather than a project that finishes and goes. And, from our experiences before, unless there is ownership of the project within the country and in its institutions, including the government, it is very difficult to succeed or get sustainability of the project to the future.

I would like to compare from here the support of FIGO - the International Federation - to this initiative, and we do hope that our member associations in the different countries of sub-Saharan Africa are involved. They should become engaged fully in the implementation of this project. We wait to hear the results of the project and our support through these associations will continue. Thank you very much.

Frank Anderson: Our next introductory speaker is the first president of the African Federation of Obstetrics and Gynecology (AFOG). What we

are hearing today is about African institutions and universities solving these problems in Africa with inputs from people who have been on this road before. I have been really lucky to get to know Yirgu this year as the President of the African Federation of OBGYNs and working with our colleagues in Ethiopia. Thank you so much, Yirgu.

Welcome from Dr. Yirgu Gebrehiwat, President of the African Federation of Obstetrics and Gynecology

I thank you, Frank, for the nice introduction. Good morning, ladies and gentlemen. I'm here on behalf of the African Federation of Obstetrics and Gynecology. This is a very new organization that was established in October 2013 at the last FIGO meeting. Our first meeting was held in Addis in October. There were about 1,000 attendees, 807 of whom were from different countries. Sixty-seven countries participated in that meeting. I would say it was a very good start. The African Federation of Obstetrics and Gynecology aspires to collaborate with all stakeholders who strive to bring down maternal mortality rates in Africa.

As you know, of the three very important health indicators in the Millennium Development Goals, one of the most challenging MDG goals has been MDG 5. Unfortunately, Sub-Saharan Africa did not do well. When you look at the rate of reduction of maternal mortality between 1990 and 2010, the rate of reduction is about 1.6% per annum. We have to do better. It has to go as high as 5.5% per annum in order to meet the MDG. In addition, what kills the woman definitely kills the neonate and therefore both maternal mortality and neonatal mortality have not gone down the right way.

AFOG has about twenty-eight member constituents, which are societies of professionals in African countries. We have got twenty-eight countries from Africa and about eight from the Mediterranean. Unfortunately, what you see is that currently there are fifty-three countries and not all of them are on board with AFOG. The reason is that some of the countries do not have obstetricians and some of the countries have too few obstetricians - too few to form a society - so they are not well represented in the African Federation. We all know that many of the countries have resorted to task shifting and task sharing in order to improve access to maternal health services. We know quite well that in the short term task shifting and task sharing would be a way out, but in the long term we need to be able to create the necessary workforce of specialized physicians to be capable of providing quality services. In that respect, this initiative of training 1,000 or more obstetricians in the next ten years is quite a vital and important goal.

In this respect, as Professor Hamid has already stated, this has to go beyond a project. It has to be nationally owned. There has to be a mechanism to not only train people, but also to retain them and ascertain a mechanism of continuous professional development. Otherwise, this would be quite a futile exercise. In that process of training, retaining, and continuous professional development, AFOG would like to contribute its level best.

On this occasion, I called on African countries that are represented here – about thirteen of them – to join us in the AGA meeting, which we are going to hold next week in Khartoum on Friday, Saturday, and Sunday. That will also be a time to reflect on whatever has been achieved in this process. So, finally, I call upon all of us to contribute our level best to the success of this venture. I also call upon the fact that this partnership is a two-way street. Not something from the developed world into the developing countries, but the contribution of developing countries and African universities has to be appreciated. They also have to meaningfully contribute into the process. I hope that we will do all that. I wish you all success in all your endeavors. I thank you.

Frank Anderson: Thank you, Yirgu. The way we are here today is that a couple of years ago the Flora Family Foundation was interested in obstetric fistula. They came to our department and said, “What can we do help with obstetric fistula?” We talked to them about not only the treatment of obstetric fistula but also the prevention of obstetric fistula. The Flora Family Foundation funded the meeting we had at FIGO last year. You all have the proceedings from that meeting; there are approximately ten obstetricians from different countries who brought this *Call to Action and Way Forward* about raising capacity within African countries to train physicians to become OBGYNs. So that was a very successful, but smaller, meeting. We gained a lot of momentum and were able to produce those materials and I was able to meet someone from the Gates foundation who was interested in having us get together regarding funding. So, Kate Somers is here from the Gates Foundation as our project manager and I would like to call her to the podium to make some comments.

Welcome from Kate Somers, Project Manager, the Gates Foundation

Thank you all for the warm welcome. I have to say that I have the easy job; I just had to write the check. I think Frank and his team have done an incredible job, so I do want to give them a quick round of applause. And, thanks also to the Ghana College of Physicians and Surgeons for welcoming us, all protocols observed. I would also like to thank the cinematographers for making sure that we are all awake, because if we fall

asleep we're going to be up there on camera. So, that was a very sneaky tactic but I thought that was great.

I know you share my enthusiasm for being here. We really have a great opportunity to learn from each other over the next few days. I just wanted to say a little bit about why the Foundation wanted to support this meeting. One reason was that we obviously saw that this was a tremendous opportunity to come together, to collaborate, and to share lessons and strategies amongst you. I've had the pleasure of working with FIGO and Hamid, and also I work with Dr. Jeff Wilkinson in Malawi where we are funding a program. But we also recognize that there are definitely global trends that we are looking at very carefully as more and more women are delivering at facilities. We really think that there is an urgent need to improve the quality of care and particularly intrapartum care in these facilities. And obstetricians and gynecologists definitely have a critical role in ensuring quality.

We felt as if we could develop a roadmap here that charts the path needed to achieve results collectively, our collective efforts will be greater than the sum of our parts. It is probably no surprise to you that I have already heard from pediatricians and other groups that we need to do this, so I think that you really have the opportunity to show the way of how to do this work. We want to look critically at what we can achieve together, but we still need to think about what we are going to hold ourselves accountable for.

We can have a grand vision, but unless we really put down the numbers and how we are going to get there, we cannot go as far as we want. So, as we get ready to do the work over the next few days I would like to pose a few questions to you for you to think about:

- How will we produce this additional 1,000+ - is that even the right number or will we need more than that?
- How will we get there with the partnerships that are here today?
- How will we be able to show better quality of interpartum care at health facilities because of this effort?
- And, to answer the big question, will the collective efforts here actually reduce maternal mortality, fresh stillbirths, and neonatal mortality in the countries represented here? Can you actually do it?

Tough questions, but I'm really inspired by those who have showed up and who have come here. We can address this and achieve a lot and create transformational change over the years ahead. With that, let's get started!

Frank Anderson: We have talked about all the big things and the funders, but we all must thank Madeline Taskier. We all know Madeline and this meeting could not have happened without her. So, thank you so much. I would also like to acknowledge Sarah Rominski who has been helping us, and Gaurang Garg, and Maureen Martin, all from the University of Michigan. And, also in the back, Alex Ocampo who was a student of mine at Michigan and is living here now doing a Fulbright scholarship; he has been helping us a lot. And also I would like to thank Kofi Seffah who is here and who is Dr. Joseph Seffah's son. His dad was an obstetrician in the Carnegie Program and, of course Andrew Boakye, who has been the African Madeline. So this amazing team of people has come together and inspired me to make all of this happen.

At this point our morning introductory session is over and I would like to thank the Rector of the College for coming and the other panelists. We now move onto the next section of our meeting.

Conference Goals and Results From Needs Assessment

Speakers:

Frank Anderson, University of Michigan
Madeline Taskier, University of Michigan
Gaurang Garg, University of Michigan
Raymond de Vries, University of Michigan

Introduction of the Meeting Framework

Frank Anderson: I'd like everyone to get their folders. I wanted to explain what our meeting framework is like and how we hope to work. From the *Call to Action and Way Forward*, there were certain categories or buckets that we heard from the participants of the meeting. These are areas that needed to be addressed. And, when all of these areas are addressed, we can come up with a comprehensive training program.

We also tasked a program manager to isolate each one of those areas and that is how we came up with your Needs Assessment. The Needs Assessment form was posted online and we had 100% participation of people filling in that online survey. Madeline and Gaurang are going to give you the results of those Needs Assessments now.

We also took those categories of the Needs Assessment, then we asked for people to submit abstracts in relation to the different categories. We received approximately 25 abstracts, and all of those abstracts are available to you on the Dropbox folder, so you can see what people are doing in the different categories within their projects, so you can learn from that. (See Appendix V.) We wanted to print that, but it is about at least half a cedi to one cedi per page to print here, so it just became too expensive to print. We went green, and it is all available for you online in multiple different places.

So we have the *Call to Action*, then we have the Needs Assessment. We have abstracts related to those and now we have our agenda set up based on those categories. You can see that our first panel will be on partnership and the partnership development process. That is going to be related to the *Charter for Collaboration* that is also in your folder. (See Appendix VII.) We'll talk more about that.

Then we are going to talk about models for infrastructure and program design. What does it take to have a department in an African university? What are the physical things that are needed? What are some of the programmatic structures are needed? Another plenary will be tomorrow.

We will talk about curriculum development, clinical teaching, and assessments for OBGYN residencies. We are going to talk about deployment of OBGYNs, working with ministries of health and education, working with communities, other healthcare partners, and faculty development. We will also discuss research, mentoring and evaluation, and quality assessments. We will also talk about certification and accreditation of obstetrician gynecologists. So, those are the main categories, and that is what we are going to hear from people.

Now, if you notice, the last set of pages is a worksheet, and this is called the OBGYN Program Development Worksheet. There are instructions on the worksheet, but basically they are questions that relate to each plenary panel. When you hear a plenary panel, you can look at these questions and you can hear any new ideas that come up from the plenary panels and each plenary panel will also have plenty of time for open mics so people can bring up what has been left out. We can add that to these worksheets and you can go back to your group with your flash drive.

One representative from each group should have a laptop computer so you can start answering these questions for yourselves, figuring out what are the different issues related to the particular topic that we discussed. By the end of the day, you'll have a 5-to-7-page program plan that you will be able to use to keep working with your group to develop, to implement, to look for funding for yourself. You are also invited to submit that to the 1000+ OBGYN Project, and we will put that together as a group. We can approach funders and say, "We as a group of universities and professional societies have all of these people ready."

There is no RFA for this and no funders are asking us to do this. But here we are together and we have this opportunity to put all of this together and say, "We are here, we are ready to do this", and I think we will get a response. That is the goal of the meeting, is that we come up as a group with these concrete written plans. Funders want us to have concrete written plans so we can hit the ground running.

The meeting today is not to talk about what we could do, but *what we want to do, what we have plans to do*. And I would like that by the end of this meeting, we will have a new number. Right now we have 1000+ OBGYNs.

The question comes up, how many OBGYNs would we train if we weren't meeting today and we weren't going to make these plans? How many would that be in 10 years? And how many versus when we put our minds to it and put our effort to it, how many can we say we can train in 10 years from now? And not just that, but how do we measure the effect, not only in maternal health but also neonatal mortality, especially?

Also, we will have to figure out ways to measure this: case fatality rates, complication rates, and referral rates. We will have a session on monitoring and evaluation and clearly that's an area that still needs to be developed. The way that the conference is set up reflects the *Call to Action*, reflects our Needs Assessment, and reflects what is in the abstracts. You will all be in the rooms nearby to other countries where you live. There are three breakout rooms where people can work on tables to discuss these issues.

You have visitors from different organizations – ACOG, FIGO, representatives from the Society of Maternal and Fetal Medicine, representatives here from the Association of Professors of Gynecology and Obstetrics, the Council on Resident Education for Obstetrics and Gynecology. And you'll be hearing from them and meeting them all throughout the meeting. There is the capacity and knowledge here to do this, so our job now is to gather that capacity together and shape it in a workable way.

So at this point, let's move on to Madeline and Gaurang. They have analyzed all the data from the Needs Assessment and have made some beautiful graphs, which are available to you. They will go over the results with you now.

Needs Assessment Results

Madeline Taskier: Hi everyone. We are just going to do a quick presentation. This is Gaurang Garg, by the way.

Gaurang Garg: Hi everyone. Nice meeting you - I'm excited to be here.

Madeline Taskier: We are just going to do a quick presentation on the cross institutional comparisons from the postgraduate training Needs Assessment. The purpose of the assessment is to understand the diverse partnership models. We began assessing interest from the different partnerships who attended the FIGO meeting in Rome, which Gaurang was at as well. The desire to share information and best practices was very clearly expressed. We had a conference call with several of the American

representatives who mentioned on the conference call that they really need to understand where we are now and have a baseline that we can talk about during the breakout sessions and during this meeting. The big questions are, “How close are we to the goal of 1000+ OBGYNs, where does each partnership stand, and how best can we pair partnerships together to complement each partner's needs? “.

The method of the survey was helped very much by Joel Segre from the Gates Foundation. We submitted an online survey to all of the partnerships that gathered individual country data which was self-reported by one or two representatives from each country partnership that looked at OBGYN resident rates.

So, how many were in your class – we sort of counted it by class; the department structure; site requirement and capacity – what is your caseload, OR capacity, etc.; curriculum – what is the current curriculum you are operating with now; faculty, faculty development opportunities, research opportunities, certification process – what is your institutional certification process to train OBGYNs; online access to education, research capacity for OBGYNs and faculty members? In many ways the questions were to assist our project with Elevate Health, which you will hear about in a little bit.

Gaurang Garg: Like Frank and Madeline mentioned, we have these really wonderful responses that all of the partnerships gave us. So, thank you first to all of the partnerships for filling the surveys out. After reading through them (they were quite interesting) we had all of them compiled into one document called the *Country Report*, which is available in Dropbox – that magical thing that Madeline was talking about – and also on your individual flash drives, which you will have during your breakout sessions. For each country – for example, Ghana had three responses, three different medical schools and hospitals that responded – we wanted to put them all together under one country report under Ghana.

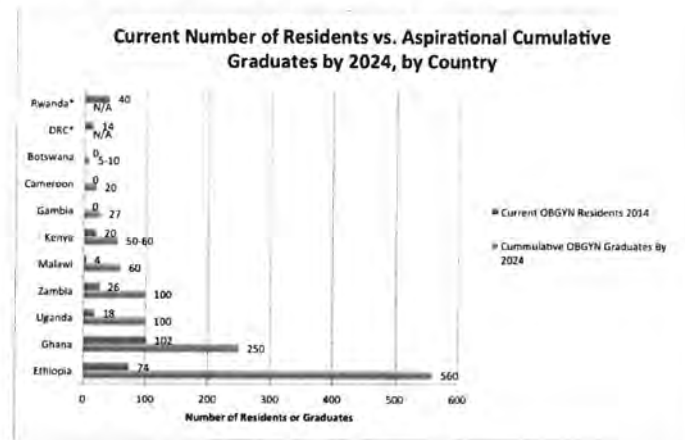
The first page of that country report was some basic statistics: some population statistics, economics like GDP and GINI coefficient, and lastly some maternal health statistics from the WHO, just to kind of give an overall profile for the country. You can take a look at what the maternal health care is like currently. There is also a table of all of the medical schools within each country – which we have taken from the *Lancet* – and whether we have reached out to them through the 2012 FLORA survey that Frank mentioned or this 2014 Needs Assessment. Following that first introductory page is the raw response data from each one of the partnerships. Like I said, if you are in your country teams, you can look at

what your colleagues mentioned and wrote, and then if you want, on the flash drive or in Dropbox you can look at what people around sub-Saharan Africa wrote as well.

Current and Aspirational Number of Resident Physicians

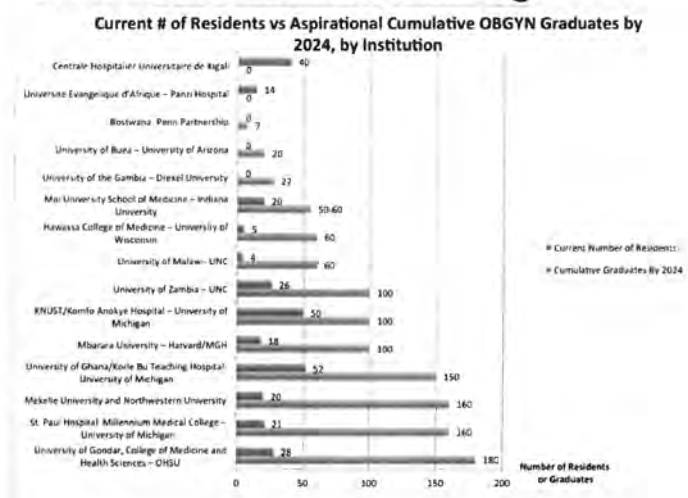
One of the first questions that we wanted to ask was, “What are the numbers of residents that you have in your institutions right now, and then what is the cumulative number of residents that you want to train in the next ten years, by 2024?” So here is just a side-by-side comparison of where we are and where we want to be by country. And the next slide is broken down by institution. There were sixteen partners that responded. For each partnership, how many residents do they have right now total between year one and year four or five for some, and then how many do they want to train in total by 2024.

OBGYN Resident Training



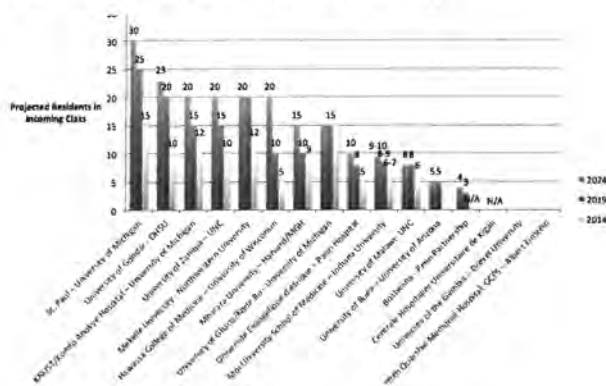
Madeline Taskier: We organized it in ascending order and, as you can see, some of the data shows that there are some program without any residents at this time but they have goals to train over the next several years. If there is no red line, then they do not have current residents – or at least that is how we interpreted the data, please correct us if we are wrong – and you can see how each of the institutional partnerships aspire to train more and scale up. As you can see, if you count the whole total which have on the *Country Report* but not on this presentation, but it exceeds 1000+ OBGYNs. So the aspirational goal in 10 years from each institution definitely exceeds our proposed number.

OBGYN Resident Training



This is another graph looking at the projection of residents in each incoming class. 2014 is in yellow, where we are now; in five years, 2019 is in the red; and in 10 years, 2024 is in the blue. You can see that each program has sort of a gradual scale up.

OBGYN Resident Training



Gaurang Garg: One other interesting aspect is that when you are looking at all of the responses, some partnerships do not have a program right now or they are planning on starting one by 2016 or 2017 (to be decided), so it is interesting to see the scaling progression for all of these institutions.

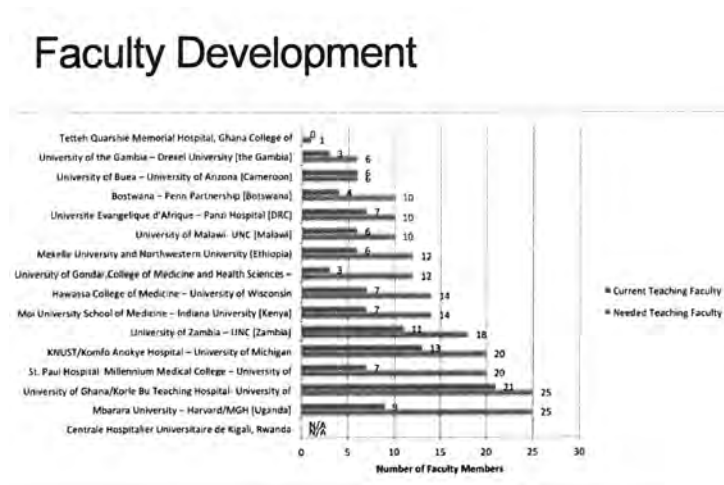
Case Evaluation

The next phase of questions that we had were related to the number of cases that each institution saw per year. By ‘cases’ we mean deliveries and C-sections. And other questions were, “What is the current capacity in your operating rooms and in your OBGYN clinics?”

Curriculum source

We have a graph that is available to you on your flash drives. What we analyzed was the total number of cases per faculty member per institution. You are able to see this really interesting analysis of the caseload per faculty member in each institution. The departments that have more faculty members - even if they have more cases - seemed to have an easier time of managing it, as is represented by having a lower ratio.

Madeline Taskier: We asked each partnership what the source of their curriculum was, how often it was reviewed, and then a qualitative question on what are their needs overall. We asked each partnership to check off whether there were additional modules included in the curriculum that have been shown to help support and supplement OBGYN resident training, including a management module, research capacity, community rotations, respectful care, and quality improvement. I would say that the majority of responses have research capacity and management modules inserted. Quality improvement and respectful care were about two-thirds, or one-to-two-thirds of all responses.



Faculty development

Gaurang Garg: One basic question that we wanted to ask in terms of faculty was if there were any room for faculty development in terms of research and other activities that they could take to become more proactive in their own careers. This first slide is our first question, “Can you give us a little more information on how many faculty you currently have”, which is in red, and then the blue bar represents how many they need, or how many they aspire to have over the next few years, and whether that is coming from the classes that they are training or other people that are coming and working for the institutions and staying as long-term solutions for training residents.

Certification

Madeline Taskier: There are a variety of certification methods that we have come across for OBGYN training, and we tried to show them on the map of Africa and the concentration of where they are geographically.

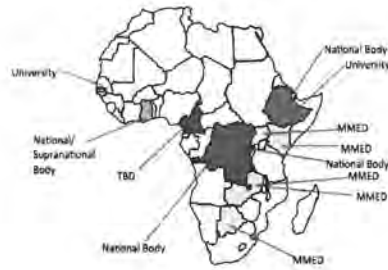


The countries highlighted in blue have a national body of certified OBGYNs. Ethiopia also has certain universities that do certification as well. The MMED program is quite popular as well, as you can see in eastern and southern regions. There are the national and super-national bodies like the Ghana College of Physicians and Surgeons but also the West African College of Physicians and the West African College of Surgeons. And these were the general responses that we received. So you can see, it is sort of a mix. Of the 16 responses, here is the percentage breakdown:

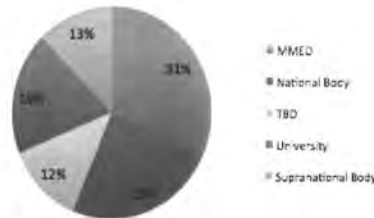
- 31% were in MMED programs,
- 25% were by national body,
- 13% by super-national body.

That sort of gives us a sense of how we can align certification methods and make them more uniform.

Certification of OBGYNs



Certification of OBGYNs



Internet access

Gaurang Garg: The next section of the response dealt with the current infrastructure for Internet. Part of this deals with the Elevate team and their goal of adding online medical education, and this is also just in terms of just basic resources that are available to all of the residents. We asked, “Do you have access to Internet?” The follow-up question was if they had access to high bandwidth?

The vast majority said that they had it sometimes, and then a few institutions also said, “Often,” for both. Only one of the partnerships said, “Always,” that they had it pretty consistently and pretty regularly, which naturally will be a concern that you will have to deal with it in terms of

implementing online education or even other forms of communication for the residents than what they have available.

Research capacity

The last section asked, “Are residents trained in doing research, becoming inquisitive thinkers, and going on to lead their own projects in the future?” The nice thing is that the vast majority (14/16) said that they do train the residents in some way. What we did was compile a few of the methods they use in terms of giving their residents the skills to become researchers in the future. There was a pretty good mix; some are really creative.

I think Dr. Wilkinson said that his team does weekly journal clubs, which I thought was very interesting. Other institutions do things like having public health teams come in and offer some type of seminars or some type of courses. We would like to see these continue.

I think that one of the main feedbacks that we got in the responses was that every institution thought it was really important, that research training and going along that line was something critical that all residents should learn.

Research Capacity for Residents

Figure 13: Research Capacity and Methods for Development

14/16 (87.5%) of participating institutions train their residents in research capacity skills. Here are the activities they emphasize:

- Faculty and Peer Mentorship
- Clinical Research Exposure
- Designated Research Units Within The Curriculum
- Teaching Assistance From International Partners
- Personal Research Projects
- Training In Academic Writing Skills
- Formal Research Methodology Courses
- Data Collection, Analysis, and Communication Training
- Weekly Journal Clubs
- Dissertation Requirements
- Instruction By Public Health Professionals
- Departmental Emphasis On The Importance of Research

Madeline Taskier: And that is everything. If you have any questions on how the data was analyzed or if your team didn't get the chance to fill out the Needs Assessment, it is still an open form and we are going to update it as the week goes on and upload a more recent version into the Dropbox. Does anyone have any questions?

Jeffrey Wilkinson: I wonder if we can explore further the distinction between certification and training, because there is the training body, which you would get in an MMED, but the certification might be through the Council of Physicians.

Madeline Taskier: Dr. Wilkinson's question was to distinguish the difference between training and certification, because the training may be the MMED degree but what is the larger body that is certifying? I think that distinction is something that will definitely be brought up during the certification panel and can be discussed among the breakout groups, but we are going to have a certification discussion and panel later in the program. Any other questions? We will actually hand you the microphone.

Thank you so much!

Gaurang Garg: Thank you!

Frank Anderson: So that is the data we collected from all of the participants. As you look at that data, if you want to adjust that data, please let us know. That's a great place to start and a great baseline. Now that you see it up there and you see your partnership response, you may want to adjust that a little bit. As you go into your small groups, this country report will be on your disk. Your individual country data will be on the disk as well as the compilation. And you can absolutely update the information.

Thinking about a proposal development process or a project plan, you can use the first few pages of your own country report as kind of a baseline data and update it as you will. I think the plan is that you will have your own Needs Assessment already done for your country and for your program as you move forward.

Does anyone have any questions about the worksheet and the process of the meeting? Any comments or feedback? Could I hear some feedback from the audience about this process and how they think it might work?

Authentic Partnership

Introduction to Partnership Development

Frank Anderson: We have with us Raymond de Vries, a sociologist from the University of Michigan, in the Medical School Department of Ethics. He is what could be called an embedded sociologist. Although he is embedded, we can see him at the desk. Sociologists are observers, and they observed processes and they observe people interacting, and Ray has been observing the Ghana–Michigan partnership for quite some time as well. Ray has been thinking about what that means and what issues come up. He can say it very well, so I would like to introduce Ray de Vries, our embedded sociologist, to give us an overview of this partnership idea that will be embedded in the work that we do this week.

Ray de Vries: Thanks, Frank. I, like everyone else, am excited to be here today. To me, this is almost unbelievable – the number of people with a number of interests that have come together behind a single project. Of course as Frank said, we have a lot of content work to do while we are here over the next three days, but content without paying attention to process is not going to succeed.

I was going to say not likely to succeed, but if the process breaks down, then all this beautiful content, all the curricula, and all of the things we are doing back at our home institutions cannot succeed. We are going to spend a whole session after the coffee break talking about partnership, but Frank has asked me to give a brief introduction into the value and the need to focus on partnerships.

I want to start by using this quote which comes from a colleague of ours in Ghana, who was very involved in the project in Ghana (but he is not with us today) and is somebody that you might know; Professor Peter Donkor. Professor Donkor said,

“The surest way to achieve an enduring and successful collaboration is by ensuring that while you pursue your interests, you also look after the interests of the other partner.”

I think that there is a great deal of wisdom here and I kind of want to do a little sermon about this. I want to unpack the wisdom in that brief statement from Professor Donkor.

He starts by saying, “The surest way to achieve an enduring and successful collaboration...” What's so exciting about us being here is that we have the shared goal of creating the structures we need to improve maternal health in a sustainable way. That is what we all want to do. But, we will not reach our goal without an enduring collaboration. And that's key. I've heard several of the speakers this morning in their welcoming use the word 'sustainable'. And I think that's on everyone's mind. Sustainable collaborations just don't happen because we have a good idea; they take us thinking about the ways we are working together. This is why we put the session on collaboration and the worksheet on collaboration at the very beginning our time together. The collaboration comes first - not later. You have to structure the way you're going to work together to pursue the great ideas that you have.

The second part of the statement is,

“...while you pursue your interest, you also look after the interest of the other partner.”

To look after the interests of the other partner you have to know the interest of the other partner. And that might seem obvious and simple, but, again, listening to some of the speakers in the introduction, there was talk about, “Let's pay attention to local conditions.”

Folks might be coming here with great ideas but unless you know what your partner wants and you know the situation into which those ideas need to be introduced, you will not succeed. You have to know the interest of your partner. Knowing the interest of your partner requires two things, I think. Respect – each partner in the collaboration needs to have respect for each other, has to understand that I have something to learn from you, and you have something to learn from me. This attention to the other is really critical for sustainable collaborations.

The second part of this is reflection and this is part of what – I'm not so sure I like being called an embedded sociologist, it seems kind of strange – the one thing that I can offer and the one thing that my discipline offers is it helps people to think about and see what they're doing with new eyes. So I think constantly throughout this process you have to reflect on: “What are my interests?”, “What are my partner's interests?”, “Am I listening to my partner?”, and, “How can we help we make these two things work together?”

Another point about the statement – pursuing the interest and looking after the interest of the other – is that knowing the interest of your other partner

requires effective communication. You have to find ways where you're really talking to each other and really listening to each other. And effective communication starts with attention to detail. In the worksheet we are going to give you, we actually ask for a lot of detail. It's not just, "Oh yeah, we agree to communicate." But you have to face the problems that are going to happen because typically they'll be from two different cultures. And I don't just mean the culture between a country outside of Africa and a country inside of Africa.

Part of the collaboration is universities working with ministries of health and ministries of education, and those organizations have different cultures. So you have to be attentive to how you will communicate and what you will hear when the other person says something. So, in sum, this is Professor Donkor's statement again, "The surest way to achieve an enduring and successful collaboration is by ensuring that while you pursue your interest, you also look after the interest of the other partner."

A last thought before going to break and also a little assignment for you. We have to avoid the upside down Golden Rule. We all know the traditional Golden Rule, "Do unto others as you would have them do unto you." It's part of the value system of most every religion in the world. This example comes from Christianity.

What's the upside down Golden Rule? (And we heard about this today.) Here's a king saying, "Remember the golden rule." The people say, "What's that?" And someone answers, "Whoever has the gold makes the rules." That is another way of thinking about the Golden Rule. In observing collaborations between high-income countries and middle-and-low-income countries, I find that this is one of the problems of collaboration. And I'll have some more to say about this in our next session, but we have to keep this in mind when they collaborate. Respect and reflection require understanding the Golden Rule in this way.

I'll leave you with this and a few questions you can work together with your partners, maybe over coffee - it's not always true that when I succeed, you succeed. And this is what I mean about being reflective and thinking about your relationships. 'If I'm coming from the University of Michigan, and I come to Ghana, and I run a project, I'm going to succeed if I can take what I have learned in Ghana and bring it back to United States and publish a few papers. It doesn't matter to me what happens in Ghana. My success is really not necessarily connected to your success.' And I'm sure, it can be flipped the other way. But of course, I'm speaking from my perspective from someone coming from a high-income country.

You have to pay attention to this. It is sensitive; maybe we don't want to talk about it, but enduring collaborations require attention to this detail. So one thing that I am going to encourage you to do over the break is to find the members of your partnership -and again, that means cross-country and inter-country and also in-country partnerships - and talk about how you will handle the unavoidable imbalances that are going to occur in a collaboration. And how will you move beyond the abstract of, "Hey, we respect each other," to the details of the things that you will do? The actual, practical things that you will do to make sure that you are respecting each other, listening to each other, and communicating well. So we have more work ahead.

Understanding how we're going to work together, I think, is probably the most important part of what we are doing here. We do need infrastructure, we do need the curriculum – we need those sorts of things – but the process is critical. So thanks for your attention.

Kwabena Danso: Well, I think we have come a little far this morning. We are going to break for 15 - 30 minutes. And of course, during that time, we can have some snacks in 'cocoa break'. In Ghana we say 'cocoa break' because we produce cocoa. Coffee will be there, but I think that we want cocoa break to be generic for all the others: coffee, tea, what you have. So if you hear 'cocoa break', it is also for 'coffee break'. So we will take a break and come back in thirty minutes. It is down there, in the main foyer of the college. Please come back here in the next thirty minutes. Thank you.

Partnership Development Process

Speakers:

Ray de Vries, University of Michigan – Moderator

Frank Anderson, University of Michigan

Kwabena Danso, KNUST

Samuel Obed, Korle Bu Teaching Hospital

General Discussion

Ray de Vries: Welcome back. Frank has asked me to moderate this session, which will go into much more detail than where we left off before the coffee break about creating a successful and enduring collaboration. We will hear first from Frank about the charter process that was used in the relationship between University of Michigan and Ghana. I'm going to then add a few words about what we learned in that charter process. And then we will hear a couple more examples coming from the Ghana side about

collaborations, what is effective and what is not effective. So we are going to begin with Frank.

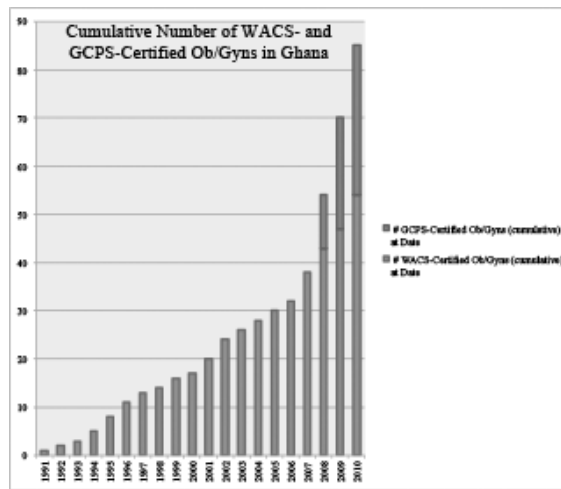
Overview of the Elmina Charter Project

Frank Anderson Thanks. And then we will have time for you guys to talk about your own partnerships as well. I heard a lot of comments during the break about how people enjoyed Ray's discussion. I did as well. Being very technical, we can be lost in all of the details of the technical stuff, so this part of adding on this reflective piece is important, and I would like to give you an example, a concrete example, of how this is expressed. Sometimes you talk about these things loftily, but how do we actually make it happen? In your folder, you have the charter for collaboration that we created during a Gates-funded project. I'd like to tell you a little bit about how that came about.

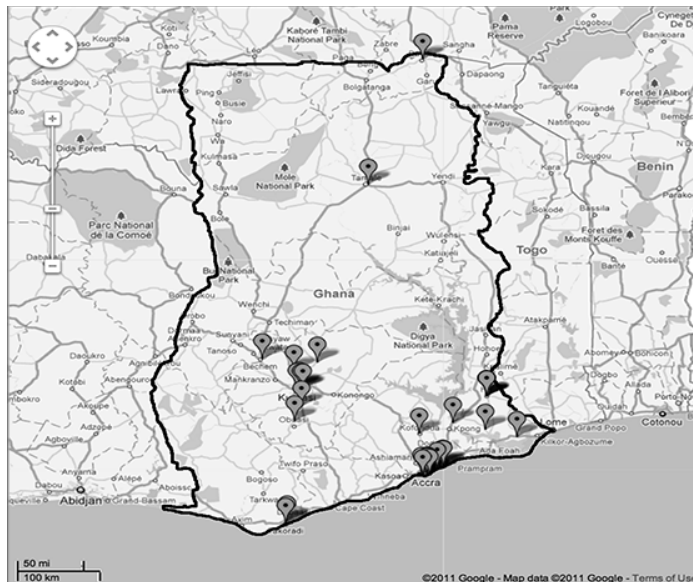
Our Charter group met in Elmina on February 1, 2009. Michigan had had this history of working with Ghana, as you know, with Tom Elkins, Tim Johnson, Jack Sciarra, JR Marty, JB Wilson, ACOG, Royal College of Obstetrics and Gynecology, and many others. The funding was during the 1990's and when that funding ended, the University of Michigan continued to work with the University of Ghana, hosting residents and medical students, which turned into our medical students going to Ghana, which turned into the President of our University going to Ghana and visiting the Vice Provost of two universities, which turned into engineering students going to do engineering projects, which turned into the emergency medicine department working with the Ghana College to start an emergency medicine residency, and on, and on, and on. It stemmed from this OBGYN partnership, but expanded to the entire university. We had an opportunity from the Gates grant to use this example of training OBGYNs retention and leverage that experience with other parts of the University and other partnerships, and that's why I think it is so valuable to have these academic partnerships.

You've heard about the numbers of Ghanaian residents, but I just wanted to show you a graph that I made for recent publication in the American Journal of Public Health.

Critical Components in Building Capacity



You can see how in 1991, one OBGYN had completed the program and by the end of 2011 there were 85. The green is the West African College of Surgeons, which you have heard about. That is a five-year certification program, where the graduates go to Nigeria to take an exam. When Ghana created the Ghana College, you could see that they were able to certify people in three years and started to pick those numbers up. Now we are at 140. I don't have the distribution, but you can only imagine the slope as it continues to grow, especially knowing that now they have 50 residents in the program.



Here is a distribution map. Many of my public health colleagues will say, “Well, yes, you train physicians, and they stay in the cities and go into private practice, etc. etc.” Well, I think that in 10 more years this map is also going to look very different.

Obviously, cities and very urban areas are going to get filled. Ghana has two new medical schools and David Kobila is starting an OBGYN department in Tamale, Ghana in the northern part of the country. But it is a process and it is going to take a while. It has already taken 15 years; this is not one of these five-year development projects. We have got to take a long view.

So this is what is happening in Ghana right now. That kind of gave us this leverage with the university, where the Bill and Melinda Gates Foundation was interested in capacity building projects. That was before the economy crashed, though. What is interesting is that we had a learning grant to strengthen training and deployment of human resources and health in Ghana.

Charter for collaboration

We had four major objectives: to look at, assess, and develop research infrastructure at the medical schools; to look at the resources and capacity to improve education and training in all areas of health; to work with the ministry to look at data for policy decision-making; and to look at the distribution of health workers and match health workers with clinical needs.

These were all in line with the Ghana Human Resources for Health priorities. We also had an objective during the proposal process to develop a Charter for Collaboration, so we wanted to think how we were going to work together and what would that look like. We wanted to identify and document principles for collaboration between Michigan and the Ghana partners that can guide the interactions. We felt like the critical milestone for that objective was the approval of the document, this *Charter*, addressing the principles of communication, compensation, research, and educational collaboration. It was not a memorandum of understanding; it was a broader agreement document. We felt like past programs were developed fairly vertically – priorities set by the donors, limited timelines, capacity building might be limited or short-lived, and sustainability may not be ensured – and I know you are all experienced with those types of projects.

Most collaborative projects are initiated by the north; are mono-disciplinary or partly interdisciplinary; might have disagreements concerning the

remuneration; and the collaborative research is complex or a poorly understood process with lots of possibilities, but with lots of logistical problems as well.

We did this Charter process to open the dialogue among partners to ensure that the Ghanaian priorities had been identified, that the policies and procedures under the collaboration were considered, and that we consciously talked about mechanisms of communication. We developed overarching principles and we used those to guide the implementation of a pilot projects and proposal development in the learning grant process.

It identifies our priorities, our assumptions, the risks, relevant policies and procedures, reviewing of the typical consulting model and trying to change that into a capacity-building and partnership model. And then looking at previous collaborations to see what worked, what didn't work, what were the recommendations, and what were the alternatives.

During that Elmina Process, we had a one-week conference. We had a facilitated process of 10 hours for the Charter. We discussed sessions on past stories of partnerships that worked, we talked about gender, and we talked about cultural issues. These conversations were frequently very intense and sometimes difficult, but at the end there was positive feedback so we could all clear through the historical issues and the financial issues, sort of put those aside so that we could move on with the work that needs to be done. We had a way then in this Charter that served as our kind of Charter agreement, our Charter principles. That allowed us to work together.

There are different sections in the Charter. One section is called 'We recognize that'. What are the assumptions, what are the givens, how has the history of past projects informed the present, and what is the current situation of faculty structures, of Ministry of Health structures, hospitals, public health facilities? Then there is this idea of consciousness, that we need to do these things, consciousness like what are the priorities of each institution? In our case it was education, data for decision making and research, how to communicate, and where is it going.

We also have a section called 'Guiding Principles' and we used a whole collaborative process to re-brainstorm all the principles that we thought were important. We boiled them down to the ten principles that are on your Charter for Collaboration. We considered this Charter document kind of a contemporary model for collaboration. It would be a living document

that would include these processes for commitment, faculty involvement, progression, communication, and faculty support – all of these things are out in the open. The emphasis on the charter document differentiates a partnership that relies solely on the technical interventions. It really means that we have something more than just a technical intervention.

The process for the Charter document as the background of the process created a platform for technical interventions, so this makes the work applicable across campuses and across disciplines. It just wasn't about our project; these principles are cross-disciplinary. Consciously addressing the ramifications of the inherent and overlooked inequities is the first step in creating the authentic collaborative international team that begins to capitalize on diversity and movement to this new era of partnership based on the new paradigm for planning projects in an ever increasingly interconnected world. Not all sites are equal; they can still be one-sided, but there's much to be learned to determine the best practice. But it is inconsistent with these one-sided, vertical implementation projects because it is harder to do. But it has a much bigger impact, not just for your own project, but for your university as well. That was our concrete process for how we came up with the Charter. Now I'll turn the microphone back over to Ray.

Good and Bad Partnerships

Ray de Vries: Thanks, Frank. Let me say that if I'm a good moderator, we will end the session at about noon and that will leave us a half an hour to have a discussion here, because we know that a lot of you are involved in partnerships and we're speaking out of our experience with partnerships that we have done together. We're hoping that the things that we bring to your mind might bring to mind successes and problems that you have had in your own partnerships. So when we are done, I really do want to engage us in conversation about partnerships – things that make them work, things that make them difficult.

I want to build now on what we ended with in the last session on making partnerships work and giving you some more concrete examples. I think you are going to hear from me and my colleagues as well, that there are certain key issues that come up again, and again, and again. Those of the key issues that we encourage you to think about with the worksheets – Frank's favorite thing is worksheets – we have given you. You might take a look at the Charter – it's in the folder you were given right after the program – and also near the back is the worksheet for development of partnerships. If it is useful to you, you might make some notes there. I do want to say one thing which is kind of difficult for me to say based on what

I talked about the last session. We are arguing for the fact that each party has to respect the other, but of course this is coming from me and I'm coming from North America. There's kind of a paradox here and I just want you to appreciate that even though I am saying that this has to be an equal partnership, I am the one who is saying it. I am hoping that the next time we meet, that I have a partner here from Ghana who is talking with me. We do have some colleagues here who will talk about it, but I just want to acknowledge that paradox before we begin.

So what I want to do is to show you some examples of things that make partnerships work and things that hinder good partnerships. And, really the title of this part should be, "Making Partnerships Takes Work." It's not just work. We can all get excited about the platitudes but at some point we really have to dig in and think about how we are going to make this work. And clearly my message has been that, 'good intentions are not enough'. I prowled the Internet for a good illustration of, 'good intentions are not enough' and I think that this is an exquisite example: a dog who is trained to retrieve, but you really have to think about what you are retrieving.

So as I have emphasized before, good intentions are not going to be enough to get us where we want to go. And I think the main message here is - I want to borrow a Dutch word - I used to work in the Netherlands. The Dutch have a word that we don't have in English. We could make one up, but it's *bespreekbaarheid*, and it really would translate to "speak-able." The point of a good collaboration is that everything has to be made *bespreekbaarheid*, or speak-able. It has to be put on the table. We have to recognize that we share the same goal, but we have to be honest that we all have our own individual goals as well. If we don't make that speakable at the outset, we are going to run into trouble.

Secondly, we have different cultural understandings of what collaboration is, of what success is, of what it means when you do not answer an email within 60 minutes or two hours. Work cultures are quite different. And in working with the collaboration earlier in Michigan, we have certain expectations of our colleagues that absolutely are culturally given and do not apply to other educational systems.

We also have to acknowledge that history shapes our relationship with one another. The history of the relationship - between high-income countries and low-income countries, between the global north and the global south - shapes what we expect from each other and how we approach each other. If we do not make that *bespreekbaarheid*, if we do not make that speakable, our collaboration is going to be in trouble.

I want to give you some examples that come from Professor Donkor, a Ghanaian. He spoke to us when we last met five years ago about specific examples of things that went wrong in collaborations. I think the point here is to have you see what went wrong and think about how you will address that in your own partnerships. So, for example, here's one: a vitamin A supplementation trial done between KNUST and a European University, which I won't name. The object was to do capacity building, but interestingly enough, KNUST - the Ghanaian institution - was not involved in hiring the key appointments. The advisory board had just token representation from the African partner. There were no staff from that institution on the research site and all the leftovers from the investment went back to the European country. Professor Donkor pointed out that his institution felt used and, of course, then they lost interest and, as a result of miscommunication and unequal partnership, this project did not work. It just collapsed.

The second example is capacity building to train PhDs - not obstetrician gynecologists. Here the relationship is between KNUST and a North American university. Again, they had this common goal that they all shared equally but they did not start with agreed-upon concepts. The way they screen candidates to be trained for a PhD - Ghanaians who were going to be trained in this North American country - was done poorly and in the end there was no guaranteed placement of these people, where they would go to get their training. In the end four candidates were trained, but none of them came back to work at KNUST, which was one of the original goals, at least in the mind of the people were the African partner for this project. And, of course, the department's interests were not being addressed. They didn't agree on processes from the outset. And again, you might say it was successful - four PhDs were created - but they didn't come back to the institution as KNUST had hoped.

Another project trying to create a collaborative center for research, which was a collaboration between Ghana and a European country. And again, a shared goal, but when the management structure was set up, it was set up in a way that it was skewed in the favor of the European partner. Right? Because we know better. That's the idea. At some point there are some good intentions involved, like 'Hey, we know how to do this. We will set up a management structure that works fine in our country.' But none of that respect and reflection goes on. The director of the project was selected by the European country, an agreement was set up that could not be altered, and, okay, there is token representation from KNUST on the advisory board.

Professor Donkor went on to point out some of the reasons for failure and from the flipside, what you have to do to avoid failure. And, a lot of these are in the Charter; if you look at the Charter, you'll see that we address these.

- institutional involvement
- poor leadership or the wrong leadership
- poor management structure and chain of command
- not having a work plan
- loss of interest and the priority kind of drops away
- unequal interest in collaboration

Again, it is back to that point I made earlier that my success isn't necessarily your success. I might succeed, you might succeed, and it doesn't relate to me. So it's really important that you focus on that mutuality in the relationship.

Some more reasons for failure are inadequate resources, inadequate compensation, unfair sharing of the spoils of the process, not being transparent with each other, having goals and ideas that you don't share with your partner, feeling exploited, having crazy unrealistic expectations and, again, the inequality in partnerships. We can say, "Let's have respect for each other," but you actually have to get down to the fact that when we author papers, how are we going to decide who is the first author, who is senior author, who gets to be an author on a paper? It's not enough to just say that I respect you and then work it out on the fly when you are trying to decide who is an author. Communication becomes important.

Misunderstanding goals and processes, changing rules in midstream, and dealing with differences in local laws and regulations – as Professor Donkor pointed out - these differences in Ghanaian law and how you had to procure things and how you had to record expenditures, and how you had to create contracts can all contribute to misunderstandings.

The flipside to this are the lessons learned:

- You need to have high-level institutional involvement. The institution you're working in has to be behind you and see this as a good project and want to be involved in the project.
- Fair and representative management structures are important.
- A detailed and agreed-upon work plan.

- Adequate compensation. Here again, an example from our collaboration with Ghana; we have different ways of working in Michigan than in Ghana. In Michigan, if we get funding from a granting agency, faculty members can use it to pay for part of our effort. So 20% of our time, or one day a week, can be used from this grant. We discovered though, for our Ghanaian partners, we might give them 20% of their effort, but they couldn't stop at the other 100%, so now they are working 120%. That's the kind of communication that you need to have. How realistic is it, where will the compensation go, what will it free you to do, what will you not be free to do?
- Frequent meetings to iron out emerging problems
- Keep communication lines open
- That lesson about all partners' interests being addressed
- This is important, and we heard this from the Gates Foundation. You have to have a metric for evaluating a project, its success, also the success of the collaboration

Another important thing about enduring collaborations is that you have to structure it in a way that it outlives everyone in this room. It can't be based on one charismatic person like Frank Anderson, because some day Frank is going to retire (believe it or not!) and Professor Danso is already retired. It has to have a structure that can be picked up by the next generation.

The benefits of good partnerships are communication, respect with different voices, commitment to the project, and a context for collaboration that is contagious – your partners are excited about this. These things I am showing you are things that we learned when we interviewed people who participated in the Ghana-Michigan collaboration. One of our metrics for evaluation was interviewing people after we were well into the collaboration. We asked people to talk about, how is the health of the collaboration, how has the Charter made this collaboration different from other collaborations? These are the kinds of things we heard that were different when a Charter preceded the work that was done. An interesting thing about the first bullet point is that we heard from people in Ghana and also in Michigan that not only was communication between the countries improved, but that communication *within* the country was improved. The people in Michigan from different departments that never talk to each other, as a result of the Charter, were talking to each other. We heard from Ghanaians that people at Universities had a really difficult time getting into the Ministry and talking to the ministers. After the Charter, that communication improved, which was one of the most interesting and unanticipated aspects of our work together. We thought it was all about

our inter-country collaborations, but it actually improved within-country collaborations as well.

And you see that in this quote. This is a quote from one of the participants from Ghana. “From those of us coming from Ghana, there is greater collaboration amongst ourselves.”

To be honest, problems remain. I am sounding a little Pollyann-ish up here. If you have a good charter, you're set to go 25 years from now and still be working well. But we also heard of a few problems in our conversations with participants. There is still concern from Ghana that we are working hard to collaborate but still the processes is being directed out of Michigan and not here in Ghana. There are infrastructure problems like different cultural understandings of what the appropriate response time is for an email. The five-hour time zone difference made arranging phone calls very difficult. Regarding the infrastructure problems - you saw the slight about Internet access. Those things are created problems that you need to anticipate and address. Different hierarchies within the two universities like who is the key player in Ghana compared to who is the key player in Michigan, and that wasn't always sorted out equally.

The charter helps, but I want to be honest about the fact that these things remain. This comes from Peter Donkor and I think that this will be helpful when you're developing your partnership plans as we ask you to do in the worksheet: There has to be institutional ownership of the collaboration and a thorough understanding of the expectations of all partners. You must do what you need to do to ensure that everyone is a winner; my success might not be your success, but if I am successful, then I want you to be successful in the ways you need to be in your own university, your own country, your own ministry.

Peter Donkor says that you have to make this *bespreekbaar*, or *speakeable*. What is in it for me and my institution? And then you have to be transparent about that. And here is that quote again from Donkor, “The surest way to achieve an enduring and successful collaboration, is by ensuring that while you pursue your interests, you also look after the interests of the other partner.”

Thanks for your attention. I hope that this has stimulated some thinking on your part and that we can have a good conversation before we break for lunch and you go start working on your own partnership plans. In effect, what we are asking you to do is to have your own Charter process for your own collaboration. We took several days to work this out and we learned a

lot. We hope that what we learned can help you do this more efficiently and in a more streamlined way. So, thank you.

Kwabena Danso: Thank you. A lot has been said in terms of partnerships and the ethics of it. What I'm going to look at is not to repeat what has been said already, but to give specific examples of how some of the principles and guidelines have been applied - essentially to make the point that partnership in all the sense must be bilateral and should not be one-way traffic. So it is important that at the initiation of the partnership that there is a clear understanding of the objectives as to what needs to be worked on, what needs to be achieved, what is going to be the input on both sides, because, as the name implies, partnership will mean that at least two universities trying to collaborate and work towards a common agenda, each to fulfill an objective. The two objectives might not be the same for each, but it would be a fulfillment of some objective as they pursue a common goal.

In the case of our partnership - and I will take Kumasi as an example - it started as you've been told with the training of postgraduates for building capacity in maternal health to address maternal mortality and morbidity, and, of course, neonatal mortality and morbidity as well. Initially it was at the level of student and faculty exchanges. Now, as time has gone, we have moved into the stage of growth where student exchanges have been expanded and moved beyond OBGYN.

For now, we have medical students who go to the University of Michigan for their elective observations and junior specialists and junior faculty also go to the University of Michigan. On the other side, we have students from the University of Michigan coming from completely different disciplines, like biomedical engineering, who come to Kumasi to work together with the Department of OBGYN, to look at the workings of the department so as to be able to devise and build new tools to solve problems. For instance, one specific example was trying to devise a new vacuum tube that can be used to address and delay second stage due to poor maternal effort. Then also students from University of Michigan Minority Health International Research Team (MHIRT) have come to Kumasi and even moved beyond Kumasi to go to places like Mampong and other places. So it has not just been a one-way affair.

Looking at the growth of partnerships, which must be objective for every partnership, we also have had partnership established in other disciplines. In internal medicine for instance, we are looking at a partnership for the unit of cardiology where implants – cardiac implants, pacemaker implants –

will be available. Skills and facilities will also be available in Kumasi. Now, in oncology for instance, we have been able to set up a team where we can videoconference on the two sides of the globe to show that both sides are having their needs or their objectives fulfilled.

The other aspect that I would want to add is the levels of engagement. I think that when are talking about partnership it must involve all. Or it must grow to involve all aspects of an institution, so that it is not only doctors that are involved, but the other supporting institutions or supporting units of institutions must also be involved. In that respect, for instance, we have had partnership exchanges for ultra sonography as one area that we are developing and in fact, as I speak now, in the university in Kumasi we have an undergraduate program in ultra sonography, which has been built out of this collaboration.

So I will end here and say that for partnerships based on all that has been said, we need to be clear in our mind at the onset of what we want to achieve as a common rule and what each player of the partnership wants to achieve. There should be an understanding that if I achieve my objective then I help the partner also to achieve his or her objective.

The second thing that I would like to conclude is that we should look at the partnership not as a static concept. We must nurture it; we must let it grow so that eventually it infiltrates other aspects of our life. Maybe we can take an example, if you permit me, from the oldest partnership that we know - which is the partnership of marriage – in whatever form that it is. It is supposed to grow and continue to grow until death do us part. Thank you.

Samuel Obed: Hello. It is still morning. What I am going to tell you is not about partnership; what I am going to tell is an experience of someone who has gone through the system to create the *Elmina Declaration of Partnership* between the University of Michigan and Ghana. Whatever I am going to say this morning is solely my responsibility and I owe no interest to anybody.

The outline will be an introduction, some partnership processes that we have gone through, and most important, the challenges that we faced as we evolved the Elmina declaration and how it has been sustained. We are told that the 1970s and 1980s were a period of hardship within this country. There were no obstetric facilities functioning in the country. There were only a few OBGYN specialists in the country and, because of their low salaries, they were very demoralized. If you look at Ghana, there were no OBGYN specialists practicing beyond Kumasi and Kumasi is just about a

third of the way from Accra up north. As a result, there was very high maternal morbidity and mortality.

We were also told that in the 1970s, the physician population ratio was 1:12,900. By 1985, it worsened to 1:22,900, and we were not making progress at all in the country. We were also told that between the 1960s and 1980s, out of the thirty doctors who qualified in the UK and have been sponsored by the Ghana government, only three returned home.

Now we were also told that in 1987 there was a meeting in London that drew representatives from medical schools in Ghana, Ministry of Health, the West African College of Surgeons, the Royal College, and the American College. This meeting was sponsored by the Carnegie Corporation of New York. We were also told that there was an agreement at this meeting, and the agreement was to develop a full local resident training program.

The objective given to this was that they were to ensure that maternal morbidity and mortality ratios were rapidly reduced. It was to improve on the infrastructure of the health delivery system in the country. It was also to recruit Ghanaian specialists abroad. Ghanaians who have qualified were enticed to come home and teach people like me to qualify. The sum total of this was that there should be an increased total number of obstetrician gynecologists in the country. The support, as we were told earlier this morning, came from the Carnegie Corporation of New York, the American College, the Royal College, and the Ministry of Health, Ghana. The program was inaugurated in Accra in 1989, and I was one of the four people from Accra who was enrolled in the program at that time.

Now what were the initial challenges? There were two existing groups of residents at that time: those who were already in the program and didn't know when they would finish, and those of us who were freshly recruited. People were looking forward to going out to support other family members, but not necessarily to earn medical degrees for themselves. And the condition in the country was such that they cannot just stay in this country, work, and feed themselves and their family and cater to their future. There was also mistrust between those who are creating this idea and the old residents. Some of us who were new were confused as to which direction we should take. Unfortunately, some of the old residents left and some of the new ones also left. But I believe that they will regret leaving.

What made the program stabilized? By and by, economics of the country improved. And after some agitations, the government accepted that the doctors in the country should be given an extra allowance - the popular

ADHA - which in that time was about two to three times their basic pay. That helped a lot. But most important were the resources that were churned out by the candidates who took the exams. We were considered to be the most successful department among those taking the exams in West Africa, Kumasi, and Accra.

As a result of this program for the University of Ghana, we now have a deputy provost of the College of Health Sciences, we have produced a dean of the School of Public Health, and we have a vice-dean of Post-Graduate Studies at the College of Health Sciences at the University of Ghana.

The past and current heads of departments at the University of Ghana OBGYN are from this program. The past Chairman of the West-African College of Surgeons Faculty of OBGYN is from this program. The past secretary and current secretary are all from this program. And also the current secretary of the Ghana College of Physicians and Surgeons OBGYN faculty is also from this program. In Kumasi we also produced the acting provost. If I had not been aged, I would have been the provost. But because Ghanaians retire after 60 years, that was impossible.

We have also had a dean of Medical Sciences in Kumasi, and the past three and current heads of the OBGYN Department who are all from this program. Kumasi has also produced a minister of state in Ghana. In the interim, there has been two other medical schools added to the existing ones in the country: Tamale and Cape Coast. The faculty members in these OBGYN departments are all products of this program.

Now the second level of challenge. At the beginning we were promised that there would be sub-specialization. This is very bad; there was no written document on this. So when people started to come out from this program, there was agitation for sub-specialization and Ghana was not equipped to take on that journey. However, this problem has been resolved by the formation of the Ghana College of Physicians and Surgeons. And currently in our program we have subspecialties in Reproductive Health and Family Planning, Urogynecology, and Gynoncology. There are plans to set up units for Maternal and Fetal Medicine, Reproductive Endocrinology, and minimally-invasive surgery.

What are the current challenges? The Carnegie funding dried up long ago and the Ghana government is not able to keep up with the support of postgraduate training in this country. There is some sort of discontentment coming up now because of funding issues. Because of the same funding issues, equipment has broken down and is not easily replaced.

At this stage, let me mention Professor Tim Johnson. I believe he is a Ghanaian, only he was born somewhere else. He has been a conduit between the Ghana programs and whatever is happening outside of Ghana. Through his instrumentality, we were able to bring the president of the University of Michigan on a visit. As a result of that, we have the *Elmina Declaration of Partnership*, which, as Professor Danso explained, has gone beyond the scope of OBGYN. All of the universities in the country, the Ghana Health Service, and the Ministry of Health are now with the University of Michigan as a key partner.

We know about the scope of the Charter so I won't go into detail with that. I think I will end here, do some discussion, and take some responses from you. Thank you.

Raymond de Vries: Thank you, Professor Obed. I failed to introduce Professor Obed. He is the head of the Department of Obstetrics and Gynecology at the Korle Bu Teaching Hospital. Some of you knew that, some of you didn't, so thank you again, Professor Obed, for your comments.

As I said at the outset, we know that many of you have been engaged in collaborations for quite some time. We would like to take the remaining 25 minutes before we break for lunch to hear from you on your reactions on what you heard today. As you've noticed this is mostly focused around our experience in the relationship between Ghana and the University of Michigan, so we would like to hear comments about that, but also things that you have learned in your collaborations. So we have this time to open up and hear from you, and I think I will be the one moving this microphone around. So, comments, reactions, experiences?

I do have to say that I like the metaphor that Professor Danso used of collaborations as a marriage. Because those of us who are married know how difficult it is to keep that collaboration going, but also to see it grow through the years. So please, comments.

Washington Hill: I'm Washington Hill from the HRH group in Rwanda. I think that one of the things that I've heard and one of the things that I tell people about how things are going in Rwanda (besides the cold) is that we – Dr. Stephen please stand up; he's my twin – have a model in HRH for twins. I actually have a twin; you don't know him. This is not my biological twin, but in the HRH program we have a twin. We work very closely with that twin. It has changed over the years in the program. But we work very closely.

What I have heard here and would like to share with you is that it is a two-way street. We learn from our twin because we come into a country with all of these ideas, but we learn that ... Stephen is very nice in saying, "That won't work." And then he learns from me, so that it is a two-way street: we teach them and they teach us, and that is the kind of collaboration that we want. The goal is reduction of maternal mortality and with my wife the goal is to prevent stress. We get very upset when we have a maternal death or when have a baby who is committed to a nursery with a temperature of 100.5, but then we have to step back and ask how we can collaboratively work to make that not happen. So that is something I would like to share.

Ray de Vries: Can I ask you to put a little more meat on those bones of having a twin? The concept is interesting but is there anything else you can tell us on what makes it work? Now, you have twinning. I know I have some colleagues in the Netherlands who have twins in programs in Africa, but is it something specific about twinning that you think makes it work?

Pauline Hill: Hi, I'm Pauline Hill and I am part of the HRH program as well. For me, I also have a twin, which means every meeting I go to, he is there. We collaborate on what we are going to present, what problems he sees as are going to need to be corrected in the nursery, then my twin and I go to the twins in labor and delivery and ask how we can work together. It is not about me, it's about how I can encourage them to work and to collaborate. It's just like a family. I have a lot more twins than I ever thought I would have.

Diana Wolfe: Hi, my name is Diana Wolfe, and I was the first HRH OBGYN in Butare. Butare is south and is a little bit of a smaller institution. One comment I can make about training is that the twins we dealt with were junior faculty and they needed to be sensitized by their senior faculty, like Dr. Rulisa, to know what the concept is of twinning. And that meant working together to do rounds, to do morning reports, to commence journal clubs, to commence simulations, and many activities that my colleague, Dr. Washington, is doing and expanding. That is what I wanted to say about twinning.

Kwabena Danso: I think that there is something that we need to take into consideration. Depending on the objective, there will be different players that will be playing. For instance, if you take OBGYN training. It is important to involve the Ministry Of Health, universities in our country, and the Ministry Of Education. It is important that we do recognize the role of the Ministry of Health concerning Liberia and Ghana.

In Ghana, for instance, postgraduate training is also under the Ministry of Education as well, the universities come under the Ministry of Education. But the health aspect also falls under the Ministry of Health. So you see the local irregularities. This should not blind us. It is the principle we are using to work.

Ray de Vries: That was really critical, these different levels of engagement.

Rachel Nardos: I am originally from Ethiopia. I grew up in Ethiopia, but I had my postgraduate education and medical school in the USA. So now I pretty much navigate both worlds and that actually has pretty much opened my eyes to some of the nuances of partnership and collaboration. I cannot overemphasize how important it is to, when you are trying to form this kind of partnership, work with people who really understand the culture of the place where you're trying to work. If you have the opportunity to work with people who know both systems and are able to navigate and bridge those gaps, it makes a huge difference. The reason why I am saying this is because I often times will go to meetings and places where my Ethiopian partners are presenting their case and I will be going there with my US partners, and what I hear and what I get from the body language and the cultural norms is completely different from what my American partners do. I can pick up a lot of things that other people are not able to. It is just fascinating to me how much those things go towards building trust and long-term sustainable relationships. I really would like to encourage this group that if you have access to people who really understand the culture and have strong Western educational backgrounds as well, to use them as part of your bridge. Thank you.

Yvonne Butler: Hi. I am Yvonne Butler with the Baylor College of Medicine, working in Liberia. I just wanted to piggyback on what my colleague, Rachel, said. I was also born in Liberia and raised in the US, trained in the US, and now I've been working in Liberia for 18 months. It does make a big difference. I actually had a completely different comment, but I wanted to echo your thoughts and say that you actually hear a difference. But you not only hear a difference, you have a unique ear. You hear as not only your native country representative, but you also hear differently as an American representative (if you are affiliated with an American institution) but both sides may not hear the same thing you hear. So it is actually a third ear that may not necessarily reflect what either of your colleagues hear. And I think that is the important thing. Liberians are finding ourselves really trying to implement this postgraduate program. One thing that has been focused on is the idea of decreasing the brain drain. There are different concepts on how we would do that, but one

concept is why not try to reintegrate Liberians who have left to return. But it is really important to know that as we do that, we may hear something completely different.

My second actual comment was related to collaboration. In the case of Liberia there is not one international collaboration but multiples in not only academic institutions but also a variety of NGOs and other international organizations. I have a question - what is the process of integrating all of those various bodies with their own agendas into creating a successful institution? I'll be interested to know if the University of Michigan has had a similar experience and how they handled that.

Ray de Vries: Frank, can you speak to that? Here is the comment. 'How do you manage when several different people with the same goal in the one country and several collaborations exist in the same country?'

Frank Anderson: Well, in terms of the obstetrics and gynecology training, there are other people that have come in and have provided inputs. I think there are different types of partnership. I think there are inputs that can be integrated in the larger program. But then there is usually a primary partnership. We have worked with Ghana, but we can work with other countries as well, and there has been some staying power in the initiative that we have. What are we funded on? So, we have maintained that relationship. I find that students get funding to do projects, other people get funding, faculty from Ghana get funded to come to our school, so your definition of partnership isn't just necessarily what you find in an activity. Do you know what I mean? I think the transparency and the respect that is built in the long term of academic partnering happens whether or not there is funding.

Rashwan Hamid: I like your presentation on partnership and collaboration, because I think it is one of the very difficult issues to achieve in many countries, especially when you have so many universities. In some countries things have been achieved in the formation of postgraduate medical boards; this brings all the universities together. When you count all the stakeholders together with the Ministry of Health, there is a body and a high-ranking board, which has access to the presidents and others. And so it deals with the situations regarding equipment and deployment at a higher level and it makes whoever comes easier. So there are countries now who have these postgraduate medical boards and they are working well.

Ray de Vries: Just as a quick follow up on this whole conversation – the embedded sociological comment – I know in anthropology sometimes

there is a sense that, “I am an anthropologist and I am going to this part of the world; I own this part of the world. I don’t want any other anthropologists coming to my corner of the world and doing research on my people.” I think your comments bring up that we come from the West to collaborate but we are not the only people coming to collaborate with you. So you have this plethora of people to collaborate. I do sense, from my limited time here, competition between, “this is mine here, what is this other university coming to do?” If we don’t acknowledge that then we also are set up for problems which we have to be upfront about -this idea of one level for them. Point everyone to the same goal. Other comments?

Jeff Wilkinson: Jeff Wilkinson from Malawi. Taking your hierarchal relationships a step further, imagine Byamagisha, Rulisa, and Mbaye are going next week to have a meeting with the Secretary of Health and Human Services in the US, and the labeling of partnership will be Makerere – US relations. It seems a bit odd and we don’t necessarily think that, but that is exactly what is happening in the reversal when we are saying the UNC – Malawi relationship, the Baylor – Malawi relationship, the Indiana – Kenya... I think you are getting my point. So I think that our partners will see that it is a useful thing to think of as you think of partnerships.

I’ve seen this a lot in the fistula world, where you have high-powered people talking to high-powered people and they start making rules for the relatively low-powered people without the discussion that is necessary to make that work. Being cognizant of these hierarchical dynamics and how our partners might feel about those and then avoiding those – Grace might tell you that in the fistula thing there were some issues and that we are making lemonade out of lemons right now.

Ray de Vries: I think that the idea Professor Danso brought up about one-world engagement is really important and should be emphasized here. See, the collaborations are kind of a middle-level but currently we need to pay attention to the people above us.

Doreen Ramogola-Masire: Hi, my name is Doreen and I am an obstetrician gynecologist from Botswana, trained in the United Kingdom and South Africa and working with an American institution. Often times I am asked, “Whose side am I on”, by the Ministry of Health in my own country and by the university that I collaborate with. So these are some of the things and I always say that I am on the right side of helping patients. One of the things that I heard about the training in Ghana is that it creates the way that we would like to go with the idea of management. I think the idea of just training the members in terms of technical skills and thinking

that they will ultimately lead, as my colleague just said, to maternal mortality reduction is not quite the case.

I come from a country that is relatively well off and we have a very new medical school. We do not have OBGYN residency training yet and what we find is that we have two major problems: problems of leadership and problems of systems. So you can have the best technically trained people but they come into a system where really the leadership is at the board level, the government level, the hospital level, and the Ministry level is not there. The systems are all in place. You have money but there is no oxytocin. So there are two things, and if we do not pay attention to those as we create our training program, we are really going to struggle in maternal mortality. And I am using my country as an example.

Irwin Merkatz: Well, first of all I'd like to thank Frank for a number of points, but I'd like to thank him for the transparency of the discussion that has allowed me to gain insight to myself. I think that's one thing I want to talk about in our collaboration and in our partnerships.

I am responsible for a very large academic department, which is well represented here by several faculty members, but I come from a community known as the Bronx, NY, which is known as working-class, immigrant population and not affluent. When we send people away, they say that we have enough problems right here in the Bronx, why are we worried about Rwanda or Ghana? The answer is we have to bring back to the Bronx what we have learned here in terms of partnerships. And I promise that I will.

In the same time, when I have several dozen faculty here, it means that somebody in the Bronx is covering their work while they are here, so the rest of the academic department is a partner to those who are getting their names in the paper or those who are in the meetings. So I want to thank the general department for allowing Diana, Sierra, or Alex to be here. So, those are the forgotten partners that really need to be brought into the open. Thank you.

Audience member: I think we have discussed a lot of things, but we haven't mentioned the fact that we are referring to the Ghana program but haven't mentioned those who have actually made the Ghana program work. And that is the doctors who are here that spent countless hours training the physicians. I think that each collaboration in the long term, those that are on the ground and those that are actually doing the teaching, need to be commended for what they have done and without them this could not have been achieved.

Kwabena Danso: I want to react to a comment from this side talking about leadership being key to getting things right. That is very true, and in fact, it is a part of this collaboration to also realize that when the leadership of maternal health has been properly trained and put in place, we will see a lot of changes going on. We have a paper that has been published in one of the journals proving that when you have posted an obstetrician at a district hospital, for instance, you start seeing calls for, “Hey, let’s have the oxytocin be replaced,” or, “I need an ultrasound; I need that; I need that; I need that.” So the essential thing is that in whatever system we are hoping to put in place, we need people operate the system.

As far as maternal health is concerned, it is the OBGYNs and their cohort that move that agenda forward. So it is important that we look at this training. It is important to make that leadership presence felt. That is what this collaboration is about.

Yirgu Gebrehiwat: In hearing the thoughts on this discussion, I was wondering what our main point is. Is it training more than 1000 obstetricians at the end of the decade?

The second point that I was thinking about is what kind of obstetrician we train. Do we want to train a super technician who started with all procedures, or do we want an obstetrician who has some attributes of a leader, some attributes of a teacher, and some attributes of a researcher who is capable of raising issues in (inaudible). So I think we need to think about the attributes of the obstetrician gynecologists we train.

The third point is that we know that something has to happen to achieve a different level of development. We have heard we are raising the high standards. So what are we going to do when it comes to strengthening the system, creating the necessary academic people who will train and maintain the system.

And the last point is that I wonder what the place is for regional associations of these countries. Because at the end of the training we going to be wider group of professionals and their countries. This program has to be positively received by the respected societies of this country.

I think we need to work towards something - not bilaterally with one US university and another US university as a partner - but to some sort of final collaboration between university professional associations. And then the government can work to bring the Ministry of Education or the Ministry of Health (or both) to the meeting so they can be involved in the process. The

last week is a story of the success that we have heard from the University of Michigan and Ghana as a one-to-one collaboration. Now we are talking about many universities. It will take a number of university arrangements and collaborations and a number of foreign institutions. So we have now some mechanism of organized relationships. Because unless there is an academic association of the relationship, I can possibly see an occasion where you are going to compete. I mean this is a reality - some of the relationships may work and some of the relationships may not work, so at the end of the day we need to find a mechanism of looking into what is happening and push up those relationships that have fallen behind, so nobody in those single relationships is working within a vacuum. Thank you.

Male African Participant: Thank you and many things are addressed by Professor Yirgu, so I only have one question which is that we have many partnerships in the pipeline for the program we are starting. So, do we really think that having multiple partnerships will affect the success of this partnership? Thank you.

Ray de Vries: Yes, that remains an important question. I don't think it necessarily should alter, but I think the possibility is there if we think about it. But other people may have thoughts greater than mine.

John Mulbah: My name is John Mulbah and I am an obstetrician from Liberia. I've sat here listening to the comments and also the concern coming from some of us. It is important that when we come here, for us to understand partnership and collaboration. If we take the country of Liberia, we are in desperate need of help, so we may collaborate with many parties. The partnerships will understand that they have to collaborate to achieve a common goal.

Because as I stand here, I am also a fistula surgeon, I manage the national fistula project in my country. I am getting help from Johnson and Johnson, I am getting help from Zonta International, and they are all partners. Fistula is the example that I am giving you now. I know that fistula cases are associated with lots of stigmatization. Johnson and Johnson is interested in training and Zonta is also interested in training. You will not get a patient at that hospital to operate if you have not mobilized the patient or sensitized the community. You have to understand that we have collaborated to achieve the common goal. This is very important for us to do and especially for people who are coming to the help of other people. Because many universities are using faculty to train our residents. We came to Ghana, we went to Michigan, we went to Baylor University, we went to

Boston University, and we went everywhere to achieve our goal. But the help will be coordinated. We will be transparent; we will coordinate the help.

Ray de Vries: Thank you for your comment. I should go to the back of the room. I have been favoring the front of the room. We will start here and then go to the back.

Joseph Ngonzi: Thank you, my name is Joseph Ngonzi and I am the Chair of Obstetrics and Gynecology in Uganda for Mbarara University. I just have two questions and then one comment. Listening about the partnership between Michigan and Ghana, we seem to find it successful. I pose to you these two questions: how did you manage to steer through the political environment and how did you manage to make a political will on your side? Because without local political involvement, then efforts can never be sustainable.

Number two is in a couple of different countries there is a sort of a ban on recruitment because of so many reasons; one of them is lack of resources to be able to recruit and retain some of these highly specialized physicians. How did you manage to be able to retain over 90% of the physicians that you were able to train? Because that is very important.

It is not easy to object to offers outside of our country, especially if they come with better pay. A case in mind is myself. I received so many offers to go where I am able to earn ten times what I am earning in my country. But I look at the future and I say, 'If I go, what will happen?' Many have gone, so let me stay and be able to erect the pillars, but hopefully the future will be able to judge me right.

My comment that I want to give lastly is that we are learning from failed partnerships at my university. There are some partners that came in and they were not very transparent, and at the end of the story, they were churning out papers, and interestingly, none of us were part of publication. And so when some partners came, we still listen and we say that we do not want to collaborate. But along the way we discovered, well, we need to change our mindset and be able to discuss a dialogue on equal terms.

And I'll just give one example of a partnership. They came and they said that one of our challenges is senior mentorship and residency training and service delivery and research training. 'How best can you be able to partner with us and achieve our goals as we help you to achieve your massive goals with us?' They have been able to support some residents by paying their

tuition and by giving them a small stipend and this has been very successful. So my comment lastly is for the African institutions. Yes, there is a challenge to try and bargain on equal terms, but there are many factors that seem to dictate who gets the biggest share. Nevertheless - for our American partners - it is very important for you to know that most of these institutions are young and upcoming, and as you come in, it is important that you help raise the capacity of these small institutions to sustain whatever program they are carrying. Thank you.

Ray de Vries: We are running a little late so I propose one more question, and if somebody from the Ghana-Michigan collaboration wants to briefly answer those two questions then we will move on. Does someone want to speak to those questions on how we engage politics between UM and Ghana? Professor Danso? And then we are ready for lunch.

Kwabena Danso: Well, the involvement of the government is paramount from the beginning. The agency of government that needs to help is the Ministry of Health. So we realize what is now the Ministry of Health was well represented from the beginning. The second thing is how do you retain? There are a lot of things that you have to put in place to make the partnership or the products of the partnership be successful. One thousand new OBGYNs is over and above what we would have achieved if we went at the same level. That is what we are talking about and the system in order to accommodate them.

There is panel discussion on the government to overview that. But in the Ghana example, concurrently there was a movement in the working conditions of doctors, where an additional remuneration was added - the ADHA; I think that was mentioned in the presentation. The government must be brought on board right from the beginning. That will be the job of the local parties. That is why in this assembly we have invited representatives from the Ministry of Health and also invited people from the Ministry of Education. That is the answer: you cannot just train and train for training sake. You are training to be used by a system. The confidence of the system is – in this case Ministry of Health – is very important, so let's bring them on board from the beginning. Thank you.

Ray de Vries: And that is the perfect opportunity to take this moment and ask the folks who are here from the Ministries of Health and Ministries of Education to please stand. I think we have done a really fine job of working on it. Anyone from a Ministry of Health or Ministry of Education please stand so you can be recognized. [Applause]. They will be a critical part of this whole process.

Frank Anderson: Okay, wow. What a morning we have had already. Thank you so much for your efforts and thoughts. I am just going to check with Madeline, but lunch will be from 12:30 to 1:30 and then we will have another plenary session about infrastructure and program design. We will be back in this room at 1:30.

Kwabena Danso: Good Morning! Welcome to the second day. Yesterday, we had the first session and I believe at the end of the day, the enthusiasm, the determination, and the commitment was obviously very high. The night also hopefully you rested well so we are refreshed to come and continue this day. We will begin by looking at a recap of what we did yesterday and then move on to what we have to do today. Essentially I am sure we are now in tune with the workings that we have in our representations and then break into the country partnerships and the worksheets. I'll have Frank take us through the recap and then take it from there.

Meeting Recap

Frank Anderson: Ray, our embedded sociologist, is going to make some comments in a minute. I wanted to just ... for myself and from everything that I have heard, and I get to hear from all of you guys, which is great because I can see people's eyes lighting up, and people getting this idea, moving their partnerships along, and building the relationships. The partnership session yesterday morning seemed to be especially touchy for a lot of people because it opened up some conversations for us that we don't usually have.

I wanted to thank Ray for coming here and opening up that type of communication, that line of communication because I think it had a nice effect on our small group work. The second part of our day was hearing the country stories and I was amazed to hear the variety of stories, to hear number one that so many countries are moving in this direction. I think 10 years ago, a conversation about training obstetricians and gynecologists or specialists in general was on the very low level. Now what I'm hearing is that all of the countries that are represented here are moving in the direction of having expert capacity in their country to deal with maternal care. And so it is happening and 20 years from now we won't be doing this.

We're at this time now to figure out how to make that happen for African countries to implement what they want and what we can do is not just American universities but other organizations, funders in a way that the support can be harmonized and collectively offer to you. Finally, you got to

get with your small groups. Some were one-country groups just meeting your Ministry of Health partner. Other groups had several partners in the same country. So there is a lot of good discussion going on, a lot of issues being looked at and a lot of transparency and a lot of progression and tremendous feedback. We had a nice dinner last night which was lovely and here we are again today.

We asked Ray gives a comment yesterday as a recap on the country stories but we kind of ran out of time. So great, I'd like you to come up to the microphone and give us your impressions and then I'd like to get your impressions as a group.

Thoughts and Impressions

Ray de Vries: Thanks, Frank. Frank had asked me to more or less pay attention to the country stories and make some observations about what I saw. Essentially I have four areas of things that I would like to talk about very briefly. This will be very brief. The first is transparency. The second is mutuality - back and forth. The third is levels of engagement. And then the fourth thing is models of cares.

So in terms of transparency, I am thinking across all the stories we heard yesterday and it was clear that in every story, transparency was very important. That is being open with each other about what you're up to, the nature of the partnership, and with whom your partnering. In particular what I found interesting in light of some comments both in the sessions and what I heard outside of the sessions is these partnerships are not exclusive. We had the metaphor marriage the other day but maybe the better metaphor for partnerships is polygamous. It is not as if once you are engaged with one partner that excludes other partnerships.

I was impressed with the collectivism of some of the countries' working partnerships - that is where they went to find resources, where they got engaged both within the country and outside the country, but I think that the underlying message about transparency is that we need to be transparent about that. We need not to be jealous when somebody says, "Well, I am partnering with this other person." As I was saying yesterday, no one owns these efforts; this isn't my country or my part of the country. That came through in many of the stories.

The other thing under transparency that I was impressed with is the idea of leveraging partnerships. I thought that was very interesting that you may have a partnership with someone that you can leverage to generate new

partnerships or to change people's mind in your own country because the nature of the relationship gives you some kind of credibility that you can translate into more resources for yourself and more resources for the ultimate goal of improving maternal health.

In terms of mutuality, this might be a little bit more sensitive, but in listening to some of those stories, I was concerned about were these partnership really mutual. Are we really willing to learn from each other or is unidirectional? That one partner has something to teach and that the other partner only has something to learn. I get a sense from that, and listening to these stories, and sometimes that felt like the case in certain countries, that it was a one-way relationship. I've used example before in Rome, so those of you who were in Rome will remember this.

I work in the field of ethics, and I'm concerned about the fact that we in North America and Europe think that our models of ethics can be directly applied to countries outside of North America and Europe. So we travel to Africa, we travel to Central America, and we say, "We have a model of ethical reasoning that you need to adapt when you do clinical trials and when you do clinical work." Most ethicists never listen to the way that ethics get done in these other countries.

So, we come in with our American idea of the best way to make a decision is each individual must decide, never keeping our ears open to say, "There's something about relationships and community that should inform ethics decision-making." So we tend to hear only one side of the story, and we think that our model is the only model that should work. After all, it started back with the Greeks, it was developed during the Reformation, and now we have these modern philosophers, never saying that there are other ways of doing moral reasoning that we in North America can learn from.

So that is an example of sometimes I heard this lack of mutuality. Somebody talked about what I could call 'Structured Inequality'. That is, when residents come from outside of Europe or North America, they are not allowed to touch patients. But we in North America can send our medical students to Africa and they can immediately begin giving care. I think we need to pay attention to that type of structured inequality.

What this calls for is something that I mentioned in my talk about being reflective. And I heard that coming up also in the topics that you actually have to stop for a minute think about what is going on here. Am I really respecting my partner? Am I honoring my partner? So, that is mutuality.

Another thing is levels of engagement - I think Professor Danso brought this up - which is the need for engagement on all levels. I saw that in most of the country stories that the collaboration kind of sits in this middle level but you need to engage people above you in the institution and in your country and the people were actually doing the work below you. The partnership is here, but it has to engage other players, especially players who have the power to make the partnership work. So I was quite impressed that Liberia (and there are other countries here, too) but we got to hear from Liberia yesterday that someone from the Ministry of Health was here, which shows that kind of clear engagement at that level.

Two more things, models of partnership. We heard several different models of partnering and I think that is why we are here. You have to be open to learn from each other and use different models of partnering, but I would caution us when we're being reflective about our models to say, "We want to provide training, but we also want to develop infrastructure. To what extent do our models generate well-trained obstetricians, or 1000+ obstetricians, but also how do they shape infrastructure that will continue this training beyond the life of the partnership?" When scrutinizing our model, I think that should be foremost.

And my final takeaway message is that it seems that probably the ultimate things that is important for partnerships is trust. In talking to some people yesterday, the question was raised - which I think is reasonable - isn't it dangerous to over scrutinize our partnerships? If you start thinking about fifteen ways in which partnerships should work, won't it lead to people saying, "Yeah I am kind of unhappy about that." I think we have to avoid that side as well, of being too cautious and too sensitive. Ultimately what we want our partnerships to generate, which is why we need transparency, why we need mutuality, is trust. That I can trust you and you have my interests in mind, and when you are pursuing your interests, you won't ignore my interests. Those are just a few of the things that I noticed yesterday. Thank you.

Frank Anderson: I know you have all read this book, but if you missed Ray's talk, it's on page 77. He has reflections on global partnerships and if you'd like to read more on Ray de Vries, it is available.

Our intention as we are recording all of these talks is that we will make transcripts and you will be able to have this in print as well at some point. But at this point, I would like to get some comments from the audience about your reactions yesterday, especially to your small group work, but also your reactions to perhaps the country stories and partnerships.

Kwabena Danso: So I will pass the microphone around. Show by hand and I'll give the microphone to you to give some comments. I'll also look around if I see that your body language is indicating that you have something to say, I'll give it to you. Yes, Yirgu.

Yirgu Gebrehiwat: Yesterday was quite a productive day in the sense that it created an opportunity for networking and created an opportunity for exploring what is happening in terms of postgraduate training in our respective countries. We have also seen the challenges and also realized that countries are in different phases of implementing a reasonable postgraduate training program. From the Ethiopian perspective, in the afternoon it has given us an opportunity to explore the best ways of pushing this agenda of having more obstetricians in the country. One of the issues that we reached a consensus on is establishing a consortium of universities, with four or five US universities collaborating with around four or five Ethiopian universities. We know that the need is huge.

We have currently thirteen medical schools in the country which have started undergraduate training and also would like to proceed to postgraduate training. If we use these resources only within four or five universities, I think it is probably a misuse of whatever opportunities that we have. One of the things that we decided upon is to have a consortium so that all institutions of higher learning in the country could be beneficiaries. We have explored the challenges of really going out of the main focus areas and into the other facilities or other institutions. But this is a work in progress and we will see which mechanism would be best to suit us.

The second issue that we have reached a consensus on is how we can centralize all the efforts into one institution, like an Ethiopian hosting institution that can track whoever is coming, what program they would like to run, etc. So that whoever comes in from the US not only benefits one institution but could also potentially benefit other institutions which may be ready for that particular kind of subject matter or that particular kind of patient care. So all in all it was quite productive. Maybe on the downside is that we are not keeping time. Maybe it is the heat or the humidity, the sessions were a bit long. Today, I hope that we will have more structured decisions and also some opportunities to go around Ghana and see the city of Accra. Thank you.

Kwabena Danso: Thank you. I am happy that you brought up the issue of time keeping. Today I think we will remind speakers that we will have to keep time. Any other comments?

Jean Anderson: Hello, I am Jean Anderson from Johns Hopkins, and I am extremely happy to be here. We have a fledgling partnership with Sierra Leone. I think we proceeded past the blastocyst stage yesterday and are a full-fledged embryo. I think that what has been so wonderful is the opportunity not only to meet our partner, Dr. Phillip Koroma, who is the chair of the department of OBGYN in Sierra Leone, but to then interact with those of you who already have partnerships in other stages of development nearby in the region, like Liberia and Cameroon, and to really learn from and be able to troubleshoot some of the issues. We talked a lot about how to start a partnership and how decisions would be made.

One of the things that I would be interested in hearing from others, hopefully in the course of today or tomorrow, is how you do that in your different partnerships. We talked about starting a board with some relevant stakeholders on both sides, including the Ministry of Health and the Ministry of Education representatives, midwifery representatives, and really heavily weighted towards Sierra Leone partners. Anyway, I just wanted to say that so far this is a terrific conference. I think what we are learning from all of you is just amazing. So thank you.

Lee Learman: Good morning, I am Lee Learman from Indiana University and we are in partnership with Kenya. Just to report briefly some very exciting news from the Ministry of Health of Kenya, from Dr. Mueke at our breakout session yesterday. We learned about a very recent strategic plan for Kenya which will require one OBGYN specialist at each of the primary care hospitals that may be planned throughout the country which will require the numbers of OBGYN specialists in Kenya to grow by about 500 individuals in order to appropriately staff those hospitals. This is all from Dr. Mueke, and I must add very quickly that this is all in the planning stages, nothing has been approved and there are no newspaper articles to be written at this point. But there is also a private-public partnership that is being established to help fund all of these training positions and the major challenge that we discussed at our table was, “Once they are trained, will they stay?” And how to be sure that this major governmental effort to more than double the number of specialists in the country yields the ability to retain the vast majority of those trainees. So any advice that you all can share with us will be appreciated. Thanks!

Kwabena Danso: Thank you. I’ve just been reminded that there are some people who were not here yesterday and have joined us today, so I would like to introduce them. We have the Commissioner of Education from Uganda, so please introduce yourself.

Robert Odok-Oceng: Good morning, everyone, I'm happy to be with you here. My name is Robert Odok-Oceng and I am Commissioner of Higher Education and Training. My work is policy formulation, monitoring and evaluation at the university level, and I also tend to advice on technical nature concerning universities that govern Uganda. I am very happy to be with you, because I think this is my first time to join you. When I learned that it was about the welfare of our mothers, I knew you were on the right track. Because in Africa, those who agree to our agenda, would agree with me that women are vital to the maintenance of the economy of Africa. Most of the time when you drive outside the city, you find that they are the one in the gardens with children at the back tilling land. Now imagine that women is sick or she has a miscarriage or that the child has died. What does that mean for production? It means that production will recede or will come down and you know Africa is still developing part of the world and we need all human resources for its development. I'm not saying that women in Africa will be working, because I am a man myself, but I'm saying that I am just telling you the truth of what is on the ground. Therefore what you are trying to do will help our mothers to live a healthy life and therefore will make them very productive.

My concern is what we have just raised. How will we retain those we are training, and how do we reach the real mothers? Most of our mothers in the urban centers in Africa already are doing well because they meet these services. But those who are really in need are in the rural setting. In the case of Uganda, medical doctors do not want to go to the villages and even nurses with degrees do not want to go the villages. It is really the midwives, the nurses with certificates or sometimes diplomas, and clinical officers who are the ones who maintain the health of people in the rural areas. I think this conference should also think about retention and how to change attitudes.

Teaching is about three things: it is about the transmission of knowledge, transmission of skills, and imparting the right attitude. I think we are doing well in knowledge and skills, but because we are not doing well with attitude, most of our people do not see the need to do exactly what they went for. Because when you are a doctor, you are not supposed to be in town to treat those who are healthy. You are supposed to be where the sick are. Today most of our morbidity and mortality is in the rural setting because of the economic background we are facing. I think this conference and future ones should look at that seriously. Otherwise, we shall do a great thing here but the morbidity and mortality of our mothers and their children will continue and African will remain to be backwards.

Stephen Rulisa: Thank you. I just wanted to share my experience on partnership. Having heard about different programs, I think the program we have here in our country is a bit different from the other models. We had a similar problem before where we had a US or European institution partnering with our institution. What happened is that when a donor comes with funding and comes to the program, the results that we get are the ones dictated by the donor and not the ones that we want. That's what we have been getting all the time.

Eventually, we figured out wishes from our national program accounting for what we want. And then the next step was to be to find a partner who would be willing to partner with us but we wanted to make sure that before that we know where we are going and the other person is taking you where you want to go. That was a problem. Before people would say, "No you don't want to go there, you want to go here." Then you follow.

We lived with that and it hasn't taken us very far, so eventually we found the program in which we know where we want to go and we have a partner who can accompany us on where we are going. That is where the HRH program was born. The Ghanaian program that was formulated. Then we had our objective where we want to go. And then we are looking for partnerships, who would be willing to accompany us on where we wanted to go. Then we are planning on putting together a basket fund whereby which all the donors who are working in our center put together all the funds. Now the government will formulate what we say, that if you want to partner with us this is where we want to go. So please put together all of the funds and then we will tell you where to invest in.

Now, that accountability. The donor also wants to know where their funds go, which of their funds. And then they had to check where their funds go. So that is where it came and then they had put together a consortium of US universities who we are willing to partner with. We don't see them as Yale, Duke, or Harvard; we see them as a group of partners who are partnering with us on the objective that we know.

It becomes difficult if you start managing one university that is driving here and another one that is driving there, you don't achieve a common objective, especially when you are working on the training program for the whole country. You can't work if one institution works with one institution and another university has its own institution. It's a common objective, there is one main consortium from the US, and there is one objective and one that has only end result, which I think is the best model, other than micromanaging things.

Yes, of course you have to micromanage a few egos here and there, but you know you have one objective and are driving towards one common goal. I think that is better than having several institutions who are working with several other institutions in the country. The objective won't be quantified at the end of the day if you come in a country and ask how many US universities? Ten. What are the objectives? Different. It becomes difficult for other countries to quantify the output. I like this forum because we want to work as a consortium. That you can quantify results, but I think the outcome will be better if the partnership is really works, as de Vries says. I like that. I usually enjoy hearing de Vries' presentations. So I just wanted to share our experience of the HRH program, which was spun out of such collaborations that where there before. I think the results are much better than what we had before. Thank you very much.

Frank Anderson: Thank you very much Stephen. That model is definitely something that needs to be considered, but it's a different model than what we are talking about. I think there is also some harmonization of that model which we can continue to talk about.

Models for Infrastructure and Program Design

Speakers:

Senait Fisseha, University of Michigan (SPHMMC), Ethiopia

Josephat Byamugisha/Meg Autry, UCSF – Makerere, Uganda

Bernice Dahn/Lise Rehwaldt/John Mulbah, Mt. Sinai – Liberia College of Physicians & Surgeons, Liberia

Ron Mataya/Grace Chiudzu/Jeff Wilkinson, UNC – University of Malawi, Malawi

Sierra Washington – HRH, Rwanda

Irwin Merkatz; Albert Einstein, USA/Rwanda

Frank Anderson: Today is a great day to talk about infrastructure and program design. This morning we learned about partnerships and I appreciate everybody's comments. I've received a lot of feedback too, because I think that understand the partnerships, the barriers, and the need for honesty and transparency helps everybody develop better programs. So this is the 1000+ OBGYN program and we are here to figure out how to train new obstetricians in country in a sustainable way and perhaps in a new model, where the obstetricians are working clinically but they are also working as leaders in the country.

They are also working with midwives, they are working with health workers, and they are working with ministries, etc. We've heard a lot about the Ghana – Michigan model, but there are other programs with other designs that we are going to use this opportunity to talk about. So I encourage you to take notes, listen, and see what sounds interesting to you or what sounds challenging to you. In the worksheets, there is a physical infrastructure worksheet. The word physical probably doesn't need to be there. Infrastructure in terms of what you need for your department, what kind of things do you need to have a functioning obstetrics and gynecology department with large. These are some guiding questions. What you hear today during this session are some guiding ideas and then your job will be to come together, to pull some of those plans together, and to write them down in something very concrete that we can use later.

The panel today is incredibly interesting and diverse. We've also added Sierra Washington, who is going to discuss the Human Resources for

Health model as well. Before we get started, I did want to recognize a couple of people. We have lot of academic partnerships here and we have professional societies here, but we also have some representatives from clinical professional societies or clinical professional support organizations. Doctor Alan Waxman, if you could stand up and just let everyone know where you are from.

Alan Waxman: I am from the American Society of Colposcopy and Cervical Pathology (ASCCP). One of the things that our organization does that could be very helpful to this process is that we have, “train the trainer,” programs that have gone to a number of countries in Latin America and Africa working with medical schools to teach cervical cancer prevention. We’ve taught colposcopy courses here at the Korle Bu Teaching Hospital. We’ve taught them in Kenya; we have taught them in Rwanda. We work with the Ministry of Health in a consultative manner to help cervical cancer prevention in Botswana. I just want to make our services available to any of you as you get your partnerships together and working. If you would like some help in the cervical cancer prevention. Cervical cancer does not kill as many women in Africa as maternal mortality, but it still has a very high rate, which is unacceptable, and like maternal mortality, should be completely prevented. So I’ll be here for the whole conference. Please contact me if I can give any help. Thank you.

Frank Anderson: I would like to remind us all that tonight at the dinner, during dessert, there will be an open mic. So if people would like to say some things, introduce yourselves further, or talk to the group that will be an opportunity as well. If you have something you’d like to add to the agenda, please let me know and we would be happy to work with that in.

Okay, so now we are going to start with my dear colleague from the University of Michigan, Senait Fisseha. She is originally from Ethiopia and is head of the Reproductive Endocrinology department at the University of Michigan, and she has started a partnership with St. Paul in Ethiopia. She just got in today. Thanks you so much for coming. Senait has an incredible story to tell about what she has been doing with her partners in Ethiopia.

Ethiopia

Senait Fisseha: Good afternoon! I'm going to start my presentation. As Dr. Anderson introduced me, my name is Senait Fisseha. I am originally from Ethiopia. I did my training in the US. Most of my OBGYN fellowship and post-fellowship career has been at the University of Michigan that has an incredible passion and commitment for global

women's health. Having had the opportunity and the fortune of working under Tim Johnson for so long, I have not only been infected with the virus to go out and do good, but I also have the internal drive to do this because I grew up in part of the world where maternal mortality continues to be a huge issue. As Dr. Waxman just talked about cervical cancer, for me family planning and safe abortion are pieces of that big puzzle that I think can be addressed to reduce maternal mortality in sub-Saharan African nations. With that, I will tell you a little bit about my partnership. The University of Michigan's new, robust, and ever-expanding partnership in Ethiopia. I'll be happy to take questions at the end.

So a little background. I see my Ethiopian colleagues here at the front who can expand further on this, but just to give you a little background for those of you who don't have the demographics. Ethiopia has an approximately, somewhere between the region, according to the literature, of 79 to 94 million people with an average life expectancy of 59 years. There is a decentralized health system. There are nine regions with two-city administrations, and my partnership at St. Paul is in the city of Addis Ababa. I also have a collaboration with Black Lion hospital, AAU, and as well as the Ministry of Health.

As most of you know the World Health Organization has designated Ethiopia has one of the countries that has a critical shortage of healthcare workers, not only in maternal health but in various areas. The numbers are critical for OBGYNs and surgeons where the ratio is 1 to 1.6 million for surgeons and 1 to 1.8 million for gynecologists. There's a little bit more data as you can see, I don't need to go through this, but the high maternal mortality, the low CPR and unmet need, as well as the large percentage of unwanted pregnancies. In response to this, one of the people that I admire and am inspired by busy former health minister of Ethiopia, Tedros Adhanom who, in 2012, Melinda Gates nominated as one of the 50 people who would likely change this world. Indeed, he is in Ethiopia. In his tenure as the health minister, he has done a lot of things, which included expanding the medical schools from three that serve 94 million people to adding a large number of medical schools, which, again, will have their own challenges that will not be discussed at this meeting. But again, massive expansion of medical schools; task shifting, whether we agree or not; as well as training very large number of community-based urban and rural health extension workers to address some of the needs, such as passing contraception, teaching hygiene, and so on.

In 2011, when Dr. Tedros was in the US ... I've been working in Ethiopia since my medical school and residency days with colleagues like Dr. Yirgu,

but it was an individual effort. You could only go so far to have a broad impact when it is an individual effort. My chair's passion and commitment and heart resides in Ghana, and I knew that was not going to change anytime in my lifetime. But in 2011 when I invited Dr. Tedros to come and visit the University of Michigan and see if we can explore partnership, the University was really persuaded by his commitment, by his passion, by his energy, and by his creativity. Tim said, "You know I've been working in Ghana for 25 years, and I think we've done a lot, so maybe this is time for us to look into a neighboring country. Not only to just build a program but also to facilitate south-south collaboration between Ghana and Ethiopia."

Tim and I followed with a visit in April. This is where Dr. Tedros asked us to work. This is an old hospital that is been there for about 47 years, but a new medical school. We just graduated our first batch in November. It is a five-and-a-half to six year integrated curriculum. The numbers need to be updated a little bit, but we started with about 1000 clinicians and 80 physicians. The number of physicians now is over 250 or so. They're building a maternal-child health hospital.

One of the things you asked us was if we could collaborate and really replicate what we did in Ghana. In terms of training OBGYNs as a whole, Ethiopia is quite ahead. The Ethiopian Society for OBGYN has been around for 27 years, there are about six residency programs throughout the country, close to 300 or more OBGYNs, but the challenge is in relation to the population. So it is not just having the number of OBGYNs, but having the number of OBGYNs in relation to the population, physician retention in public centers, and distribution to rural areas. Just like in most sub-Saharan African countries, we've had our challenges. This is where he asked us to put our effort.

This is our first class that just graduated in November. When we started exploring – I'm trying to provide some context because Frank has asked me to talk about program design and infrastructure. I'll try to weave in some of that story. One of the things when I went to visit St. Paul was that there was one OBGYN, who was MFM trained in the former Yugoslavia, I believe, and 18 nurse midwives. So, it was going to be a challenge to start in a new medical school. The second OBGYN was in a leadership position. She is this brilliant and amazing – who has become a dear friend and a sister to me – young OBGYN, but she has become the CEO and Vice-Provost for Academics, so she was extremely busy. So we asked what are our opportunities? If we want to build an OBGYN robust residency partnership, we do not necessarily have to fall into a mold. Let's look at where our interests lie and where our opportunities lie for a partnership.

Prior to Tim's commitment to work in Ethiopia, I would always say to him, "Tim, I want to work in Ethiopia can you help me?" He would say in response, "I'll give you the financial resources but I cannot personally commit." Anytime he sees someone who has an interest in Ethiopia – I see Dr. Irvin Merkatz in the crowd – he will say, "Go talk to Irwin; go to Albert Einstein. I'll support you; we'll pay 50% of your effort." Or Laurel Rice from Wisconsin would have an interest in Ethiopia and he would say, "Go work with Laurel. How can we support you?" He is that incredible person who has a big vision and does not see partnership as just Michigan or Ghana, but instead with a broad scope. We went to Ethiopia and visited, and we said that one of the things that we wanted to take into the partnership was what we have learned from Ghana.

Frank, Tim, and his colleagues in Ghana have taken a long time that I've gone through a very thoughtful process about partnership and I adapted the *Charter Document for Collaboration*, which you may have seen. That collaboration is based on these values: mutual trust, mutual respect, mutual benefit. One of the things that gets to me as a person was a product of Africa living in the US is when I see partners who will say to me, "How can we go help?" And yes you are helping but you are getting as much out of it in terms of opportunity for our residents, opportunity for our research, and opportunity for convergent science and collaborative teamwork. So how about this mutual benefit? Transparency, accountability, as well as communication in developing sustainability was the piece. We asked, "How can we develop this?"

The solo individual person, who was a department chair himself but was the only OBGYN along with myself, sat and said, "Okay, we know the problem." I said to him, "This is the opportunity I see – my passion is family planning and safe abortion; I want to design a program that is very different from the typical OBGYN residency program both in the US and in Ethiopia, that sort of marginalizes and puts on the side family planning.

Let's develop a training program that has safe abortion and family planning as an integral piece of the training, instead of something that we put on the side." Part of the challenge for me, working in the US, is that I will have people who will say, "I'll go help you, but it has to be about fistula," or, "I'll go help you but it has to be about abortion," or, "I'll will go help you but it has to be about PMTCT." So how can we design a program that integrates all of these things? For me abortion was important, because places that I've been to as a resident in Korle-Bu, Accra, or even in the US, family planning resides outside of teaching hospitals, it is usually the corner clinic; it is usually understaffed and underequipped. So I asked, "Can we look at this?"

That not only gave us opportunities to teach our OBGYN residents and medical students, strengthen capacity, but also funding opportunity.

Using the model of using family planning to reduce maternal mortality as well as do faculty development, we developed a competency-based OBGYN residency program. We had colleagues and experts like Dr. Yirgu, who came on board as a consultant to help us see through this; we borrowed curriculums from ACOG and the Royal College; and Vanessa Dalton, who is one of my colleagues in the crowd, has done a fabulous job with the international family planning fellowship that she runs both in Accra and Kumasi. We sat down and jointly wrote the curriculum and went through a national workshop so that we could get feedback from our colleagues in Ethiopia to ensure what works and what doesn't work, as well as work towards a standardized curriculum that could be potentially be adapted. We jointly wrote the grant to a foundation that supported our initiative.

The first year of a partnership was focused on faculty development. We started our collaboration in April 2011 to July 2012. When you are in a hurry and you see that kind of maternal mortality, the urge is to go form something and run. But then you look back and you ask why am I failing? We asked ourselves, “What we would do to make this sustainable, what would make this successful?” We recruited my superstar faculty – Dr. Balkachew sitting in the crowd. Just like most of the countries in which you work at, it's not just the shortage of OBGYNs, but it's a shortage of OBGYNs in the public sector. The pay difference is vast; the incentives to stay in public institutions are hard – you don't have enough equipment or enough supplies; and you get paid a lot less do not have housing. For me, it is a struggle to ask my colleagues to come work in a public institution when I know what hurdles they face. At St. Paul, we are somewhat fortunate. It is an interesting dynamic and one that I find very fascinating, in most countries, the Ministry of Education oversees education and the Ministry of Health is in charge of the health of the community. The former minister has started opening medical schools under the Ministry of Health. For me that makes perfect sense because you can align the health of the community with the priority of the people that you are training. We had tremendous support from the ministry, so we started building capacity. One of the things that we did was we recruited; we went from two faculty to seven.

What were the things that were bringing faculty to St. Paul? Right, because they are going to be paid little. We cannot change their housing, shortage of cars, or what have you. What brought them was the opportunity to have an academic career. There are a lot of faculty that sacrifice so much. Every

time I go to Ethiopia – and I've been going to Ethiopia for almost 15 years – I see Yirgu everyday going into and out of Addis Ababa University, Blackline Hospital. I really get filled with this emotion that, how can you get up everyday despite the hardship? Most of us would just get up and leave, but they have this greater purpose, the burden of taking care of an entire community. And being part of this community, part of this global community, where you have the opportunity to write together, to do research together, and to work on their skills is really what is bringing them. Balkachew came from private practice; I had colleagues who left JHPIEGO, who left ICAP Columbia. People were giving up high salaries in search of an academic partnership.

I cannot stress enough how much you guys, especially our colleagues from the north, bring to the table. Part of challenge ... you know when I meet with Dr. Merkatz we usually sit and ask where we get the money, because we have such a vast resource looking at our faculty, looking at our SIM centers, and looking at our fetal diagnostic units where they can come and observe, where they can come and develop their skills, and build friendships, and do research. So that is what we did. We built a very robust faculty exchange. All of them have been to Ann Arbor.

We built an advanced training, an advanced laparoscopy, and an advanced ultrasound - although they have women dying from post-partum hemorrhage, they also have women who would like to know before they have the baby if they have a child with a severe anomaly. The challenge for us is how do we balance that need to provide the basic service and yet support our colleagues in their quest to give evidence-based, high standard care.

So we were able to put these things in place as well as work on infrastructure, improving equipment and supplies. The hospital was able to get us five ultrasound machines. We were able to order a laparoscopy machine. We were able to get donations from industry to upgrade our laparoscopy training units. We are strengthening skills as well as building a robust learning resource center. In fact, I have folks from Michigan right now who are connecting us with tele-medicine, including tele-pathology and tele-radiology. So it is really not only developing a piece of just the faculty, but also upgrading the facility to allow for continual communication when we are not physically there.

After a year of faculty development, we inaugurated our first class in 2012. We were also able to get support from the CDC through the American International Health Alliance; we have a grant for the training program. We

launched our residency program a year ago. We accepted in the first year seven residents, in the second year fourteen. We are in the process of adding a few more faculty, so our goal is to not just increase numbers but to also maintain a high-caliber, quality program.

Just to summarize, our model for partnership is specialized clinics. Maternal mortality is high but there is a need for family planning, there is a need for higher-risk obstetrics, there is a need for fertility, and there is a need for minimally invasive surgery. We are supporting our colleagues at Blackline. We launched a fellowship in OBGYN oncology. So really being able to do not just kind of funder-driven, vertical partnership but expanding and trying to bring capacity and quality, just as we are trying to strive for ourselves a model for our partnership. An education beyond of the OBGYN faculty, spreading family planning training and integrating it in medical education has been high for us. Advocacy, leadership. As well as creating this culture of collaboration.

The University of Michigan is just an immense institute. Our collaborations are in women's studies, in the law school, in the medical school, in bioengineering. So creating that kind of partnership and creating that culture very early in our residents – the concept of team science and the concept of implementation science that Bert Peterson passionately goes around and talks about. We are trying to integrate those things early on in the training. Our collaboration was in the country involves the Ministry of Health. Our colleagues from Blackline AAU work with us very closely. We reach out to Makele and reach out to Hawassa. Outside of the country, we collaborate with Wisconsin was now graciously is helping to host an institution in the South, Hawassa. We collaborate with Jefferson. Jefferson has been an amazing site; the chair there is Bill Schlaff, a former Michigan alum who is committed to sending maternal and fetal medicine faculty to come teach as we launched our fellowship. We have a continual visit from Jefferson faculty, we have Wisconsin faculty, and we are creating that we do not have to be tunneled. It doesn't just have to be you and I, but kind of opening up this partnership broadly.

Our colleagues in Ghana have been tremendous. Richard Adanu comes every three months when his schedule allows it to do faculty development. Because Michigan has such a rich history with Ghana, and they are farther ahead in the training. They are reaching from the simple, everyday clinical research into translation – how we can import that? They have developed their strategy for research capacity under limited resources, which is a lot more applicable to Ethiopia than to Michigan. Really fostering that south-south partnership has been tremendous.

Here is a team visiting us from the University of Michigan for our international family planning meeting last year. Currently our program has expanded in just a year and a half. It has expanded beyond the postgraduate training in OBGYN in Family Planning. We launched a MFM fellowship in the fall. When I started a year and a half ago, the medical school was in fourth year with no postgraduate training program. In a year and a half now, we have a postgraduate training program in internal medicine, that the University of Michigan Internal Medicine Department supports; we have a general surgery residency program; we are looking into starting anesthesia and radiology this summer; we have a very strong enabling technology, medical education ICT team that our dean for global collaboration, Joe Kolars, oversees; and we are exploring ophthalmology as well as a fellowship under internal medicine.

This is a visit to our program by the former Minister as well as Dr. Messman who is the former Provost. As well, on the right is Joe Kolars who is our Senior Associate Dean for Medical Education and Global Partnership, as well as Roger Glass from Fogarty. So it has really been just an incredible opportunity for us at Michigan as well as for our colleagues in Ethiopia.

Internally again, the University of Michigan has this rich culture of internal funding so we don't always have to be limited by that, and the Provost's office put out an announcement for a 50 million dollar internal funding that is phased. We successfully were able to receive \$300,000 in the first phase pilot grant and we hope to apply for another three million dollars in November. But, that is to broaden the collaboration outside of the medical school and include biomedical engineering, include the business school that has been helping us in supply-chain and training our students in health systems. It is going to include the School of Natural Sciences and Environment, so we are trying to push it outside of the medical school. Sort of like our Michigan partnership, we call it, "Michi-Ghana." So we are trying to come up with the phrase for an Ethiopia-Michigan partnership.

My eternal gratitude to Tim Johnson, who is a true inspiration for me. If I get up and am in doubt about what to do, I'll just ask myself, "What would Tim do?" He is that type of person who has value and integrity and he looks at every human being with that same eye. So I have tremendously benefited from his leadership and mentoring as well as our funding from the CDC and anonymous foundations. Thank you for the opportunity.

Frank Anderson: Folks, that's how you do it. Isn't that amazing? So that is one model that Senait has been able to achieve and really mobilize in so

many other departments in our University. She has been able to take the lessons learned and apply them in a very short period of time. I think it is an example for all of us in universities. This idea of academic partnerships and university partnerships and how those make sense given these partnership ideas we are talking about.

Uganda

Frank Anderson: I'd like to call Josephat and Meg up to tell us about their experience in Uganda at Makerere and UCSF.

Josephat Byamugisha: We are two presenters. I'm Josephat Byamugisha. I am Chair of the Department of Obstetrics and Gynecology at Makerere University, which is located in Kampala, Uganda.

Meg Autry: I'm Meg Autry. I am Director of GME education at UCSF and the upcoming APGO President.

Josephat Byamugisha: Okay, good. So we are talking about Makerere University-UCSF OBGYN collaborative educational exchange, capacity building, and clinical research. We had a vision for the academic partnership and we were looking at a number of factors: that is should be collaborative, sustainable in training and education, should build capacity in various areas, strengthen health systems, should be clinically relevant, and also provide collaborative research. We should have an exchange of faculty and also we were looking to have supervised bilateral learning exchanges.

A bit of background goes straight to what we want to discuss. This is a bit of the complex from an aerial view. Where you see a number of buildings that is where we have the national teaching hospital. For us both Makerere University and Mulago National Referral Teaching Hospital sit in the same complex because we teach from patients. That complex has got very many other departments and institutions that collaborate. We are located within the hospital. Some of you who have visited us have seen our Department of Obstetrics and Gynecology.

Now one of the important things to consider as we talk about partnerships in collaboration is that the institutions we are looking at collaboration have got a vision and mission statements that they look at. For example, ours is to be a center of excellence in reproductive health in Africa. There are three main areas of interest: treating patients, that is service delivery; training, we are looking at undergraduates and residents, but we are focusing on residents; and also research that is clinically relevant and talked

about when we had the vision for the partnership. This is just a little bit of what happens in our set up.

We have a number of deliveries ranging from 30-34,000 by year. Our C-Section rate has ranged between 20-26%, for example. We have also lots of preeclamptic patients as well. One of the areas here is that when you look at the two - like the University of California, San Francisco and Makerere University - there are lots of issues that come up that we can share in terms of the number of patients but also in terms of the conditions that they present that the other group can share. For example when we go to San Francisco, California we can look at issues through technology and culture of care in terms of patient management.

For maternal mortality, this is our target. We want to reduce this. The main causes are induced abortions; postpartum hemorrhage, which is the biggest; periparturient sepsis one of the initial infections that is still killing a number of our patients, preeclampsia, and especially, eclampsia - we still get a number of patients who are presented with this. We still have obstructed labor - you get various figures ranging from this.

The other issue we are beginning to look at now that is killing a number of our patients is AIDS related conditions and complications. They are killing quite a number of our patients. These are all issues that are preventable. That is what is really disturbing us, is that all of these conditions could be prevented through a number of factors. Also presented here is the maternal mortality ratio for Uganda is at 348 per 100,000 live births. That is the latest one from our Demographic Health Survey from 2011. It is going down, but very slowly. Our target for the Millennium Development Goal 5 is about 131 per 100,000 live births. In other words, our meeting and collaboration falls exactly in what we are trying to do.

Somebody talked about sub-specialties and their success. In 2008, for us, we just decided to move into some types of specialties. The staff we had, we said let's group ourselves because we were having firms: firm A, firm B, firm C, on the same floor all doing the same work. So it was a move from within that if we moved into these subspecialties like reproductive medicine and family planning, maternal and fetal medicine, gynecological oncology, uro-gynecology, and general gynecology, we could do better. Some members had different interests and we just went in without having trained fast. We also thought that just being in a hospital may not be enough, so an aspect of community reproductive health is critical and we will have that as well.

We have some specialties listed out with staff in these different areas managing patients, but not trained as well. Now we look at our partners in San Francisco, California, they have all of these subspecialties. So it was actually fitting in quite well. Our indicators are quite difficult to really talk about because the figure still very. The doctor to population ratio is about 1 to 24,000; we keep getting different figures. Midwives are about 1 to 9000, but what we can say for example is that we think we have a deficiency of about 2500 midwives. That is also an issue. The number of obstetricians and gynecologists that we have should be ranging between 150 and 200 and a number of them are in active clinical practice. As he said, a number of them are concentrated mainly in the urban areas and that is an issue that is really critical for us. Staffing - we have 47 faculty; we are looking at both University and Ministry Of Health staff. For us in our set up, we work together as one unit and actually sit in the same department. We have 246 midwives with only 42 being in area labor and deliveries take place. We have about 120 medical students or undergraduates per year go through our department in different smaller groups. We have 50 residents. We also have a number of staff for PhD training, 8 of them. We also get about 29 intern doctors; some people call them junior health officers. Allow my colleague to say something here.

Meg Autry: UCSF and Makerere University have had a long-standing relationship of over 20 years, primarily in HIV and malaria research. More recently with us in medicine and surgery has been a more clinical approach. About five years ago a group of faculty from our department went and met with Josephat and his colleagues and did an extensive needs assessment, primarily with faculty but also including SHOs. Basically the three goals that we came up with together were surgical skills (skills transfer), faculty development, and research collaboration. The highlight of our collaboration today, is a long-standing MOU between UCSF and Makerere. In terms of skill building for their residents, we have laproscopy simulation training and remote teaching. We are working on clinical teaching and evidence-based medicine. We are also working on collaborative research and protocol development as well as research mentoring. And for faculty development we have a senior scholars program, which I'll talk about in a second. Training to competency is something we are working on as well as subspecialty training, which I will talk about in a minute. Lastly, we have faculty training, minimally invasive surgery, as well research collaboration and grant writing.

After we started this endeavor, or soon after we started this endeavor we actually hired our first global health faculty, and I'm sure for some of our North American colleagues this is interesting to some, it was the first

person who is actually funded with some monetary commitment by our department. The initial plan was through grants to be economically viable within two years with external support for the first two years. Basically, the model, which I hope is talk about later, is that this faculty member (some of you may know her - she did a family planning fellowship in global health at Harvard) works very hard to make the money so she can spend 50% of her time on the ground. She's actually generating her own support but she spends about 50% of her time in Uganda and at meetings. Her other jobs, as well as clinical support and faculty development, are curriculum development and research.

We collaborate with a 501(c) called Global Partners in Anesthesia and Surgery and they started a successful anesthesia residency in Uganda. Their subsequent project was actually funding junior faculty for one year, not only to help them with faculty development but also to hopefully include them in being hired by the Ministry of Health. Currently, GPAS has five senior scholars: one in anesthesia, one in surgery, one in OBGYN, and one in orthopedics ... so four. They are recent grads; we pay their salary for a year, they work on education projects, clinical faculty, protocol development, and research collaboration. They are primarily working with Ugandan residence on their research protocols, etc.

We do have a UCSF resident experience where we basically have a UCSF resident on-site the whole year. As many of you agree, we think that this needs to be supervised. The other 50% of the time that our one Global Health faculty isn't there, the rest of us rotate out through that. We have a pre-departure curriculum, and the resident salary, housing, etc., is supported by our department.

Other accomplishments - we work very hard initially on a remote teaching and surgical skills video which was very successful and published. Our 21 official reintegration grant, we were grant challenge finalists. Another topic that will be discussed more today is that we recently received sponsorships so that we can hopefully (and I know that our Moi colleagues are here) send a Ugandan faculty member to be trained at Moi for an oncology fellowship. More of that African-to-African partnership would be great to discuss and further explore. I'll leave it to Josephat to discuss challenges.

Josephat Byamugisha: Some of the challenges we have had, the issue of funding come up, especially in bilateral exchange, supporting the initiative, supporting faculty as has been highlighted, and issues over research seed money. We realized that for every research, however small it may be, usually need some form of support. We've had other issues, like

infrastructure at times in the training, you get someone who is coming over from UCSF and comes to a theater, looks at the theater, and thinks what I manage here. Then something may not flow very well, equipment may come in there as well. These are the issues that we have been looking at.

What I would like to say that is that even if somebody comes over, they should not be discouraged by the infrastructure that we have because it can be improved at times by just putting in ideas and talking here and there. That issues over territorial interests - during the morning session, somebody brought in this, politics was in there and a bit of medical tourism. However we are looking to have these coordinated, well coordinated. If you come in, what are your interests? How can you improve the department?

Now, issues over US and Ugandan faculty financial support. It may be easier, but some people assume that in the US somebody may find it easier to come over, but at time someone may have saved money for quite some time. But it is usually difficult when we say the same number of faculty should move from Uganda to UCSF. We may find that financing there becomes a real issue and something to look at.

Bilateral Exchange. We have observed that if we have the staff - senior faculty - coming in, some of the programs succeed more than if you only have some of the students. Because in terms of decision-making and influence, the senior staff and the senior faculty seem to do well.

Now another issue that is coming up and quite critically that we must emphasize here is the issue of observership versus hands on. It is coming up at a number of universities in that whenever people come from Africa and go to the USA, they are not allowed to touch patients. And when you come from the US and come to our theatre, we don't have a lot of problems. You have a number of them doing cesarean sections and so on.

This issue needs to be tackled and from our university I know almost every group is being told that we need to see how people can go, have hands-on, and also have a short time. If it is just observership then we would want that time to be limited.

Subspecialty training is coming up quite a lot. The focus in Africa has been on maternal mortality reduction, but this is going down and we are beginning to see that cancer cervix is being completely neglected and is killing so many people on the gynecological side. How can this be worked on as well?

Fistula. Just recently there have been a ton of people focusing on fistula.

Technology access is an issue. Though it is improving in Africa, I must say, in terms of mobile Internet and so. With electronic medical records, some of our departments had multiple copies. For example, you may find that a woman who was pregnant four times has got four different files. So that retrieving the previous information is an issue. So all of these are areas where we have met challenges and also there are possible areas for research and possible improvement. And the issue of databases for information, it is no longer a challenge and which must be very critically talked about concerning this meeting. In our department of obstetrics and gynecology at Makerere University, we have observed that for a long time we worked on getting American partners. Gynecology services have done well, so this is coming in very handy. So now we have numbers coming in and it is making us become optimistic that we will possibly start improving quite markedly. It brings us back to what we were talking at the beginning and it shows that all issues were highlighted here. These are the points that we think can be very critical. Always remember the mission and vision of the institution that is being looked at. Thank you for your attention.

Liberia

Kwabena Danso: Thank you, we will move on to the next presentation. We have the next presentation from Dr. Bernice Dahn, Dr. Lise Rehwaldt, and Dr. John Mulbah. Dr. Bernice Dahl is the Deputy Minister of Health for Liberia, so let's give her a welcome.

Bernice Dahn: Good afternoon to all. We are looking at postgraduate medical training in Liberia. Liberia, like many other countries here, of course was for very long time including today, lacking specialists in country. I believe we can count the number we have who are Liberians on her two hands currently for all specialties. The country and the Ministry of Health knowing the problem decided to mobilize resources to support young doctors to go out for training and to bridge the specialist gap. We realized that there were problems with some of the funding we mobilized. We get funding and the donor ties the duration to the funding to the years that you have to spend the funding. Most of the support that we get can train up to two years or less, and we all know that medical training - especially specialist training - is longer than two years. Also, there were challenges in even identifying universities and placing people, especially with the national health plan, which is very ambitious. We have fifteen county health hospitals in a country with regional hospitals. The plan is that by 2021, at least all of those hospitals should have the basic four specialties.

From the beginning we decided to be a little bit more innovative and so we decided that we are going to explore the possibility of training our own. While we were in the process of this discussion we had the opportunity to host the West African College of Physicians for the conference at the first of the year around three years ago and then subsequently the West African College of Surgeons. They both encouraged us to establish our training program and so we decided to put a team together for a study. We took all of the stakeholders: the dean of the medical school, the chairperson of the Liberia Medical and Dental Council, the president of the Liberian Medical and Dental Association, the Ministry of Health that lead the delegation, and the teaching hospital head. We decided to do a study of three countries: Ghana, Nigeria, and one of the universities in South Africa.

We first came to Ghana. When we came to Ghana we met the Ghana College. There were very encouraging and they give us all the support they could in thinking through how we could design a program and how we can move forward. They also provided the needed resources that could help us to move forward. And from there we felt that we wanted to design our program based on the Ghana model and there was no need to visit the other countries.

So we went back home. We found a technical working team. That technical working team first drafted the act. The act was pushed to our Parliament by the Liberian Medical And Dental Council and was passed. The technical working team also drafted a strategic plan. We did a lot of advocate cases around this, because you first wanted to know whether the physicians in Liberia would be willing to attend a postgraduate training program in Liberia. We did a survey, and one concern that they had was if the design was fashioned around the West African College model and we do the training with quality, then they will attend. And so, we took that seriously.

We use every opportunity we have for doctors to meet, to brief on where we were, and to get their inputs on the design. We agreed that we are going to start with the four basic specialties that are OBGYN, pediatrics, general surgery, and internal medicine. We also organized the specialists we had amongst us to form teams to develop the curriculum. So they designed the curriculum. We had the West African College curriculum, the Ghana College, and they designed and helped adapt the model. Some of our partners also helped to edit. We knew that we needed to first of all prepare young doctors for the entry exam. A good number of these people have been in other academic settings, they work in county hospitals and things like that. And so, the preclinical faculty volunteered to do the refresher

training for them and then an entry exam was administered. Eighteen candidates were admitted into the program with five in OBGYN. The program was officially launched by our vice president on September 30, 2013.

We have a lot of partners mobilized around this. We have 10 United States universities as a consortium to help provide faculty and then some others that are also helping along with the West African College Of Physicians And Surgeons. And of course, we have the Clinton Health Access Initiative who is working along with the Ministry of Health looking at the big picture, the strategies, the policies and things like that. I will turn over to my colleague John Mulbah. He will give you the details of where we are in the challenges and opportunities. Thank you.

John Mulbah: Thank you very much. Our challenges are not different from the challenges mentioned since this morning, like Ghana and other countries. So we have just decided to summarize the main challenges into clean categories. The first group of challenges is academic challenges. And under this we have difficulty funding faculty and establishing partnerships. Before the start of this program, Liberia had only three obstetricians for 3.5 million people. Of these three obstetricians, only one was an academic. As you can imagine, with one professor for the medical school and to now establish a postgraduate, we have to have faculty. The next was how do we establish the buy-in from local faculties? That was another challenge. And the third was how to integrate our academic centers with established residency training programs? This was another problematic issue. And, with the only existing faculty of medicine in Liberia, establishing a new residency program, the other challenge was how can we link the residency program with the undergraduate training?

And last but not least, changing existing policies in the Constitution to accommodate the program; this was a serious challenge. Our largest medical training institutions in Liberia, which is the John F. Kennedy Medical Center, had a policy or an act that created it and permitted it to not be a training institution because the chief medical officer and the internal leadership was appointed by the president, not by the Ministry of Education. Carrying on a residency program in such institutions can be very difficult. How can we change that to suit our goal? Of course with the challenges, we don't have to just sit and cross our legs. We try to see what we can do to overcome this. We establish partnerships. As I told you, with only three obstetricians we needed faculties and we established partnerships with universities in the US. I am pleased to introduce to you Dr. Yvonne Butler. Two years ago we were able to get her from the Baylor

University. Can you stand up please? We have here Dr. Lise from Mount Sinai University. And we are pleased that Dr. Lisa is the co-chair of the department, and she is the clinical coordinator for the department.

Besides other universities in there, we did not forget about our sub-region. We came to Ghana. Dr. Wilson who was here this morning - he was my mentor. He visited Liberia many times as an external examiner. The minister has instructed me not to leave me here; he will be on the plane with us. And we also proposed a change in legislation by challenging the parliament regarding rules in government existing institutions. This was very important for us.

The next group of challenges is that infrastructure challenges. It is controversial, but we selected seven institutions for the residency program in Liberia because we want our residents at the end of the program to already recognize situations in the rural area. Although institutions prepared for the residency program, we also needed to prepare them for the residency program. Identifying in one way for national residency program is another critical issue. Upgrading a facility for teaching and building an academic program. And lastly, a lot of support services, equipment, and drugs to meet the demand as mentioned by previous colleague.

Again, we try to overcome those challenges by doing the following: establishing partnerships to provide low-cost drugs and equipment and by establishing partnerships with the Liberian Dental and Medical Council to increase quality services. In our country, we have a medical council that regulates medical practice in Liberia, and this council is working closely in collaboration with the postgraduates to ensure that the training program in Liberia will meet the national and international standards. Also, establishing partnerships with financial institutions to assist with upgrading of infrastructure and adopting a rotational model for the program. Above this, we have been able to establish partnership with local partners and international partners to see how best they can help us upgrade our institution to be able to cope with the training program.

The last, I know, with all that we have said, is funding. Establishing funds to put into place and implement a residency training program and obtaining government financial support for the program; it could only help in financing the budget. You know and I know that when it comes to budgeting in Africa, to including a training program, even if the budget has passed, we do not know how long it will take to pass this budget. If it has passed, we do not know how long it is going to take to make this money available. We did this to overcome these challenges within a loan

application to secure a grant to assist with the funding. And, we also went to private foundations for grants and sought government funding. Initially what we did was to take a loan from the World Bank and this loan gradually will meet the requirement and grow a grant. And at the same time, trying to see how the government will do this.

Despite all of these challenges, five residents have started the OBGYN residency and the basic sciences training was completed and first competency examination was administered with 100% passing. Phase II of our training is currently ongoing. Public health, immunology, research methodology, are being taught now to our residents, and Phase III schedule is to begin April 1st. And for this Phase III, that will include the teaching of the clinical obstetric, whether normal or abnormal obstetric. Dr. Lise will be playing a very important role in that, and as I said earlier, Dr. Yvonne while the basic sciences were taught, she's doing the coordinating of the clinical aspect, the core schedules, this and that. Dr. Lise was appointed co-chair of the Liberia residency program and she is currently on the faculty of the Mt. Sinai Medical Center in New York, where she serves as director of the residency program before accepting this assignment. She is a member of the global health region of the Mt. Sinai Medical Center, and she is coming to speak to you on how we were able to build partnership with Mt. Sinai University.

Lise Rehwaldt: Thank you very much and thank you Dr. John Mulbah and Dr. Bernice Dahn. I'm very honored to be part of this team and partnership. I am going to talk a little bit about the Mount Sinai and the Liberian partnership. I'll first talk a little bit about the initiation some of the challenges and where we go from here. The initial Sinai partnership arose out of the Clinton Global Initiative in 2007. At that meeting President Ellen Johnson Sirleaf was there as well as board of trustee members from Mount Sinai. Out of that meeting arose the first inaugural mission of the Mount Sinai partnership.

I was very honored to be a member of the first inaugural mission as was Dr. Anne-Marie Beddoe, who was our new Director of Global Health for the Mount Sinai OBGYN systems. I can honestly say that that mission changed drastically and dramatically the course of my life. Since that time, multiple faculty members and residents have been coming to Liberia on a consistent basis and have been spending time in Phebe, in Bong County, and in Monrovia. This past January will be my 15th time to Liberia.

During my time as Program Director, with the visionary support from the chair Dr. Michael Broadman, we formally integrated of global health block

into the residency core curriculum within the PGY3 year. This was presented to and approved by the residency review committee. Residents are required to participate in a global health corp prior to coming. As of this time 15 residents have spent time in Liberia. This opportunity has changed their relationship with the global world, allowing them to experience and share healthcare practices in a low-resource setting and develop awareness of the culture community there practicing. Many residents have returned within the PGY4 year and have continued to participate after graduation. Our mission then as it is now his capacity building.

The need for this residency program is clear. With the aim of producing OBGYN specialist to respond to specific needs of the country's health care delivery system. Prior to this year there was no opportunity for formalized residency training in Liberia. Upon completion of an internship at JFK, the residents then spent 6 months in an intensive emergency obstetrics and surgical training program. This was actually, I think, a wonderful idea that Dr. Bernice Dahn was instrumental in, which really solved some of the short term problems for providing quality care in some of the outer communities in Liberia.

As we move forward with the development of this residency program, I think it is essential that we incorporate these house officers within the training program and focus on an expansion of the focus core curriculum. They will be an essential part of the short-term solution to providing improved quality care to the outer posts as a residents will require 3 to 5 years of OBGYN specialty training before they return to the workforce, ultimately becoming the leaders in their own residency program. While John spoke about some of the challenges faced in establishing the Liberian residency program, I want to share with you some of the challenges we now face as we bridge the newly established OBGYN residency training partnership.

The follow-up on this morning's discussion, I really want to stress the importance of transparency of the partnership in initial discussions. The establishment of a primary academic partnership in no way precludes collaborations. Partnership by definition will embrace collaboration and look at how best the needs of Liberia are served. We are very fortunate looking to the success of this academic partnership that this whole process is happening right now and there'll be very open discussions.

One of the challenges has been taking faculty and resources from a large center such as Mount Sinai that offers expertise ranging from genomics to

robotics and prioritizing these resources to fulfill the needs that are driven and defined by Liberia. In a country that has limited full-time faculty, we need to rely on volunteering faculty from academic partnerships and collaborators. Targeted faculty members have been enlisted for the development of core curriculum modules that will subsequently be given by visiting faculty over defined periods of time. Delivery of these modules will be combined with clinically related activities. As we move forward we will develop subspecialists will become part of this exciting collaboration and will be willing to spend short periods of time on a repetitive basis to establish continuity and development of meaningful curriculum modules. For example, in the gyn-oncology division, Dr. Ann Marie Beddoe and Peter Detino have been to Liberia many times and have expanded the services offered in Liberia, including the initiation of a pilot cervical cancer screening program. These screening programs will now be integrated into the residency training program, preparing these newly trained physicians to disseminate such programs throughout the country. These two individuals will be instrumental in the creative development of the overall programs to ensure sustainability and capacity building.

Our residents will continue to participate in the Liberian program during their senior year as part of the restructuring of the global health experience. Now with more full-time faculty on the ground, the amount of time the residents will be able to stay will be increased. Senior residents are excellent teachers and this collaboration exchange will benefit both Liberian residents as well as Mount Sinai residents. Consistent presence will also yield opportunities for collaborative meaningful research and patient safety initiatives. Liberian residents will also have the opportunity to rotate through Mount Sinai during their third year and will be participating in patient care under direct supervision, and this will be direct patient care. There will be a formal didactic curriculum design for that period of time, focusing in part in those areas that they were otherwise not exposed to.

Future plans – we want to focus on real-time MFM collaboration, participation in GYN tumor board, collaborative journal clubs, Mt. Sinai didactics will be available online, and consortium building with other institutions. But we need to keep in mind is that this is a very fluid project built on many moving parts. We know that much of what we will do will vary as circumstances change. Flexibility in program design is essential. We has an institution are 100% committed to see this partnership succeed and will encourage collaboration at all levels. Personally I'm committed to this process. People who know me very well concede that I am more at home in Liberia that I am in New York. Liberia makes my heart soar. This is truly an extraordinary time and we are truly blessed to be here with you all.

Malawi

Kwabena Danso: So, now we invite University of Malawi and University of North Carolina: Ron Mataya, Grace Chiudzu, and Jeff Wilkinson.

Ron Mataya: I think the Malawi partnership was probably the easiest one to work with because I came when everything else was done. I am Malawian but American at the same time. I work at Loma Linda University at the School of Public Health. Loma Linda is east of Los Angeles. I was seconded to the University of Malawi three years ago when we had the PEPFAR grant to help the Malawi government with lab services as well as clinical services. So I spend my time between Malawi and Loma Linda. I account it quite a privilege to be able to have two places that you would call home. I do feel at home in Malawi as much as I feel at home in Southern California. But truthfully speaking our partnership has been, from what I'm hearing here or from what I've heard, has been the easiest one to work with. Dr. Grace Chiudzu is the head of obstetrics and gynecology at the Kamuzu Central Hospital in Lilongwe, the capital of Malawi. Susan Raine is from Baylor University. Jeff Wilkinson who is euro gynecologist from UNC. We also have the Ministry of Health represented here in Dr. Titha Dzowela, he is with the Ministry of Health.

The reason why I'm saying that it has been easy was because the curriculum of the program has been developed in 2006 and approved by the Senate, the University Senate. What was lacking was the wherewithal to put together the faculty to do the training. It's always good to have movers and shakers in every organization so Grace and Jeff took it upon themselves for us, while I'd already started working and helping in the teaching in the department. I didn't know that I would end up being the department chair, which was the last thing I wanted on my plate, but Grace and Jeff approached CDC and said, "You know, it is about time that you funded something that is going to be more tangible and long-lasting, so go ahead and find the money." The CDC was very interested in funding without actually writing a proposal. We actually wrote the proposal after the fact. But the money was there and the CDC ended up giving us \$1 million for the next four years for the first cohort of residents. That was Grace and Jeff who really pushed CDC.

Our first meeting - which was quite confrontational in a way; friendly, but confrontational - was when we were discussing how we would run the program, whether the funding would go through the College of Medicine or whether it would go through another third party. They decided to give it through iTech. iTech, which is out of the University of Washington,

manages the grant and they sub-grant to us. CDC gives the money to them. Last night I got an email and they are apparently thinking that they will give the money directly to us in the second cycle, which is in a couple of months.

Besides having had the curriculum already approved by the Senate, we had commitment from our partners UNC and Baylor, who have had presence in Malawi for a long time. UNC started one of the earliest HIV maternal child health research centers in Malawi 22 to 24 years ago now. They have a state-of-the-art research center, which is used for training various people from birth, the Malawi government as well as the US. Baylor has the Childhood HIV and AIDS Center next to the teaching hospital in Lilongwe. And with the funding, we were able to gather ourselves together and say, "Well, we have the money, what are we going to do next?"

Coupled with that was another fortuitous funding source, the Norwegian government has given us \$1.2 million to equip the teaching facilities, both in Blantyre and as well as in Lilongwe. What was the outcome of all of the negotiation was the fact that we have two campuses where we run the program, one is in Lilongwe and one is in Blantyre. We inaugurated the program in November of last year; the Ministry of Health inaugurated the program, and currently we have six residents who have started the training. We believe that our curriculum is strong. We are working very closely with the University of Cape Town. We have just been on my way here. They will support us with the first part exams. The reason for that is that the majority of our residents or specialists who were working in the country ever since we started sending people out to train have been trained either at the University of Cape Town or any other university in South Africa.

Fortunately, I must say that the majority of them have come back home to work, very few have stayed out of the country. Also there's been recognition on the part of the government in the Ministry of Health that there needs to be some incentives greater than just a salary to help our people come back home and settle.

If you speak to Dr. Dzowela here, he will tell you that that the government is really seriously revising their remuneration packages, particularly focusing on highly-trained, highly-qualified individuals i.e. physicians being some of those. The challenge of providing the kind of equipment - for instance laparoscopic surgery; we do have laparoscopic equipment in Malawi but only in two or three private facilities. For us to manage that at the Queen Elizabeth Hospital or the Lilong, Central Hospital in Lilongwe is quite expensive, not only to purchase but to continue maintaining that sort of

sophisticated equipment. So we would be looking at perhaps using the private hospitals to train our physicians and so on.

The challenge that I can say, for me personally, as the coordinator of the program is to be running between two institutions. I spend one week in Blantyre or spend two or three days. But I must say that it has been made much easier because, really at least I feel so, there has been really transparent communication between my colleagues. I can phone Grace any time of day, Susan or Jeff in Lilongwe and say, "When are we going to have the next meeting? Who is coming? Who is going to work?" I know who is coming, I am told who is coming to work, and we get them registered with the medical council.

I really honestly haven't felt that there has been any of the usual birthing pains of a partnership. It is a partnership that is sort of really morphed out of serendipity or whatever you might want to say, but we honestly didn't really go through the nitty-gritty of saying what are you going to be doing, what are you going to be doing, and you stay where you are and I'll stay here, and so on and so forth. It looks that so far we have started off very well.

And also the challenge of managing grants when you have such large amounts of money; I'm now spending more time honestly managing the money rather than sitting in a clinical setting. I sit in a meeting, I sit with the procurement committee, "How are you going to buy this, where are we going to buy it, how many coats are we going to get, and when are we deciding to buy what?" It is kind of a good problem to have, but I like clinical medicine and bedside teaching, but I'm really honestly spending much less time doing that than managing the grant itself.

We hope that as far as placing the trainees, we give that to the Ministry. The Ministry will tell us how many people they need for training. In the next few years, we hope that they will be the ones to tell us how many they need and how many they will accommodate. Seventy-five percent of health care in Malawi is provided by the Ministry of Health, and 25% by the Christian Health Association. The scholarships are available to every Malawian whether they are working for the Christian Health Association. The CDC funding funds tuition for our residents bearing in mind that the hospitals are not run by the College of Medicine. The hospitals are the Ministry of Health. So the college does need tuition for the residents to provide the training. That so far is going to work well at least for the next 4 to 5 years, when we have the obligated funding from the CDC. Thank you very much.

Rwanda

Kwabena Danso: We are running far behind time so we need to stick to time and get things sorted out. We will invite Sierra Washington to give a short presentation and after that a break.

Sierra Washington: Thank you for slotting us in. This is sort of an impromptu addition so I thank you very much. My name is Dr. Sierra Washington and I'm in the division of Global Health and Family Planning at Albert Einstein College of Medicine and I am also visiting faculty specialist for Rwanda Human Resources for Health. I stand here today before you really as a member of Human Resources for Health, Rwanda, because we have heard a lot today about primarily bilateral collaborations or at most trilateral collaborations between North American and African institutions. I was very impressed with the Minister from Liberia talking about what their needs are and hoping to engage multiple North American institutions.

I would like to take a moment just to highlight a different model that has not been mentioned as of yet today. As Kate Somers from the Gates Foundation said earlier this morning, including Gandhi or Martin Luther King, that essentially our collective action can often have a greater impact than the sum of her individual actions.

With this in mind, HRH, Rwanda, has taken this approach in terms of institutions and has said that we want to put academic institutions separate agendas and egos aside and do something that is led by Rwandans for Rwandans. It is really led by the Rwandan Ministry of Health and the National University of Rwanda. It comes from funding through PEPFAR and the CDC.

Basically the motivation came from the triple imperative of addressing health care disparities both the moral imperatives, the epidemiological imperative, and the economic imperative. I think that is what brings us all here today. The goal was clearly set out to train and retain a whole new generation of physician teachers and researchers across all disciplines in medicine. So not only OBGYN, but medicine, pediatrics, anesthesia, surgery, midwifery, nursing, health systems management, and I think this came about because Rwanda stood in a very unique situation. It had similar demographics to many of the countries that we heard from today, but it had the added suffering of the genocide 20 years ago. Many people fled or were killed and so there is an even greater shortage of doctors and specialists. So they basically said that we need a whole new generation of doctors.

So they set about to create a comprehensive human resources capacity building program for the entire nation. The model was really the establishment of an academic consortium led by the Ministry of Health, the National University of Rwanda, and sixteen US medical schools, six nursing schools, one school of public health, and two dental schools. So really, this was an invitation by Rwanda to come join us, help us accomplish our goals. It was funded by PEPFAR, CDC and Alma Foundation and facilitated through the Clinton Health Association. We have heard a lot this morning in a discussion about the idea of how do we create enduring partnerships. This had a slightly different goal, I don't think the goal of the Rwandan government was to necessarily create enduring partnerships with these 20 some odd schools, but rather the goal was to train and retain a whole new generation of doctors. The program would endure for seven years with the idea that there would be residents within each of these disciplines that would graduate with faculty from these schools for their entire training.

Basically, the program functions all over the nation. There are five main teaching hospitals in the nation and OBGYN functions in three of those hospitals: the University Teaching Hospital in Kigali, the University Teaching Hospital in Butare, and Muhima District Hospital, which is the highest volume maternity hospital, which has about 20,000 deliveries per year. In the coming years, there may be engagement and the other two teaching hospitals, which are Kinombe Military Hospital and King Faisal. In addition, though, HRH has sent nurses, midwives from the US public health schools and nursing schools across district hospitals nationwide.

So what does it mean? It means that they are full-time faculty from these twenty-some US institutions based in Rwanda. By full-time I mean that people come for a one-year contract, and their contracted through the Ministry of Health to teach and train the Rwandan postgraduates and undergraduates. The main partners are the Ministry of Health and the Rwandan National University. In OBGYN, we are here today many of us, but we comprise Albert Einstein College of Medicine, Brigham and Women's at Harvard University, Duke, University of Maryland, Yale, and also NYU. I stayed here as part of a team of seven plus OBGYNs who are full time in Rwanda at the request of the Ministry of Health and the National University. I stand here also as one of 150 US faculty who have been deployed by the Ministry of Health across the nation to serve the goals that they have set forth. We have six visiting generalists, two full-time maternal and fetal medicine faculty, one female pelvic medicine and reconstructive surgery faculty, and then superimposed upon these full-time US faculty are short-term rotating subspecialists from any of these lead institutions in the field of OBGYN. Again, I am merely speaking about the

OBGYN part of the program but you can imagine that there is something similar happening in midwifery, and nursing, in an surgery, and in anesthesia whereby there are full-time faculty on the ground nationwide.

So I just wanted to take a moment to allow us to think bigger and potentially think collectively and dream large about what all of us could do together. Here in this room, we are about 20 North American institutions and 20 African institutions, and we are talking about largely one or two or three people doing something together. But perhaps we could dream larger about how 20 more academic institutions could help Liberia, for example, or could help another area and consider another form of HRH or another form of collaboration. Thank you.

Frank Anderson: Wow, just incredible work, incredible partnerships, incredible models. I hope that everyone picked up on all of the important aspects of the different models and are ready to incorporate that into your worksheets. You'll now have an opportunity to get together with your groups to work on them. We are running a little bit behind. I'd like to make a proposal for a change in the agenda that we don't come back together at 5:30 today but we simply stay in our groups and once you finish your worksheet, you can eat dinner. Or 6 o'clock, whichever comes later. Until 6 o'clock, if you can work in your workgroups and then we can let you know when dinner is ready and then we will all meet down in the main lobby, outdoors, where we will have a nice dinner. We will also have an open mic and I encourage people to give us some other thoughts, some follow-up, further introductions, things you'd like to offer. I would also like to talk to anyone who has a monitoring and evaluation model that they may be interested in presenting tomorrow afternoon because we have some time for that as well. I'll turn it over to Madeleine and she will give us our logistical instructions.

Frank Anderson: Our next speaker is Dr. Irwin Merkatz from Albert Einstein University. Dr. Merkatz has been the chair of the OBGYN department longer than anyone else in the United States. He has a lot of experience and a lot of experience with Global Health as well. We are happy to have him here with us today.

Rwanda

Irwin Merkatz: Good morning everybody! Stand up and stretch after an hour! Thank you! Relax, take a deep breath. I was faced with a little choice this morning, which was whether to focus my comments on the partnerships part of the meeting or on the curriculum part of the meeting.

With your approval, I have chosen to start with just the partnership. I have in reserve their curriculum piece and I have a fair representation of the faculty here to talk specifically about the curriculum.

I'm an obstetrician gynecologist, I'm a high-risk pregnancy expert, and I'm a regionalization expert. I've worked with development of innovations in maternal fetal medicine, screening tools, etc. So I've done a few things that are really at the sophisticated level of providing safe maternity care, but my overriding mission is this slide.

I come from the Bronx New York. New York has five boroughs and the one that is in the heart of it is Manhattan, which people equate with being New York. But Manhattan is only one of five boroughs in New York. The majority of people do not live in Manhattan. The majority of wealth exists in Manhattan. The majority of companies are headquartered in Manhattan. But the rest of us live in the boroughs. And in the boroughs of the Bronx, the working-class people - laborers, people who have middle-class incomes live in the Bronx. We have a number of hospitals in the Bronx. And in one of them the immigration from Central America and the immigration from Africa is clustered. Particularly the immigration from Ghana is in the community that we serve in the Bronx. So as you will hear and as I mentioned in my comments, I am interested in what I bring it back from this meeting to those partnerships in the Bronx.

I have a large department. Along with the school the overall mission is to promote the ideal of health for everyone. Here is the department. The medical students are in the dean's center of the picture. In my center of the picture as the resident program director, the residents are in the center of my diagram. To train the residence, I have 120 clinical faculty, almost all of whom are board-certified and many of whom are subspecialty dually certified. The resources for the curriculum stem from the needs of the residents, the needs of the students, and the expertise of the faculty. Well, that expertise is shown in all of these subspecialties that we represent. We are unique as an OBGYN department to house the medical genetics subspecialty, which more often is in a department of pediatrics. But since medical genetics deals with two things; it deals with reproductive genetics involving mother and baby, and it deals with cancer genetics, which is focused on inheritable diseases affecting women: breast and pelvic cancers. We have the substrate to spend the rest of my life or many of your lives trying to transmit all of that knowledge to our friends, our colleagues, our partners in Sub-Saharan Africa. I for one plan to do that. The goals and objectives are to encompass the domains of education, which we are going to learn from Elevate and from our partners across the ocean, the domains

of research and service, which intersect in overlap in all of our actions. Service is at the heart of what we stand for.

Our story began about seven years ago. One of my residence at the time, Dr. Lisa Nathan was interested in providing service in sub-Saharan Africa. She got a grant from the Einstein Global Health Fund and a Fulbright Fellowship foundation to study what she was doing in Kyiv Agoura region of Rwanda. That is just across the lake from the Democratic Republic of Congo. Many of the physicians who serve in Rwanda, come across the water from the Congo. We have access both in Rwanda and in the Congo. This is to depict the geographic topography of that area of Rwanda - mountainous and hilly. Pregnant women have to make their way to the hospital across these hills to deliver their babies. Our major focus is how to surmount this transportation difficulty.

Rwanda has a populations of less than 10 million people. But 57% of them are less than 18 years of age. So this is a young population, which child rearing, childbirth, and sexuality are all consistent with a youth population. The per capita income in US terms is five dollars a year. The life expectancy at birth is only slightly above 50 years. And who serves these young women and men? There is only one doctor per 18,000 inhabitants. Worse yet, there is only one nurse for over 7,000 inhabitants. And by the term 'nurse' we are including nurse midwives. So there is a shortage of healthcare providers of all types.

We are here trying to train more obstetricians in Ghana. We are also going to try to do that and Rwanda. But we have a much more basic need, which is to train healthcare providers in general. This is a curve of the maternal mortality ratio trends in Rwanda. After much debate I included this little arrow, which stands for 1994, the year of the genocide. And you can see what that did to the more turnover mortality ratio in that country. The maternal mortality ratio in the year 2000 was over 1000 and it has progressively lowered since then. The data are here. But to get a healthcare provider in a referral hospital, the community health workers have to get progress of moving that pregnant woman through the system to a district hospital. We are focused on what happens in that movement in the district hospital.

There are three major delays in the model of healthcare delivery. The second delay is in reaching care, transportation. We have tried to limit that with the birthing center and with healthcare carriers. The Fulbright had us do three different models, one with a birthing centers, one with mobile teams, and a control group all a distance from the Kyiv Agoura District

Hospital. We have employed all sorts of technology in the training of health workers. They have brought them to the Bronx. We have trained them clinically with simulation, because they cannot touch an American pregnant woman. But with simulation models and the training we are able to do that. So I have doctors in various countries who have volunteered their efforts in reducing maternal mortality, including Dr. Dimasio who works in the Ghana Ridge Hospital with an interdisciplinary group, trying to lower mortality in Accra itself. But as I learned yesterday, planning for successful collaborations - and this is the courtesy of Ray de Vries, who taught me so much yesterday - employing technology, educational expertise, and experience for the on-site motivation and enlistment of competent developing physicians, good intentions are not enough. Respect, reflection, and the two variations on the golden rule are important.

Two years ago, the Clinton foundation started the HRH in Rwanda with a number of university OBGYN departments. I was aided to join that in the last minute because they do not have maternal fetal medicine components, so Einstein was the last participating member and we have based ourselves in partnership with academic director whom you've heard from, Dr. Stephen Rulisa. Stephen, can you stand up please? Would you come up and be here with me, side by side? So Frank, this is our partnership. We are brethren. We are getting to know each other. Please stay here because I want your input.

There are two sites. Stephen is at Kigali in my group is Butare. Dr. Lisa Nathan wanted us to go to Kyiv Agoura, so I've learned that geography.

Why are we in Butare? Because the medical school is there; it is the academic center; and because we have a commitment and dedication that the Einstein faculty brings. We have to be cognizant of the two sites as we staff for it. These are the physicians who have been there in the first two years. Sierra Washington, who we mentioned earlier and gave the previous presentation. Sierra is now at Einstein, and she is going to direct the program in Rwanda.

We focused on midwifery, on simulation, and training in various curricula modes. We have rented a house where we live while we work. And the subspecialist input is to sustain the curriculum. Shorter stays allow for contribution and overlap. Every two months I have had somebody, at least one or two, members of the Einstein faculty in Butare over the past two years and we had just made a commitment for year three to be together. We can bring the information back to the faculty has all with weekly emails that everybody can read as to what is happening. We play grand rounds,

which keeps them up to date. Consultations with the global health activities group. This is our commitment, we come back to the community, which is full of the Ghanaians that we serve in the Bronx. When somebody asks, “Why don’t you stay here? Why do you go to Ghana?” It is because we are all one world and we all work on one side. Thank you very much.

Curriculum, Faculty Development and Assessment for OBGYN Residency

Speakers:

Hillary Mabeya, Lee Learman; Moi University - Indiana University, Kenya
Joyce Browne, Renee Filius; Elevate Health, the Netherlands
Blair Wylie, Joseph Ngonzi; Mbarara University - Harvard, Uganda
Karen Adams, Diana Curran, Balkachew Nigatu; OHSU/UM/SPHMMC
US & Ethiopia

Frank Anderson: From 9:00-10:30 we are going to talk about curriculum and curriculum development. We are going to hear some presentations about different ways we can have curriculum development. And again, I'll open the mic to the audience to hear your ideas and thoughts about particular curriculums, harmonizing curriculums, and bringing curriculums together. There are lots of interesting projects to hear from. We will learn about projects from Lee Learman and Moi University, Indiana University, from Elevate folks, and also Diana Curran who is working on a curriculum project with them, and Blair Wylie with his partners as well. So we will start with Lee Learman.

Kenya

Lee Learman: Alright, thank you so much, Frank. Can everyone hear me in the back? Great! Well, good morning, everyone. It is my pleasure to spend a few moments with you, providing a context for Dr. Mbaye's presentation to discuss subspecialty training in gyn-oncology. I really want to thank the University of Michigan and our Ghanaian hosts for a really historic meeting. I think one day we will be looking back on the moment of yesterday, today, and tomorrow and realizing that we were there when something special was evolving. It is just a pleasure to be sharing this day with all of you. I would like to also mention the rest of my Kenyan team here. Dr. Simon Mueke is from the Ministry of Health and it's been wonderful to get to know him better. The Ministry has recently been reorganized and he is the director of reproductive and maternal and child health at the ministry.

It is also a great pleasure that we are joined by Violet Nabwire Opatwa who is the Associate Dean for the Moi University School of Education. It has

been wonderful to get to know them better. I think it will be instructive to talk a little bit about AMPATH because unlike some of the new programs, reproductive health has been the leading edge of the wedge of change.

In the case of AMPATH, we are the relative newcomers. We are the five year olds sitting at a table with fifteen or twenty year olds. In 1989, sort of at the same time that things were starting to happen here in Ghana, there were two leaders from Indiana University who were internal medicine physicians. They went to Kenya and established a partnership from Indiana University and Kenya to help develop the second medical school in Kenya, the Moi University School of Medicine in Eldoret, as the district hospital was becoming a teaching and referral hospital to help develop educational and leadership programs to get all of that moving and started.

Turn the clock ahead to 2001 when the HIV pandemic becomes so dramatic in this part of Kenya, the entire program morphed into an HIV prevention program with a USAID grant in 2001. From that IU-Moi partnership, the entire AMPATH consortium was born. The consortium includes Indiana University, Moi Teaching and Referral Hospital and the School of Medicine, and, in addition, nine other North American institutions. The leads for reproductive health have been the University of Toronto with Indiana University and some visitation by Brown University and Duke along the way as well.

The HIV program was a smashing success and I think it is important to mention where things were as we started in reproductive health. By the time we came along in reproductive health in 2007, when we had some presence from Duke University, the University of Toronto and Brown. By that time, amazing things had already happened in HIV care in the western rift valley area that we were responsible for through AMPATH. By today, AMPATH provides care for 160,000 HIV positive patients. It includes medications, agriculture, food, water, ways to sustain families, ways to get people back to work, and the focus on HIV to the exclusion of other things was a very positive thing in terms of impacting health. There are 2,000 new patients seen per month in the HIV program and over a million home-based counseling and testing sessions that have been conducted and perinatal transmission has been driven to less than two percent.

By the time reproductive health comes along in 2007, we are just beginning to see some visitations from North America. In 2008, Indiana University and Toronto made a commitment to sponsor reproductive health. And by 2009, when our first field director - who is here today actually, although she has moved on, Sierra Washington - established our first year round

presence in Eldoret, Kenya. By this time, the HIV program had been a huge success and we were coming along as the relative youngsters to try to develop reproductive health programs.

Now the partnership started as I mentioned in 2008 and ramped up in 2009, although we were only five years old and are the youngsters, we have been able to do some important things. You'll hear about one of them from Dr. Mbaye regarding cervical cancer screening, but there are some other things that we have facilitated: robust exchanges of faculty and students between North America and Kenya; we added a family planning module to the HIV care (imagine all of this wonderful HIV care if there hadn't been a family planning module in the various centers where this was happening!) so that was the first thing; creating emergency obstetric kits; getting out into communities with community health workers, decreasing maternal mortality in our responsible area of Kenya; and starting a MMED program, which is more relevant to today's conference.

Several years ago, we were delighted to see that approvals had been performed and we were able to help with some curriculum support to develop the first MMED program at Moi, which now still has not graduated its first class but in full form will have about 10 graduates per year. In the meantime AMPATH itself has expanded from its HIV focus to primary health care; chronic disease management; maternal neonatal and child health; and in a remarkable and very important historical event, the primary grant from USAID to transition from Indiana University to Moi a couple of years ago.

Now all along the way, there has been a culture of partnership, respect, and reciprocity so when I talk about being the child at the table amongst older siblings, I'm talking about it on the Kenyan side as well as the Indiana or consortium side. Within our infrastructure there some very good things about being one of the later programs to join.

You've heard the formation stories of new programs that lead with reproductive health; it is wonderful to hear. But when we came into AMPATH after it had been in existence for a while, we found a culture, which was a very good culture. We found bilateral leadership. Every program, every department - all of the structures that we have - have paired leadership models. However it is also very large organization. There are institutional leaders; they are distal leaders; and there are programmatic leaders. There is a School of Medicine, there is a Teaching and Referral Hospital, and there are ten other North American institutions.

Nevertheless, it has been fun to become part of this. It has been wonderful to hit the ground running with these other structures in place. The one challenge, however, has been what happens within our AMPATH families. We talked about marriage, we have talked about polygamy, but I would rather think of it as a family in a consortium. So imagine you are sitting at a table, it is family-style dining. All the food goes into the middle of the table and all of the children are sitting around and you have a 15-year-old and you have a five-year-old. Who is going to get their hands on the food?

In other words, as the five-year-old we have to advocate, we have to speak loudly in order to get the attention that reproductive health and maternal child health deserve. The parents love all of their children. They are all beloved in all of their missions are important, but because the origins of the program are in HIV care and maternal health and reproductive health have come later, it creates some unique challenges for us that some of you may be able to avoid having reproductive health lead the way. Okay, enough said about that.

I would like to introduce Dr. Hillary Mabeya. Dr. Mabeya is not only currently the chair of the academic department and chief of the hospital-based service for reproductive health at Moi, he has also been present at every step along the way of this history. He was one of our first Kenyan collaborators to join us in almost every program that I've mentioned to you today. His particular interest is in fistula repair and fistula reentry of fistula patients postoperatively. Amongst the many outstanding African leaders who inspire us today in this room, Dr. Mabeya is counted among them as an award winning fistula surgeon both in Kenya and regionally as well. His main interest, what keeps them up at night in the wee hours after he is finished with his day job, is helping with fistula repair in a special hospital that he established in Eldorat for that purpose. But he is here today to tell us about that particular program and the necessity of developing subspecialty training in gyn-oncology as a consequence of early detection of curable cervical cancer in Kenya. It's a great pleasure to introduce Dr. Mabeya.

Dr. Mabeya: Thank you so much, Professor Learman, for that wonderful introduction to our program at Moi. Good morning, everyone. When I was sending this abstract I didn't know whether they will accept it or not because it was focusing on training 1000 residents not OBGYNs, but here I was coming with a subspecialty. What prompted me to send this abstract was we kind of started the same program at the same time. Residents program and then in between before we could even graduate our first class of residents, we introduced a gyn-oncology program from nothing. We

didn't have teachers to trainer fellows in gyn-oncology, we didn't have the structures in place, and I am to show you how we have managed to get our first-year fellows in their second year and almost graduating. So, this is the development of innovative subspecialty training in gynecological oncology for low-and middle-income countries. I'm predicting that Kenya and most of the other African countries are leaning towards middle-income countries in the next twenty or thirty years, I believe, maybe less.

This is one of the outcomes of partnership. Riley Mother Baby Hospital at Moi University is a modern center for care. Initially, this place was a private hospital but it has become a public hospital and I'm happy to say that I think from last year April maternity services are free in Kenya. The new government declared that. Of course there are challenges but we are working towards those challenges for free maternity care for all women walking into a public hospital.

We looked to innovate a subspecialty in gyn-oncology. We looked at previous curriculum development, clinical teaching, and assessment of OBGYN residency. We looked at why —why did we want to have gyn-oncology? We know that the pattern of female genital cancer is very high in Kenya and even in Africa as a whole, and gyn-oncology is the most preventable women's cancer in Kenya. The figures are quite high; 2,635 cancer cases every year and about 2,000 deaths every year. At the moment we have about three gyn-oncologists in the whole country of about fourteen million women, whereas in other countries like Canada, there are one gyn-onc for 200,000 women.

This is the first kind of training in Kenya. The current masters in residency and gynecology is not sufficient enough to treat a cancer patient. The reason is that sometimes you see a patient who has been operated outside the district hospitals with advanced cancer. Maybe the gynecologist is making the wrong decision in terms of at what stage do you do the surgery. So patients are coming with advanced cervical cancer and ovarian cancer.

We started quite early in terms of introducing a strong screening program in Western Kenya. This one started from a small research fund in 2009 of about 150 HIV-positive women and then from there, after the research was done and published, we started a program of screening through the same collaboration and in 2010 we had did about 1,500, but we moved up to over 20,000 I would say towards the end of 2013. That means the number of women who are being screened within the hospital setting and in central clinics has gone over 30,000 at the moment from just 150 patients we started our research with in 2009.

This is a little older, but it shows how we have scaled up our screening program in western Kenya, where we have trained masses to do colposcopy. Initially, that was a precept of gyn-oncologists, but we think that some services can be provided by others especially our nurses who are doing colposcopy and LIMP. The purpose of the subspecialty was to train gynecological oncologists to provide the best possible care in leadership and in Kenya and elsewhere, and to create a national referral center in gyn-oncology and to establish a strong collaboration in education and research in gyn-oncology, and to maintain a cancer registry in gyn-oncology.

Of course we have challenges. Lack of trainers for our fellows. No budgets, no training facilities, and even no trainees, people interested to be trained. There are no existing standards and no relevant curriculum and a brain drain to external or internal destinations. It took us almost four years to get our curriculum approved from 2010 from the first meeting of postgraduate the committee, stakeholders meeting, all the way down to the College of Health Sciences Academic Board, the University's dean's meeting last year, November 2013.

We also looked at collaborations with the University of Toronto, Indiana University, and another. And internal operators of Moi University, Moi Teaching and Referral Hospital, where we are housed. Other institutions like Kenyatta National Hospital, which is a private hospital in Nairobi where our residents do their electives, because in Kenyatta National Hospital they have high-tech radiation where our students go to train for electives. And of course the Ministry of Health. Our curriculum was based on a model that I am going to explain shortly. Online training modules and Skype with experts, our students do exams actually online.

We looked at the training program in three phases, initially the University of Toronto was to provide a chief medical examiner. The second phase for Moi was faculty support, who are going to qualify with support from the University of Toronto and Indiana University and then finally the program would be managed by Moi University with consultation with the University of Toronto and Indiana. That means in the third phase, Moi University would take over the program, because we will have produced fellows and they will take over the program.

The program has two structures: year one and two. The admissions requirements is a Masters of Medicine and special recognition from the board, and membership in the Kenyan Obstetrics Society. The training program will have earned a degree in Masters of Science in Gyn-Oncology. Initially we thought of putting it as a PhD, but we thought the advantages

in clinical training. There were issues around turning it into a PhD, then we said it would take another four years for approval, lets move towards a masters in gyn-oncology for now. Then this one will address the women's cancer in Africa because we intend to admit students from neighbors. We might start from our immediate neighbor Uganda, maybe. It is innovative in design and implementation. This is a cancer unit that just came out of the collaboration. It is under construction and I think in a year and a half we should see a modern center for both chronic disease and cancer management with radiotherapy and other facilities.

This is Moi Teaching and Referral Hospital entrance. When I was coming from the airport, I was amazed by the organization of public transport vehicles, which is different from my city. There is a lot of congestion, a little bit. That's what I have learned during my short stay in the beautiful city of Accra. There is a lot of space, and a lot of organized public transport systems as opposed to my town which is congested. Thank you so much.

Frank Anderson: Thank you, that was quite amazing. It seems like fistula surgeons always stay really busy clinically and with their education programs. We notice of there are a lot of fistula surgeons that do this kind of work. It is also interesting that the MMED program - we'll talk about certification tomorrow - the idea that you can pass the curriculum through your university to create a masters degree or a degree in gynecological oncology versus say in the Ghana College we create a certification in gyn-oncology perhaps or the West African College where they have to get approval for all the West African countries just like the American Board may have to do that or the Royale College. It is interesting for us to think about how a person becomes a specialist in something and who says they are. I showed you the definition of an OBGYN yesterday. The level we are talking about is an academic level, but on the certification level, we have to think about what is it that indicates that this person is an obstetrician gynecologist who can train other people and do sub-specialty training. Because I think that is related to retention. If a person has those credentials, that leadership capacity, that ability to function in the country fully, then that is a very attractive thing. And that is what we have found in Ghana as well. So let's keep that thinking.

The next group that is speaking is a group called Elevate Health from the University of Utrecht in the Netherlands. We met at a meeting where we were talking about fetal monitoring and also in relation to OBGYN training the fact of having obstetricians allows next level of care. We were interacting by email when the World Bank grant became available to do

some reproductive health training. They contacted me and in conjunction with the activities at this meeting, the World Bank awarded us one of ten grants to do a pilot project to on reproductive health education. They are here to tell us about it. You've heard about them through their preeclampsia course and all the interviews, so they will give you an update on that and then we will hear from Diana Curran about a curriculum project that is also funded through that grant. Thank you.

Elevate Health Presentation on Online Curriculum

Joyce Brown: Thank you for the introduction. I would also like to express our gratitude for being here. It feels like a very special honor and flies very close to the vision that Elevate was founded with to be here. So we're very excited to introduce you to what we do, what we hope to be able to establish within a consortium for the consortium and led by a consortium, as well as the methods that we do. We will also introduce the World Bank grant that Frank has introduced already.

Elevate is an online Academy that provides e-learning for postgraduate level and continuous medical education. It is an organization that was founded by academic partners, three partners within the University of Utrecht, the University Medical Center Utrecht, and a third academic partner with in Utrecht. The foundation and a strong nesting within academic settings also means that we offer accredited courses for ECTS that really are equivalent to the Masters courses we provide like a Masters of Epidemiology. From last September, we established a social enterprise model that would allow us more flexibility to move quicker parallel to the university bureaucracy. But still the same founding partners are steering Elevate so that is good to realize. What is unique about Elevate is that we only focus on health sciences, both graduate training and also continuous medical education.

This is a website. The end of the presentation we also have a slide so you can access the website's virtual learning environment. We will provide you with the username and password to you can just have a look and feel around and have an introduction to the tools that we are using. And we will also go more in-depth on Saturday during the online education session.

The World Bank proposal had four main objectives and I will quickly run through all four of them. The first one was really strongly linked to this meeting. It is to develop a blueprint for the online academic education that could be provided within a consortium. Ideally, as we just saw with gynecological oncology that has been so well developed in Kenya, it could be perhaps a waste of resources to do it all over again somewhere else if

you have a good model, a functioning model elsewhere. And that is where we could imagine online education to be a part of. The second one is to consolidate and evaluate existing and available online resources for OBGYN training, evaluation, and certification. This is what Diana I will explain later. It is to analyze the collection of resources that already available so we don't reinvent the wheel; we want to use what is already there.

The third point is to develop an online pilot course. And that is a pilot course we have been emailing you about on many occasions. And we also started the first recordings yesterday. That was really exciting because it shows that through videos, interviews, and lectures that we record online can have a very nice foundation to develop courses. That is what we will develop in the course of this year; the deadline is July of this year to have the first pilot ready and then we will also happily share that with you. The fourth point is to create a guiding document and a Charter for Collaboration, so that is actually Raymond de Vries project that was also embedded in a World Bank grant.

What Renee will introduce to you now is the online pilot on hypertensive disorders that we are now preparing. This is a pilot - many members can wave to indicate if they were part of it - and we have Dr. Danso who is part of it, Meg Autry, Lee Learman, Karen Adams, and Diana Curran who provide the content and provide leadership in making sure the course objectives meet targets that should be part of the training course for residents and OBGYN. This course will be about eight hours of study material in addition there will be other self-study materials like readings etc. Renee will introduce more of the course.

Renee Filius: Hello, my name is Renee Filius and I will just to you briefly the steps of the will take in order to develop the pilot course. The first step is formulating the learning objectives and the topics that will be included in the pilot course. This is just a work in progress so feel free to add any remarks on anything and we will continue working on this next Saturday. Like Joyce already told us, we're still looking for lecturers and if you would like to be interviewed please contact us, and again we don't want to reinvent the wheel so if you feel that you have any appropriate content please contact us so that we can include it. We will make sure to identify the appropriate learning tools.

We have an online toolbox and a virtual learning environment and you can see four categories. The first category include more traditional tools like reading materials and lectures that you can watch. The second one includes

assignments that you can do and you also have quite a lot of learning materials and learning tools that you can use to interact with each other and collaborate with each other. The course will not be self-paced, it will not just be self-study but you can also interact with each other and with the teacher who can teach a course with a start date and end date with a lot of interaction. This is just a screenshot of the virtual learning environment that we will be using. What you see here are the icons of the type of learning activity and in the second column right here is the name of the topic and you can see whether it is a required learning activity or just an optional one. And you will also see how long it will take to do this specific learning activity and whether or not it is possible to interact with each other. If you select one of those learning activities, you will start the learning activity.

This is what it looks like but again as Joyce told you, you can try it for yourself. There will be a lot of interaction possible if you want to, so you can go to the base where you can contact each other. This is just an example of the online discussions that are possible. We also have a tool for web lectures. It's not just watching, we can also include multiple-choice questions if you needed feedback. Below you see the questions and then if the video reel stops and you have to answer the question, and after answering it you get immediate feedback whether it is correct or not, why it is correct, or why it is incorrect. Then at the end you get a summary of all the questions and whether they were correct or not. You can also click on the correct or incorrect things at the end, you can go back to the explanation. We also have modules to teach students or residents how do clinical reasoning that we will be using. We have a tool to develop online modules but again if you have appropriate content that you think we should include, just contact us.

This is how we would like to do it. Here is where we're at right now in February. We started developing the pilot course a while ago and we hope to deliver the pilot in July of this year. We would like to include all of the suggestions of the experts and we would hope to include and collaborate the physical structure that will be formulated here. So we will use both downloadable tools and tools that are available online. With these contact details, you can look for yourself online in the virtual learning environment and try the links. We will also circulate these details so that you can do it from your hotel or from home next week and you can have a look and just walk around in the virtual learning environment. If you have any questions or if you would like to add anything, just contact us. And then coming Saturday, we'll have an educational meeting and we will discuss the development of the pilot course. We will also demonstrate more teaching

tools in more detail and we will also show you some examples of other courses to get more ideas. If you are able to visit the Saturday workshop, please do so. Thank you very much.

Joyce Brown: To give you a little update on what we did yesterday, we started with the recording for the pilot course. We had the Cameroon team sit together at one table and have a very interactive case discussion. The case is about a preeclamptic patient, preterm at 32 weeks. And the idea was that the resident would have different learning moments in this one interview. So they discuss the case, then the resident would need to think about when we import it in the virtual learning environment, think about how if I saw this patient what would my investigations be? What would the questions be that that I would ask? What would be my management goals and objectives? The similar thing we did also in the afternoon as a very nice example of the Rwandan partnership. Dr. Rulisa and Dr. Hill were unavailable to sit down and be interviewed and they also discussed the case. So that was a very nice example of how you can create material in a conference, parallel to a conference like this when everyone is here together. We will give you more updates about that.

What I also want to recap is to really encourage you to visit the website and visit the online virtual learning environment before Saturday. On Saturday we would really like to dive in to the role of online education within this consortium and would like to invite you to think about this. What do you see in a role for online education? What could that role be? What courses could be created and developed? So that's what I would like to invite you to on Saturday.

Diana Curran: I just have a few things that I want to say. Good Morning. My name is Diana Curran. I am at the University of Michigan; I am the residency program director. I am just incredibly honored to be here. I can't echo enough what Dr. Learman said; I think we will all look back on this and say wow what an incredible few days and I am incredibly honored to be here. And it wouldn't be here if it wasn't for Dr. Senait who approached me in July 2012, and I don't think she got all of the sentences out of her mouth before I said, "Yes, yes, when can I go and help in Ethiopia with my wonderful friend Dr. Balkachew?". It's just been a wonderful experience and I look forward to many, many years of mutual friendship and learning together. That being said, I also want to say congratulations to Dr. Danso and Dr. Anderson, this is really a great meeting and a wonderful facility. What I have here - I tried to print this this morning but I apologize, the printers were malfunctioning this morning; but you will be provided this - is my initial list of resources that I have found. By no means is this

comprehensive but I have provided also the websites and I hope Dr. Waxman is happy that I provided the ASCCP website for people. But there is a lot out there and I am still in the process of working with one of our librarians at U of M to get open access for people, because I have two jobs to Dr. Anderson gave me. One is to help develop curriculum, and I am enjoying working with the Elevate people and I think with all of your help, which I hope anyone who is here Saturday will come and help us. That part I think will be really tremendous. But the second job that I have been given is online access for all of us. I think that really is key so that when all of you are in the middle of the night working in your hospitals and sub-Saharan Africa you can access up-to-date information. And I found quite a bit, more than I thought I was going to but some of this is websites where you can get more information.

If I have left things out, it is an error of omission, so please me know. And if I left something out, I am happy to include it. Again, this sheet will be with all of the stuff that Madeline sends out. And I'd like to give a big shout out to Madeline; good job organizing this event. Thank you.

Uganda

Mbarara University – Harvard MGH Curriculum

Frank Anderson: Blair Wylie and Joseph Ngonzi from Harvard-Mbarara University in Uganda are speaking today on their curriculum project.

Joseph Ngonzi: Good morning. I will try to project my voice a little bit because I am trying to fight off some Ghanaian bugs. We will try to make a presentation quite brief and our collaboration we made with Harvard, particularly MGH, started at a wider level with University leadership. I usually want to say that it unfortunately started off in other non-obstetric departments but later on, when we saw the need to bring the mothers and also other partners on board, we made a little bit of noise locally, and thankfully we had.

One of the bigger goals of the Mbarara University-MGH collaboration is to include all of the departments within Mbarara University, and specifically with the obstetrics and gynecology department. It talks to us fulfilling this big vision of bringing on board this very important species called the mothers started in 2010. I remember that time I was the residency director and we had a discussion with our residents and we discovered that there is a lot that we are unable to offer locally but yet some of our partners at Harvard were positioned to offer some expertise that we did not have.

That kind of noise-making of course resulted into a team from Harvard, especially from the department of obstetrics and gynecology. When they made a trip to Mbarara and we discussed the way forward, of how to move the obstetrics and gynecology collaboration. I was privileged to be part of that meeting, and by the time, I was able to meet a team lead by Dr. Blair from the division of fetal maternal medicine at Harvard, and I'll ask to give Blair and the team a hand of applause.

We generated a document that spelt out our goals of collaboration and we also discussed on the roles and responsibilities on either side. We had had a little bit of uncomfortable partnership in the past, and this time we did not want to go wrong. This time we started off with paperwork and as much as we wanted to have hands-on, we said no, let's first have the writings on board before we can move forward. Some of the core areas of the partnership document included faculty involvement, educational training for both residents and also faculty. Our department is a very young department and initially when I was acting chair, I used to complain a lot that I myself need mentorship but I am learning through the hardships of leadership, but nevertheless it is paying off at the end of the road, and the third component was actually research involvement and grant co-application with our partners at Harvard. We are beginning to see some of these things paying off.

Last but not least, we decided to include a component of health service delivery locally. This included equipment and supply support of simple things like emergency cupboards getting stocked with drugs and salaries. To be able to curtail the erratic supplies that usually accompany many of our medical supplies processes in our country. In terms of MUCT-MUCT is the Mbarara University of Cells and Technology-in terms of teaching responsibilities, we are faced with such a great burden of teaching responsibilities despite the small number of faculty available, we have an average of about forty medical students that run through our department every ten weeks and we have quite a number of residents. Currently we have 18 residents in training and this skyrocketed from just one resident in training during my time over the past not-so-many years. And so we are seeing the need and burden becoming greater every other day, and we have decided to bring faculty on board by training them, be equipping them so that they will be able to handle the great responsibility of teaching that is ahead of us. On average we have about four medical student lectures every week and about four resident tutorials every week. We have so many other responsibilities: bedside teaching, operating room commitment, and ward rounds, just like any other center but here the numbers are very few.

Mbarara University's Department of Obstetrics and Gynecology is very small. Seven faculty and nineteen midwives are there to register 11,000 deliveries every year. So the burden is quite great. So we say to Harvard, as you are coming in, in terms of teaching responsibilities we have to leverage this partnership so that you can be able to take off some of the burden. We are delighted and are very happy to have that there. They have been involved in the supplementing our teaching, especially resident teaching. This has helped us increase the number of teachers and the number of examiners. Quite often on their own saving a time, they come over when we are having our final resident exams. They come to beef up the team to be able to to graduate a number of specialists. We have been having teleconference teachings and these have been mainly case-based. We have had lessons learned from one of the older Mbarara University-Harvard collaborations, especially in the department of anesthesia. They did start a teleconference teaching mechanism and they had quite a number of papers published out of this. So we tried to see if we could have this duplicated in the department of obstetrics and gynecology. We started off with the teleconferencing. At this juncture, I invite Blair to give us the details of how this has gone.

Blair Wylie: Thank you, Joseph. And I would like to also thank Dr. Danso, Dr. Anderson, and to everyone else for bringing us all together. It is inspirational and aspirational. The panel today is on curriculum so we are focusing just one small part of our partnership. As Dr. Joseph mentioned, in 2010 we started this collaboration and we created a document that was aspirational. But we wanted to get started as we raised funds. This idea is low-cost, no cost in some respects, so we wanted to get that idea out there. We borrowed it from the anesthesia department who had been running teleconferences, and just to point out back here - you can't read the small writing - they looked at pre and post-test results. They tested the MGH anesthesia residents as well as the MUCT residents, and the MUCT residents did better and learned more than the MGH residents. I just wanted to point that out; it is buried in there.

For the last 18 months we have committed to monthly teleconferences between the two institutions. I think the learning challenge has been Internet access. You might think that it was Internet connectivity in Uganda that was the challenge, but in fact it was more problematic on the MGH side. One HIPAA, the privacy rules, they have been taking Skype off all of our computers and in order to Skype, you have to use a personal computer. A personal computer requires Wi-Fi and the Wi-Fi is not so great in the hospital. We found that we were lagging our Ugandan partners in terms of connectivity. We have tried a number of different platforms

including just calling each other and forwarding the slides. We tried using something called Bluejeans, trying Skype on hospital computers and personal computers, and we have settled with Skype on a cell phone and each partner advancing the slides. It is something to work on.

In terms of the methods, we made sure that names were not shared when we had case-based presentations. We used a drop box format to share our slides, which was also free. We were able to share materials back and forth. And I think what was really unique about this was that we pushed the fellows in the subspecialties that MGH to lead this conference in coordination with the residents at Mbarara. They were the ones who are driving the topics, picking out the cases, and ideally we were picking out a case from Uganda and having someone from MGH respond to that but the lecture.

So far we have had nineteen. Like we said, connectivity has been our issue. We were most successful with Skype over a phone. This is relatively new on both sides of the ocean. On average we had about 12 learners at MGH and 20 in Uganda. This was just a smattering of the topics that we gave, as you can see it started off primarily in gynecology. There had been other Mbarara-MGH teleconferences on maternal mortality so we wanted to beef up the gynecology topics and only later have expanded to some of the other subspecialties.

In conclusion, to try to keep to time, this idea is low cost. It is sustainable. It requires time and not much more than that. It allows us to sort of have ambassadors who have not had the opportunity yet to travel, but can still make connections. I think that we have the opportunity and the mission to reflect on what we have done so far. By presenting this, it has given us the opportunity to just kind of come up with how this teleconference is going and where we should move forward. One thing that we had talked about his curriculum development. This is more ad hoc as cases come up and as topics come up. Is that good? Or should we be structuring the curriculum and saying let's had the following 12 topics over this coming year? That is something that we can talk about in our free time this week.

We have talked about alleviating the teaching burden on the MUCT faculty and I think that it is also important to recognize the learning may even be greater for those of us in North America, hearing the challenges and lack of resources available. We may make suggestions for management and in here that is not possible. Recognizing and reflecting that the learning is bidirectional is quite important.

Joseph Ngonzi: Well, thank you, Blair. Within the next one and a half minutes, even as you listen, we are open to contributions on the way you people think we can take this forward to make this sustainable and also more useful, not only to the Ugandan residents and faculty, but also our American partners. When it comes to discussion, we are very expectant that we will be able to hear from you, especially those of you who have been doing this for a while and have measurable deliverables on this kind of teaching. Thank you for your time. “Let me introduce Adeline who is also one of our partners from Harvard. And lastly, I am delighted to reintroduce Robert, who has gladly decided to come and listen. When it comes to policy, we hope that, Robert, you will be our ambassador out there. Thank you.

Frank Anderson: Thank you. That was so interesting and innovative and I think it reminds me that it takes an individual and institution at both places to make some of these things happen. I think that was a no-cost intervention. They just meant that there was an intention there on both sides for doing that. It reminds me of our worksheets and we will talk about those again, but these worksheets are your opportunity to share what you are doing. We are going to collate these things so there is some larger document with everyone's ideas. But it is also an opportunity for what you would like to do so dream big. This is your opportunity. You are here with your team today. I don't know when this is going to happen again and the more that you can write down for yourself the better. The more you can dream the better. This conference would not be happening had we not had this crazy dream that we could actually do this and then present it to people to fund it. It is an old adage - I'm not sure what the old adage is - but if you think of something that you want to do, then you can make it happen. Maybe it is a new adage. You know what I am saying. Dream big and then maybe things can happen. These worksheets are the only way I can figure out how to get you to do this. It may not be perfect, so don't spend time wondering whether the question is perfect or not. Know the spirit of the question; change the question, do what you need to do, but get as much down in writing as possible. We can produce things and you can have that to read again. I know that this is odd for a conference, but please write down as much as possible.

Association of Professors of Obstetrics and Gynecology Curriculum Presentation

Frank Anderson: So more great ideas are along the way. Karen Adams is from the Association of Professors of Obstetrics and Gynecology, this interesting association that we have in the US that helps doctors learn to be

teachers. I think that it is an interesting model and interesting ideas that she will share for us in the group.

Karen Adams: Balkachew, come join us and Diana, please, as well. I just have to start by saying there are thousands of years of wisdom in this room and it is kind of incredible to me that we are all together for the same purpose. It is absolutely inspiring. The fact that I get to stand here for ten minutes at the invitation of Dr. Danso and Dr. Anderson to share what I hope might be useful for you is quite humbling. The thing that helps me to feel better about that is that I am here with my two very good friends, Balkachew and Diana. And it has just been a delight and a pleasure to get to know both of them through this work. I hope that what we offer you today is useful and we offer it up to you in that spirit. Again, I am Dr. Karen and there is Dr. Balkachew and Dr. Diana. We have no conflicts of interest.

I'm an educator so I want to start by telling you what I hope you will learn from this presentation. I want you to understand the rationale for existing curriculum of the new CREOG new program director school. I'll talk to you about what that is and how it came to be. I have a couple of folks here who are either graduates of the school or are currently participating to give you some perspective. And there are several other graduates of the school here in fact. It kind of feels like a CREOG meeting because they are so many residency program directors here. I would like you to understand the benefits of the knowledge gained by the US and African participants in the school and think about the ways that we may collaborate on educational programs. Finally then, as a group, kind of all of us together, thinking about as a good or table groups how aspects of this story might translate to your specific site, to your specific partners, and how you might take some of this curriculum and use it.

CREOG is a subset of ACOG, which of course is the American Congress of Obstetrics and Gynecology. You have a subset which is specifically focused on graduate medical education, and that is the Council on Residency Education in OBGYN. In 2009, ACOG decided that CREOG should create a school for new program directors. Currently about 75% of our US residency program directors have gone through the school. The participant evaluations are among the highest of any ACOG courses. I became co-director of the school back in 2009 I believe, and it has continued to be evolving as we have gone from there. The primary goal of the school initially when it was established was to increase the term of service of program directors. As you can imagine, being the program director requires a tremendous amount of skills, knowledge, and expertise.

It is an incredible waste to have someone take on that position and then turn over relatively quickly. Then someone else has to come and learn how to run the program. The primary goal when this program was established was to try to increase the term of service of the program directors because the average term is about five years and annual turnover is about 20%. The additional goal is to provide high quality and timely support to the program directors as they address the many aspects of running a residency program. The core principles of this talk and the school are really about training the trainers and that is what Frank asked me to speak about today is the idea of teaching people how to be teachers. As you guys develop your residency programs, how can we work together and collaborate to try to improve our medical educational expertise? Just because you can do something doesn't necessarily mean you can effectively teach it. If you just say, "Watch me, watch me, or do as I do," then some people may be able to learn from that but others may not. So faculty, you, can learn to be an effective educator just as you can learn to be a good surgeon. You can learn to teach just as you can learn to do a hysterectomy. That's one of the core principles of the school.

In addition, for learners, timely and effective feedback is really key. How do we give that feedback? Do we say something like, "You are doing great; just keep doing what you're doing?" That's not feedback; that is a compliment. That is a great; we all love to hear compliments, but that doesn't help you get better. So how do you actually help your learners improve by the feedback that you give them?

In the US, residency curriculum is standardized across all US residency programs. But how individual programs teach that curriculum varies from program to program. The school is designed to provide ideas. We share templates and resources and we provide these different resources to program directors, to help them either set up their programs or to modify their programs. When those national requirements change, we also provide assistance to program directors and implementing them.

The school is structured in three meetings, and two are attached to pre-existing meetings. So for example, for this kind of meeting there would be a day or two afterwards that would be the program directors' school that people could come and learn specifics of education. And then one is freestanding. Part one is three full days, part two is two half days, and part three is another half day. Then there is a tuition that is charged. We also allow people who have taken the school before and want to come just for an update to have a small tuition charge if they just want to take a portion of the school. So I wanted to just show you the topics and Balkachew is

going to talk about the portions of the program that were particularly helpful for him because he has been coming to the US in participating in the school. What we would love to be able to do is to bring the school here, rather than having to have people come to the United States to take it. But that is something that we can talk about.

The first day topics are mentorship and then orientation for - I actually said new interns, but I don't believe interns in Africa means the same thing as interns in the United States. This is first year residents, I should say. So how you orient your first year residents to your program. Maybe you do surgical simulation. Dr. Curran and Dr. Nigatu have worked together to do orientation for the new residents in St. Paul in Addis. They're going to talk about that. Then we talk about recruitment of residents - how do you choose the right resident for your program.

And then we talk about the match, the way we do is the US, but that obviously would not be relevant for African programs, unless you establish a match, which I am not sure you want to do. Also we talk about how to ask for resources that you need - dealing with your deans, dealing with your department chairs, figuring out how to make a persuasive pitch for resources that you may need for your learners. And then we also talk about technology and so this piggybacks really beautifully onto the previous talks of e-learning and ways you can access that technology for your program. Then we have a little networking reception in the evening, which is very valuable because really all of this is about relationships. Just as we are all getting to know each other and developing these relationships with each other, having the opportunity to do that in our school is really an important part of it.

The second day we do curriculum design. We teach program directors how to write rotation goals and objectives. Each residency year has its particular structure in the US. In this gyn-onc rotation, what are the reading lists, what are the goals, what should you come out of this rotation with? The skills - then we help them write the goals and objectives. We also talk about the difference between formative and summative evaluations. Formative is getting feedback right now - we just finished this surgery; how did you do? I want you to practice going faster; I want you to call for your instruments. Something you can tell them specifically about what just happened.

Summative is at the end of the rotation. And maybe do teaching techniques because what we know about adult learning is that people don't actually learn very well sitting in rooms like this. They learn better in small groups and case-based discussions and things like that. We talk about that. Day

three topics are more about the OBGYN structure of oversight and organization in the USA.

Part two we talk about how you motivate your faculty to teach. Why is it that somebody would work in academic medical center when they could be out in the community? And what motivates them? We talk about budgets. We talk about resident remuneration, which is a very, very hot topic because I don't care how long you have been a residency program director, you are always going to struggle with how to remunerate the person who is not quite hitting the targets. As our colleague from Uganda was saying earlier this morning, it is about knowledge, skills, and attitude and professionalism. So we talk about how to identify areas that our resident needs support in and how do we remediate them. If you have to get rid of somebody, if you actually need to dismiss them or put them on probation, we talk about the ways of doing that. Finally at the end of the school is preventing burnout - yours and theirs, how to stay motivated, how to keep yourself engaged, and we talk about leave policies.

Finally we talk about medical errors and patient safety, so we do some root cause analysis and we talk about how program directors might help their residence evaluate for areas where patient safety could be improved along with quality insurance, that sort of thing. That is kind of an overview of what we do. As I said Balkachew is completing the school right now and we have asked him to just share some of his experiences, what you found to be useful, and maybe wasn't so useful. Diana is going to talk about the way they have collaborated for doing new resident orientation. Thanks so much.

Balkachew Nigatu: Good morning again. I am very happy to share the podium with my mentor and deep friend, Dr. Diana Curran and my teacher in the course Dr. Karen Adams. I am going to reflect on the lessons that I got from the CREOG course on residency directors. How we handle it in Ethiopia is totally different from how residency training is handled in the US. We have a postgraduate program coordinator who mainly does the scheduling, summing up the evaluation results, posting the results, and so on. This program director is totally different in a lot of aspects. So is it important to bring it to Africa and give a really structured course for residency program coordinators to do their jobs better? That is going to be a verdict that we will be passing at the end.

The job description of a program director involves a lot of issues: he is an educator, an administrator, a financial monitor, and a time management expert – a lot of issues. He has to also understand the curriculum better

than any other faculty, because he is going to give the feedback and decisions based on the curriculum. He needs some requisites to succeed. Some of these requisites include a good and well understanding chair. The other supporting faculty also play a great role in the success of the residence director. How does he manage to enroll these stakeholders?

The quality of a good program director include a good communicator, listener, decision-maker, and has to also pull up the actions that were already said. Part of the things that I learned from the residency director course include giving orientations to new coming residents. We did not have that tradition; we gave just a brief orientation on what they're going to do in the year, and so on. But this one is more structured and well organized. I learned how to do it in a less intense way and in a fun way. I prepared the materials that will be orienting my residence ahead of time. It helps me to be more organized and I will be able to share the mission of the residency program. We did that last year with Dr. Diana Curran in Addis.

The other issue that is significantly different from our system is mentoring residents. It sounds like Greek mythology, so you understand Mentor and Odysseus. Mentoring is better than if there is no bias and there is a large case study in the US that compares those who are mentored and those who are not. The outcome states that it significantly improves timely completion of phases, improves the satisfaction of the residents, and the residents tend to be more involved in academic careers than those who are not mentored. That is very helpful. How do we do this in the 21st century? Those are some of the things that I learned and you can probably brainstorm on this issue.

The other issue is retention and transition. After they are accepted, recruited, and have joined the residency program. Due to different life events, they may tend to withdraw because of family reasons, better offers, and so on. So how do we keep them in the training? How can we help them to pass through those sometimes-adverse events? That is a lesson that I got from this section. But the selection is very important.

During recruitment, you have to know who is unstable, who is not likely to quit, and who is not likely to continue. That is a big difference between our system and the US system in terms of recruitment and selection. There is a national residency matching program in the US. That is not the case in our country so we do it at every institution and a lot of difference. We need to adjust the curriculum of the CREOG in relation to selection and recruitment.

The other significant issue in Africa is dealing with administration. Program directors have the responsibility to facilitate the training. He has to deal with a lot of stakeholders, including the administrative wing. How does he negotiate better with administrators. That was the lesson that I got and as you can see this is [on the eighth] and counting down, one of my instructors [saying in Amharic], which literally translates to “Fortune favors the bold.” So you have to be bold in your demons to the administrators.

A major aspect that I learned from this residency director course is about the curriculum. I learned how to design and identify the basics of curriculum. How do you use it? How do you measure outcomes? How do you evaluate your residents, whether they are achieving the six core competencies? How do you teach residents? Residents are different from undergrad students. It's a safety-driven teaching most commonly, so how do you prepare your teaching techniques? This is another lesson that I got. The academic and technical relegation for residents who are in trouble is another lesson. At first the residency director should be able to identify the area of trouble. Where is he weak? Where is the tension? Is it at the behavior level, the cognitive level, or the technical level? Is it about the expectations and how to correct them and so on? So, that will avoid regrets. Again I am quoting the direct words from the course instructor, “It is very rare to regret earlier action and it is common to regret delayed action.” The residency director has a responsibility to track these things early and manage them.

What happens with residents in difficulty? We follow some specific orders. We have to try to identify where the difficulties are, comfort the residents, and try to develop an intervention. Then do some action and follow-up. Recommendation at every level: What is the identified problem? How are we comforting the resident? What is the intervention? How is the follow-up? These should always be documented at every level. But if you have to terminate the resident's continuation then that is going to be very difficult for the residency director. Proper recording of the events is very critical. Due process is very necessary so that it is more transparent. Then you may consider to allow him for remediation depending on the disciplinary problem or academic problems.

Then at the end you have to have a resident and receive a copy of the plan. So he will abide by that signed document. I have already taken the first two sessions of the CREOG. The third part is in a couple of weeks in February 26th to be exact. I am hoping to get more knowledge during the third part, specifically on the probation and treatment of burnouts – the residency director and also other faculty and the residents as well.

Resident leave policies, what should they look like? We don't have a written residency leave policy, we only give them one month per year. Is that enough for males? If I have a female resident, what am I going to do? So these things I am hoping to get some insight. Teaching residents record analysis and patient safety and quality improvement education is the last piece that I am expecting to learn during the third part. Thank you very much.

Diana Curran: Since we are running overtime I am going to be brief. I have been assisting Dr. Balkachew with his new residency program. He has been doing a wonderful, wonderful job. Last summer I came to help him with orientation and it was a great example of me learning some great things that I am using now in my program in simulation. We did a bunch of obstetric and gynecological simulations, and one of the things that I learned from him is that they actually use a beef heart to teach cesarean section, repair of the uterus skills. It is actually a fantastic model to just throw it out there. We did a bunch of OB emergency skills and, as I said, gyn simulations. I also went over communication skills, since all of us know that is very important, as well as professionalism. I did some OBGYN topics. I did adjust the level of my teaching because all of his first year residents have already done two years out in rural practice, so a lot of them have a lot knowledge. That was important for me to know, because it certainly would have been insulting for me to speak at the level of what we consider an intern. That is really all I have to say. I really enjoy learning things from them and vice versa. So that's all I have to say.

Karen Adams: So that wraps up our session and we just want to say that we are available to anyone who would like to talk about how the residency program directors school might translate to your country or to your continent. Thanks again for your attention.

Frank Anderson: This idea of a program director school, I know that some places don't have programs yet and some people have very early starting programs so again it is a luxury at some level to have a residency program director. But I think that if you think about that in ten years from now or five years from now, that the structure of an obstetrics and gynecology department may include a residency program director. When you think about the infrastructure of your department and you are filling out your sheets. That is something to consider.

Kwabena Danso: Well in fact that was the point that I wanted to add. Yesterday in my group, we were talking about infrastructure. I brought up the idea that it is important to have people who run the program. Of

course they would be under the chair of the department, but it is important to have somebody who does the leg work and the hard work. So if you want some documentation, then that person would be able to give it to you. So it is worth considering in the infrastructure session of our partnerships. Thank you.

Madeline Taskier: We will have a quick break now for coffee downstairs in the atrium, outdoor area for about half an hour - 10:45 or 10:50 to 11:15 or so. Then head straight to your breakout rooms to start working on your worksheets about curriculum development. You are going to work on that until one o'clock and then you are going to come downstairs into the lunch area for lunch. The same folks will be in your breakout rooms: Frank, Ray, Diana, myself, Professor Danso will all be circulating to make sure that you are working through your worksheet and to answer any of your questions, etc. Thanks so much.

Frank Anderson: You should actually have completed your worksheets up through "Curriculum Development." There is a "Faculty Development," sheet and a, "Curriculum Development," sheet. I would suggest that you work on "Faculty Development" and "Curriculum Development" sheets right now and if you need to go back to work on some of the other partnership stuff, you can do that later. Thank you.

Deployment of OBGYNs and Working with Ministries, Communities and Other Healthcare Partners

Speakers:

Gloria Asare, Ebenezer Appiah – Denkyira; Ghana Health Service, Ghana
Yvonne Bultler; Liberia, Ethiopian Society of OBGYNs
Yirgu Gebrehiwot; Ethiopian Society of OB-GYN; Africa Federation of
OBGYN & Ethiopian Society of OBGYN, Ethiopia
Myron Aldrink, Medical Teams International

Frank Anderson: Hello! Our next discussion will start in just a minute, we are running a little bit late. I have a few announcements. Number one, I wanted to show you the brand new, hot off the press, Comprehensive Reproductive Health Family Planning book, produced by the faculty at the Komfo Anokye Teaching Hospital.

Kwabena Danso: It is the whole entire Ghana program.

Frank Anderson: This is third in a sequel of books produced by the faculty. The first one is comprehensive obstetrics in the tropics. The next was comprehensive gynecology in the tropics. And the third was comprehensive reproductive health and family planning in the tropics. A mature faculty is also producing textbooks. And these will be actually used. They are available at the registration desk. How much are the books?

Kwabena Danso: \$50

Kwabena Danso: Thank you, Frank. We are going to have our next panel, and it is on deployment of OBGYNs and working with ministry, working with communities and other healthcare partners, and faculty development. For the speakers, we have Gloria Asare and Ebenezer Appiah – Denkyira, who is the Director General of the Ghana Health Service. His Deputy is Gloria Asara, so both the Director General and the Deputy are here. Can we see you before we begin? Then we have Stephen Kennedy, Bernice Dahn, and John Mulbah, Liberia. Are they around? Good. And we are also privileged to have the President of ACOG, Yirgu Gebrehiwot. Can we see you? Good. So our panel is set. We will give the floor to them. Gloria, are you ready? Ok.

Ghana Health Service Presentation

Gloria Asare, Ebenezer Appiah: Thank you very much. Thank you, this is the Ghana flag welcoming you to Ghana. The outline: we will talk about a bit of introduction and background and then go into the training and deployment and working with different partners, challenges, and some actions we have taken to address them, and the way forward and conclusions.

Maternal and child health has been a priority of Ghana and we are looking at the attainment of the MDGs as a priority. Part of program of WIC, there is a whole objective of maternal, newborn, child, and adolescent health, family planning, and improvement of equity. Those are some of our sector objectives. Maternal mortality was declared a national disaster in 2008. We have had a lot of consultative meetings, which targeted OBGYNs and midwives. We have had a good training program for OBGYNs in Ghana, as you are aware. I think yesterday we spoke about them. The Carnegie people have been working with the West African College and now the Ghana College. We have very good retention and high levels of training. We are working with the Ministry. The Ghana Health Service is an agency of the Ministry of Health. We are responsible for the public health services and we work in partnership with all stakeholders, like the teaching hospitals, mission, and the quasi-government hospitals, which are like the MINES, and the Military and Police Hospitals, with some NGOs, civil society organizations, and development partners. We do that to implement the health sector policies and strategies. The Ministry of Health agencies include the teaching hospitals and regulatory bodies such as the Medical and Dental Council and the Nursing and Midwifery Council. The Ministry of Health again provides the policy and the strategy direction for the health sector.

In the Ministry of Health, we have a human resources division, which is responsible for pre-service training and professional postgraduate training with the Ministry of Education. When it comes to the postgraduate training of doctors, it is with the Ghana College of Physicians and Surgeons. The Ministry of Health has also supported the training of OBGYNs in the past. There is a lot of support from the government and now it is left to the Ministry of Health budget. Now we have less money so there is a lot of rationing sort of going on. So the Ministry of Health actually supports the training of the endangered disciplines. They put money down for the endangered disciplines like psychiatry, lab medicine, etc. The agencies like the Ghana the Health Service and the teaching hospitals support their residents and those who do not have support, support themselves.

When the training is over, the ministry constitutes a committee that distributes the graduates among the agencies, like the teaching hospitals, the Ghana Health Service, the Christian Health Association of Ghana and Mission Hospitals. We all have quotas, and the quotas change. When they are given to us, the Ghana Health Service posts our specialists. The teaching hospitals deal with their own specialists and we post our specialist and other staff to the regions and the districts. In Ghana we have 10 regions and 216 districts. Under the districts we have sub-districts, which are our communities. Those who want to go to the quasi-government facilities do so by resigning from the Ghana Health Sector or they go on secondment.

Yesterday, I picked some slides from Frank's presentation so maybe you can take them from memory. He had a slide showing the cumulative number of trained OBGYN specialists in Ghana, from when we were using just the West African College to 2008 when the Ghana College graduates also came on board. The numbers just keep increasing. There is also a map of Ghana showing where most of the obstetricians can be found. They are concentrated in the greater Accra and the Ashanti regions where we had two major teaching hospitals and also in the Tamale teaching hospital in Tamale there is a concentration coming up. And then we have some in some other regions like the Eastern region, the Western region, and other places.

I have a slide here on the number and ratio of selected health workers currently working in facilities per 200,000 population. This was taken from the National Emergency Obstetric and Newborn Care Assessment in 2010. We had a national one where we went to all facilities make at least five deliveries in a month. We did an assessment, and we saw the obstetricians and gynecologists in Ghana in those facilities, which was almost all facilities that deal with deliveries. We have 279 obstetrician gynecologists in total. What we think we need is at least 459; that is what the service providers in the managers said they needed. So, we have got a gap there. That gap represents two obstetricians per 200,000 population, and we want to have at least four obstetricians per 200,000 population. The distribution of OBGYNs by facility type facility type is also in the report.

This is what I just spoke about, that we did an assessment. I've circled the OBGYNs. You can see that there are not too many if you look at other service providers that we have. That is a number, and that is the ratio, which is showing that we still have a gap. They are distributed in the facilities. About 11% are in the teaching hospitals, 9% are in the regional hospitals, and 80% are in the district or other hospitals, and these include

private facilities. Forty percent are in the government facilities. Eight percent are in the religious or mission hospitals and 52% are in the private, for-profit sector.

The northern region does not even have one OBGYN in the Ghana Health Service. There are few obstetricians in the teaching hospital, but this graph does not include the teaching hospitals. So in total there are 55, and even the one in the upper West has gone to school. There is no obstetrician in the upper West region as we speak. Depending on the size of the hospital, we are supposed to have one to four in the smallest district hospitals and between four and six, and six and seven in the bigger district hospitals. In the regional hospitals we expect to have five to fourteen obstetricians in the hospital. We're still working on our staffing norms; this is a draft from the Ghana Health Service.

So we had been talking about communities. The Ghana Health Service exists primarily to ensure the health of Ghanaians and provide quality healthcare to all people living in Ghana. So everybody here, we are concerned about you. It is not only Ghanaians. So we have a cardinal goal to bridge all geographical barriers as much as possible. Things that prevent people from but accessing health services when needed. We have what you call the Community-Based Health Planning and Services Strategy (CHPS), and in this we are expanding this throughout the country. We place a community health officer or a community health nurse – a few of them have midwifery skills – in the community to do house-to-house visits and to provide services to the community and link them to the facilities. CHPS is bringing services to the doorsteps and also ensuring that the communities play their role and that we plan with them and they own their own health and contribute to this. Maternal, newborn, and child health, and family planning are all major parts of the CHPS operations.

We partner with the district assemblies. This has increased community participation and has increased in the CHPS zones. There is continuous production and availability of community health officers and nurses. We have zoned the country and we are improving what we call functional CHPS.

CHPS can be based in a compound that is very remote. You just have to put a compound in and the person will live there. We don't have to wait for compounds. Even in the urban areas we deploy people to the communities. So that is what we call functional CHPS. If you look here, this is a general doctor-population ratio of all doctors. It has been 1: 11,929 in 2009, and then it improved in 2011, and then went a little worse again in

2012. But when you look at CHPS, we are increasing in functional CHPS. Between 2011 and 2012 we increased the functional CHPS by 551.

We work with other healthcare partners. The OBGYNs, midwives, pediatricians need to work closely together with anesthetists and everybody else. We see that the work of anesthetists is also very important and the physicians. Teamwork should be at all places. It takes a lot of good teamwork to actually save lives. The Ghana Health Service works with Mission hospitals, quasi-government hospitals, and private providers, even though we don't do too much for the private providers because of some lack of funding. We need to do better - all of us.

We also work with professional bodies. We have something called Evidence for Action, which is an advocacy movement for MDG 5. We just last year launched Maternal and Newborn Health Professional Society, which includes the Society of Obstetricians and Gynecologists in Ghana, the Pediatric Society, and Midwifery Associations and this is being spearheaded by the School of Public Health.

We also have traditional and faith-based health providers that we have to sometimes contend with because they do things sometimes very differently from us. Some of our major challenges are that we have inadequate numbers and in inequitable distribution of staff. The factors for that are both within and outside of the control of the health sector. Not all of it is within our control.

The specialists are concentrated in the teaching hospitals and we have inadequate medical officers and general practitioners who otherwise would bridge in the gap. We have inadequate support for family planning, reproductive health, and community work among some of our obstetricians. There is inadequate multi-sectoral engagement in health. The measures we have taken to address them is this training and retention.

We are very happy that the trained OBGYNs have stayed in the country and are contributing a lot. We need policies and innovative strategies to attract service providers to the underserved areas and address some of the non-health factors by working with the district assemblies in others. We need to improve the quota of specialists to the Ghana Health Service, and we are working with the Ministry on that. To strengthen the collaboration with the teaching hospitals, we are doing a lot of that under the MDG acceleration framework. To improve private sector participation in multi-sectoral response and strengthen engagement with professional associations.

Some doctors have persistently refused to post to the relatively poor and low resource regions of Ghana. But we see that although the doctor to population ratio for the Ashanti and greater Accra regions look to be good, about 50% of those are in teaching hospitals. We need more consideration and commitment to explore sustainable strategies to improve doctors and midwives.

Our way forward is to strengthen and foster the involvement of OBGYNs and pediatricians in service delivery. We say that they should have select areas and own them, so they have to zone the areas where they are working – the communities and the districts – and work with them. So that the society and the communities we need to fill their presence in support. The MGD 5 acceleration framework is doing that with the teaching hospitals. We want to build capacity and support referral and referring facilities and also towards decentralizing training. We need a lot of mentoring, coaching, and improved monitoring and supervision.

Other goals are to strengthen teamwork and task sharing, strengthen and implement e-health, develop feasible policies for staff distribution, and disseminate the best practices. We do not intend to leave the private sector behind. We need to find ways to work with them. In conclusion, this is a good strategy, to have the 1000+ OBGYNs and their deployment is very important and should be linked to the communities. There should be support for innovation and other aspects in this program. The Ghana Health Service is happy to partner and to make this a success and have a real impact in Ghana and the other countries. We thank you for your attention.

Kwabena Danso: Thank you. We will follow the next presentation from Dr. Mulbah and his team. With permission, the Director General has then told me that he has been called by Chief Director of the Ministry of Health, so we will give him the opportunity to make his comments and then his deputy will still be with us.

Ebenezer Appiah – Denkyira: Thank you very much. I'm sorry for leaving you midstream. But the presentation is real. In Ghana we are making sure that obstetricians, apart from the institutions that they are in, will mentor other additional districts because they cast shadows downwards. It is important for them to create a real effect of excellence where they are, then invite the institutions around them, who will refer to them, and coach them in what they're supposed to be doing. We expect them to also go down there and train and coach with the maternal, therefore it is clinical or conduct research assessment. That would be the

job of the obstetrician. They are also responsible to ensure everyone has the lowest level they give us, added to the messages that we give to the general public.

We are trying to ensure that every pregnant woman in Ghana and baby born is followed up and linked to the next level of care. At the highest point is the obstetrician. We will challenge obstetricians to ensure that there should be district-wide zero maternal mortality. And I'll give them all the necessary support to be able to do that. This program is very important to us, and we will be following it with keen interest. Thank you very much.

Kwabena Danso: Thank you and with this I think we will say goodbye to the Director General. And now, Dr. Mulbah.

Liberia Team Presentation on Deployment and Capacity Building

Yvonne Butler: Hopefully, I am a prettier version of Dr. Mulbah. I am Yvonne Butler, and I am one of the assistant professors in the Baylor College of Medicine, Global Women's Health Program. I will be speaking on behalf of our team here, Dr. Stephen Kennedy and Dr. John Mulbah, and of course in the back, our esteemed Deputy Minister, Dr. Bernice Dahn. Before we start there is a silent partner who is sitting who I would really like to acknowledge. Dr. Susan Raine is the head of our Global Women's Health department and she actually supports me and allows me to be full-time faculty in Liberia. And my former Fellowship Director, Dr. Ben Chi, who was really great as a mentor and pushing me to explore whatever it is that I wanted to do in global health.

So we have three main objectives. I'm not going to take too much time on the context and guiding principles. You've heard a lot about this already. I'll try to focus most of this presentation on a roadmap for deployment and capacity building. I always like to start with the context and the reality is that women are dying to give life across sub-Saharan Africa. This was a picture taken in Liberia in 2006 by a Pulitzer Prize contestant. You all know about the Civil War and you know that there were lives lost, people internally and externally displaced, the country's infrastructure destroyed, and for our purposes here, the gains in maternal health prior to the Civil War were all reversed. So as you can see, Liberia's maternal mortality ratio trend in 1986 prior to the war was about 260 per 100,000 live births. There still needed to be major improvements, but we were heading there. At the height of the Civil War, the maternal mortality ratio had increased to 1900 per 100,000 live births. It currently stands – 2010 was the last date I have from the World Health Organization – at 770 per 100,000 live births. Now

there have been some gains in improving this, but the reality of it is that we have a long way to go.

Liberia has the 8th highest maternal mortality ratio in the world and the 17th highest infant mortality ratio in the world. I'm not going to go over this again, but this is just a notation that the Liberian Demographic Health Survey, the last published one in 2007, placed the MMR at actually 994 per 100,000 live births. When you look at why the MMR is so high you find that there are a lot of different reasons. There are not enough skilled providers (this is again old data from 2007) but only 46% of Liberian mothers received any kind of assistance during their childbirth, and this is any kind of skilled provider assistance, not necessarily an OBGYN, but could be a midwife or trained professional in obstetric care.

What is interesting is that if you look at the residential distribution of Liberia, the vast majority of the population actually lives in a capital city. So you would think that access to health would be much easier and more available. Regarding our physician workforce capacity, the reality of it is that Liberia needs a lot of physicians. The Ministry of Health And Social Welfare estimates that we need 893 additional residents to cover the current unmet need of Liberia.

So now given that context let me just focus on a bit on what our current guiding principles are. Our healthcare system is structured in a decentralized fashion, so at the most local level you have community health workers, followed by community clinics. Community clinics refer up to health centers, and the health centers you have a variety of trained cadres: physician assistants and nurses. Health centers refer up to county hospitals, and county hospitals currently refer up to the national referral hospital in Liberia, which is currently the John F. Kennedy Medical Center. Our OBGYN educational structure first occurs at the University of Liberia, A.M. Dogliotti School of Medicine. Licensing occurs through the Liberian Medical and Dental Council. And, of course, now we have the newly established Liberia College of Physicians and Surgeons, where our postgraduate program currently resides.

Again, this is already been reviewed so there is no need to go over it, but just to mention that the Ministry of Health has really been instrumental in making sure that this program was formed, created, and has funding. There are a variety of established licensing and professional agencies in addition to the Council, which provides your licensing. There is the West African College of Physicians and Surgeons, Liberia Chapter, which is now playing a key role in CME and continued faculty support, as well as the A.M.

Dogliotti College of Medicine, which provides continued assistance especially during our first year.

Now on to why we are here, our deployment and capacity building. This is a really important quote from one of our current residents who was asked whether or not he could possibly see himself leaving the country once he was trained in Liberia and practicing in perhaps more lucrative places like Ghana or Nigeria. His response was, “When the bullets and bombs were raging night and day, we chose to stay. So why would I leave now? I plan to one day take on your role, so we can continue this process.” I think that is really powerful and tells you that we are really on to something here.

The postgraduate program recently started in October 2013. There are four specialties, OBGYN, pediatrics, surgery, and internal medicine. There are four to five residents per specialty. Our curriculum is based on a Harmonized Ghana and WAHO model. Our residents, which for the OBGYN department we have five, will rotate amongst seven hospitals. There is a reliance on a variety of both local, sub-regional, and foreign professionals. There's funding from the World Bank, the Liberian Government, and WAHO. We are currently looking at other sources of funding, and of course there is an additional pathway for our residents to become certified with the West African College of Surgeons.

There are multiple regional and international partners. In addition to the West African Health Organization (WAHO) and our Ghana College of Physicians and Surgeons here, there is a West African College of Physicians and Surgeons, there are a variety of academic institutions, and there are also opportunities to expand and establish partnerships. The current chair Dr. Mulbah has done an awesome job in mobilizing his current resources. He heads the fistula program that provides a pathway for our residents to gain fistula surgery training. He also loves the University of Michigan, I have to put that there. He did come in with a maize and blue tie. I'm just saying.

What are we doing regarding faculty involvement? One of the interesting things that happened is that once we started this program, there was a reinvigorating concept regarding mandatory CME. Previously physicians were licensed, and their license would be renewed, but there really was not a structured step that states that they need to have a certain number of credit hours as a professional to maintain your license. So this is hopefully currently on the way. There are of course many research opportunities locally, sub-regionally, and internationally. There is faculty consultation. There are many times as a junior faculty when I may have an ultrasound or even a surgical pathology specimen that'll take a picture and send it over to

Susan and say, “Please send it out and let me know what you all think.” It is amazing, right? We, of course, get our patients consent, but it is really a way of having this electronic consultation. This also happens on the local level, where our private partners are now calling and saying, “Hey, I heard you guys have an OBGYN here. We have this question and we would usually handle it this way, but what do you think?”

Interestingly, one of our midwives recently said to me, “Doc, it seems like you guys are now all into these postgraduate things. What about us? What are you going to do about us?” This is exciting because it really means that people are buying into this idea that you have to have this academic stimulating environment, we are not just practicing to be practicing but it is actually based on sound evidence-based medicine.

There is a supportive faculty development through a number of avenues. The West African health organization supports exchanges for faculty development and there is also opportunities for international exchanges with various academic institutions abroad. There are plans for additional faculty support from various academic partners as well. So now rather than any one saying, “You know I heard about Liberia and I really want to help, let’s fly down there and do something for two weeks,” now there is a process where you have to contact the postgraduate program as a visiting faculty. There is now this process that is streamlines so you actually get good continued support and not necessarily the run-of-the-mill, mission, type of support.

Our community development is also growing and the postgraduate program was built on this rotational structure that allows communities to access medical services based on evidence-based medicine. So what does that mean? It means that our residents are deployed into our more rural sites, they will then start to institute the concept of protocol and evidence-based care, rather than just practicing as they previously did. Other areas are also gaining access to additional training support, including maternal mortality awareness, emergency obstetric training, as well as implementation of various protocols.

That’s it. Again, thank you and I’ll give the microphone to Dr. Kennedy to see if he has any words.

Stephen Kennedy: Actually there is nothing else to say, but we do appreciate the time you took to listen to our presentation. We just wanted you to know that the Liberian program just started officially about 3-4 months ago. There is a lot of potential and we also are open to secondary

partnerships and expansion, as she communicated. The ultimate goal is to strengthen the health system and also train and deploy manpower to meet the needs of the population of the country. Thank you.

Kwabena Danso: Thank you and I would congratulate you for taking the first step to start. A journey of a thousand miles, they say, starts with one step. So congratulations. So now we have Yirgu to talk to us.

Ethiopian Society of OB-GYN

Yirgu Gebrehiwot: Good afternoon. I am going to make a presentation based on the perspective of the Ethiopian Society of Obstetricians and Gynecologists, and what is really happening in Ethiopia. Postgraduate training in Ethiopia started about thirty-two years ago. Currently we have seven medical colleges or institutions that are conducting postgraduate training in obstetrics and gynecology at one or the other labor. The Ethiopian Society of Obstetricians and Gynecologists was established twenty-two years ago. There is a ten-year difference between the first postgraduate training in the country and the establishment of the Ethiopian society. Much of the impetus to establish a society came following the 1987 meeting on safe motherhood in Nairobi Kenya, when the famous statement, “Where is ‘M’ in MCH,” was really articulated. The maternal health has been really been a missing element in maternal and child health. The whole purpose of establishing the society, which by then was around 70 or obstetricians, was to address the huge unmet need in terms of maternal health and the very high maternal mortality that was prevailing at the time. The mission and the vision stated was that ESOG or the Ethiopian Society would be collaborating with all stakeholders relevant in the country in order to address the huge maternal mortality.

Currently the Society has one central office and has got seven chapters throughout the country. ESOG is partnering with a number of institutions, but the lead institutions are as follows: the first one is the Federal Ministry of Health, we are collaborating with the H4 Group, the UNFPA, the WHO, UNICEF, the World Bank, we are also doing CDC and other international NGOs. The other partners are the FIGO; we are collaborating with the University of Michigan, with Emory University, and also with the German Society of Obstetricians and Gynecologists. We have been quite active in the area of maternal health on a number of pointers, but because the area under discussion is what we are doing with the Ministry and with communities as a professional association, I’ll try to cite some important examples.

Nationally, I would say that ESOG is a very important partner of the Federal Ministry of Health. As you know, or might know, we have a health sector development program. Which is a twenty-year plan with a cycle of five years, now we are into the fourth cycle of the Health Sector Development Program, which will address HSDP 4. The emphasis of HSDP 4 is to improve maternal and newborn health status in the country. Fortunately, Ethiopia achieved earlier MDG 4 and has made quite substantial progress with MDG 6, particularly controlling malaria, tuberculosis, and also HIV, with a rate of 2.1%. However, there is quite a challenge when it comes to MDG 5. The rate of change is about 4.9; the rate of decline is about 4.9% per annum, but this pace of change has to be accelerated, because to be on track to achieve the MDG 5, we will have to reduce maternal death by 5.5% per annum. There is a change, but the change is not enough and we have to really work hard.

ESOG in this perspective is a member of the National Task Force on Reproductive Health. It has been either elite or has collaborated with still developing policies, guidelines, and training manuals. To mention a few, we have developed material on comprehensive abortion care, we have developed a policy guideline on family planning, we have training material on basic emergency obstetric care, and we have a national guideline, which was essentially developed and owned by the Federal Ministry of Health own Gender Based Violence, just to mention a few contributions we have made to the national agenda.

We have also created a forum for dialogue on important issues and we have been quite instrumental in rolling out evidence-based intervention. To cite an example, back in 2010, we were instrumental in rolling out magnesium sulfate uptake in 107 public hospitals around the country. Before 2010, preeclampsia is worth being managed with diazepam, but we know the evidence was out there that magnesium sulfate was quite superior in terms of reducing morbidity and mortality and from preeclampsia.

In relation to working with communities, we have done a number of activities. We have more than 10 projects with more than 10 million Ethiopian investment on it. Just to give you some highlights, we are currently working on a PMTCT program, and in that, the current program is a PMTCT option B+. We have over 60 facilities, particularly these are private facilities throughout the country where more than 120,000 women per annum are getting screened, know their status when they are HIV-positive, and are linked to appropriate care with retroviral treatment and follow-up care for their newborns. We have also collaborating with the Federal Ministry of Health to improve access to comprehensive obstetric

emergency care. Nationally, we have close to 300 obstetricians throughout, but we know that this is not enough for the whole country. In this venture, what we did was we did send young obstetricians who have graduated for six months to about 22 hospitals in hard-to-reach areas to stay there for six months, train in the first three months, mentor in the second three months, so that GPs and health officers are having the necessary life-saving skills to provide emergency obstetric care. By doing this we are able to train about 47 physicians and health officers to be able to provide life-saving procedures and more than 20,000 women so far have benefited by accessing operative services. Otherwise these women would have either been transferred elsewhere or have severed morbidities and mortalities because of a lack of access to essential interventions.

We have three model clinics, which are now currently reduced to two. We hope to increase those model clinics to about five. These are model clinics on gender-based violence, and particularly catering to the need of women who are surviving sexual assault. These are highly specialized clinics that offer comprehensive medical care, psychiatric care, and provide necessary legal evidences so that victims can pursue proper legal course.

Regarding postpartum hemorrhage, which is a very important killer disease in our part of the world, we have worked on a manual for health extension workers. As you might have heard from yesterday's presentation by Senait, we are close to 38,000 health extension workers who are catering to the need of the community. The lowest level of the health system is a health extension worker and there are two female health workers catering to a population of about 5,000. So in that relation, we have developed a training manual for the health extension workers on how to use misoprostol in case of home deliveries and what to do in case a woman is going to encounter a postpartum hemorrhage until she is transferred to the next facility. That training manual is translated in three languages and is distributed throughout the region.

We are also working on family planning and have recently completed what is known as a Logic Project in Leadership in Obstetrics for Impacting Change. With this project we have introduced for the first time, maternal disease audits into the country where nine hospitals and forty-five centers were involved in a process of quality assessment and quality improvement by looking at maternal disease and near misses in their respective facilities.

We are working with a number of health professional associations. ESOG has established a consortium of professional associations involving public health associations, nurse associations, midwife and medical doctor

associations, and anesthesiologists and anesthetist associations. Essentially what we do is sit, discuss, and make sure that there is no competition between these associations. In anyway possible we try to complement each other in activities. This is gone through quite a process of building trust, building confidence, and also creating a mechanism of transparency so that none of these organizations are in any way in some sort of conflict or competition.

In conclusion, I would say that the society of professionals in the society of obstetricians and gynecologists have become one of the leads partner organizations, with a proven track record in terms of improving maternal health in the country. I thank you.

Kwabena Danso: Thank you. We have a fourth presentation for this session before we move on straight to the next one. It is by the Medical International Team, Myron Aldrink.

Medical Teams International

Myron Aldrink: Thank you. My name Myron Aldrink with Medical Teams International. I just have two quick questions to answer. We are an NGO – we were probably the only NGO here, or at least on of the few here – so the first question is why are we at the meeting? And the second question is how can we support you in what you are doing?

We are honored to be here for three reasons. One is that Medical Teams International is an non-governmental organization that focuses on maternal health and also on trauma. By trauma we mean something like EMS, which is ambulances, how to transport people to the hospital, so that combination of maternal health and EMS trauma. The second reason is that we are also associated with the Medical Surgical Skills Institute at Korle Bu Teaching Hospital here in Accra. As you probably know, the medical and surgical skills is designed to do continued medical education training to surgeons, doctors, nurses, and other medical professionals. This is in conjunction with Johnson & Johnson and other support.

The reason why that is important is because the MSSSI is focusing on maternal health in the future. And the third reason is that we are honored to be working with the University of Michigan, with Frank and Vanessa on a research study having to do with task shifting across Africa. This is research that we are doing and we know that it is a sensitive subject to find out what countries are open to this, what facilities, and how we can do this. That is why we are here.

The second question is how we can possibly help where you are all doing. As Irwin mentioned this morning, there is sort of a triangle of healthcare where you have community health, regional districts, and in the tertiary and teaching hospitals. NGOs are primarily at the community level, but we realize that one of the key issues are the district and regional hospitals especially in maternal health. Our focus in the future will be on addressing the needs of the regional districts, whether it is the training, providing equipment or supplies for the facilities, and also the infrastructure – trauma care, the support and moving all of that.

Again, we are honored to be here, and we applaud you for what you are doing. As an NGO, how can we help support you as this all develops, especially in the regional district office? Thank you and if you have any questions, please see me afterwards.

Kwabena Danso: Thank you. At this juncture, we will move straight into the next panel discussion. That is on research, monitoring, evaluation, and quality/assessment.

Research, Monitoring, Evaluation, and Quality Assessment

Speakers:

Blair Wylie, Joseph Ngonzi, Adeline Boatin; Mbarara – Harvard/MGH

Alex Ocampo; University of Michigan; OpenMRS

Maria Small; Human Resources for Health Team, Rwanda

Susan Raine; Baylor University

Frank Anderson; University of Michigan

Frank Anderson: We are running fairly far behind right now to break out at 3:30. But we do have five speakers for the next series. We added two, so I am going to ask everyone to please keep their comments to ten minutes or less and we will call people to the front. Blair and Joseph are giving a talk. We are going to have the Rwanda Team discuss their monitoring. I am going to give you brief view of what we have done in Ghana working on a register project. I've asked Alex Ocampo to talk about some open access MNE software. Susain Raine is going to briefly describe her project, her maternal monitoring evaluation system in Malawi. So do you want to stand up and stretch for minute? I'll have everyone stand up and get some water from outside of the room.

Kwabena Danso: Hello, now we are going to have the panel discussion on research, monitoring, evaluation, and quality assessments. To begin, Blair Wylie, Joseph Ngonzi, and Adelin Boatin from the Mbarara – Harvard team.

Joseph Ngonzi: Thank you; we want to do our presentation in less than ten minutes. I'm called Joseph Ngonzi, and I am the acting chair of the department of OBGYN at Mbarara University of Science and Technology. My director of the hospital was presenting data to our parliament at one time. Many questions were asked to him and he unfortunately did not seem to have all of the figures on hand. When he came back, we set into a process of trying to get validated data at the end of every year. We have two gentlemen who are very charismatic; one of them is Stephen Tandu who is the chief of anesthesia and the other is Jared Tomosime who is a general surgeon. They had started doing retrospective data collection and they were seeing quite a few results. There is already an existing MGH Mbarara collaboration, and this was supported on both sides from a little

bit of financial support from the MGH side. When the little work that was already in existence by Jared and Stephen was seen, it was discovered that this was really a good piece of work to be able to track all of the surgical data within this regional referral and teaching facility. And this was way back in 2011.

Learning lessons from the anesthesia and surgical retrospective data collection, the obstetrics and gynecology department joined the trail and we managed to discuss together with our partners from Harvard MGH a way of trying to fast-track data collection and also data validation, so we could be able to inform resource allocation within our facility and possibly be able to roll these out to the bigger public depending on the resources that came through. We called this project SSQAD; SSQAD is Surgical Services Quality Assurance Database. The mission was to characterize the surgical anesthetic and critical care disease pattern and outcomes. Patient data was computerized. This is a move away from the bulk of the papers that characterized our data collection. It came in more as a pilot project and it is running onwards towards January 2015.

We had joint discussions and we discovered that there were many areas that were discovered, so we delved into a little bit of diplomacy so as to be able to convince the powers that be that sensitive information such as mortality and morbidity would be protected. We proposed this is a tool for monitoring and evaluation and also as a quality improvement process. We hoped that at the end of the road it would be able to inform health our mega resources would be located according to where the imbalances are. So we brought on board the hospital leadership. This was not just a one off. They assured us that they had understood the vision and that they were going to give us all the support.

We started this surgical database and employed four data clerks, one project coordinator, and one statistician. We were also able to buy desk equipment, like laptops and computer servers. Initially, because we did not have a lot of money to have this whole process go through, we employed the data clerks at 50% but when a little more funding came in, we are looking to raise their effort to 75%. There is a team that monitors what is happened and this is constituted on both sides, there is a team at MGH and a team at Mbarara University. So this just the background of what has been able to come out of a collaboration with Harvard, and we hope for the very best as we track outcomes.

Let me invite my colleague, Boatin, to take us to follow a bit of the technicalities.

Adeline Boatin: Good afternoon, my name is Adeline Boatin. I am a visiting OBGYN faculty in Mbarara in Uganda and that helps me really understand the processes that are going on a help facilitate the improvements in some of the data. We wanted to develop a software that would be easily applied, easily modified, easily scalable, and transferable to situations within the country and perhaps within the continent. Initially, the thought was to use an access database, but then eventually we went with open MRS. Some of you might know this program; it is an open source project which has the mission of developing software to support healthcare delivery in low-resource settings. We ended up deciding on this because it was more scalable, it is actually already being used in a hospital in the HIV clinics, which is part of the inspiration for the open source project. Our goal was really to capture a streamlined set of data. We were ambitious and we realized that we wanted to maximize information, but at the same time be realistic. In terms of developing the actual fields that went into the database, this is primarily driven by the Ugandan departments of surgery, anesthesia, and obstetrics and gynecology. We also look to existing databases in ICU and trauma surgery to sort of make sure that we were correct in collecting the right type of epidemiological data.

In terms of the actual flow of how the database works, in this initial pilot phase we haven't actually change anything about the flow of information collection and clinical care. The database is a little bit superimposed on it so the patient still get admitted in the traditional way there in that their names are written in handwritten logbooks whether that is for admission or, if they have a surgery, and operative register that you can see in that picture. They get charts; clinical care happens; it is documented, all handwritten; and then the charts go to medical records.

Basically SSQAD is superimposed on this after the patients are discharged. Before the charts go to the medical records, they go to the SSQAD office where the data clerks enter information by reading through the charts and gaining that information. We try to do this as close a discharge as possible so that if there is missing information or uncertainties you can approach clinical staff and collect that information and input it. There are a couple of methods to try to make sure the we are capturing all the data that we want, and part of that is going into the logbooks to see which patients were in admission and admitted, and then using that list in crosschecking that all the charts we want have actually been collected.

We have been collecting data since August 2013, and just at the end of January we had six months of data. In that time we have collected over 8000 database entries, and that translates into around 300 to 400 chart

entries per week, and, if you, remember there are four data clerks that are doing this. What is pretty interesting and perhaps pertinent to our mission here is that the majority of the entries are in women, 82%. Granted this does not include pediatrics and internal medicine, but of all the surgery cases, 82% are women. The vast majority are in obstetrics: 61%, 12% in gynecology. Already in these six months we have information that we can retrieve on basic social demographics. The administration can look at where people are coming from, which districts they are coming from to this particular hospital, which referral centers are coming from, what the age distribution is of the patients in the hospital and also their ethnic distribution. We also have several process indicators. We can look at the average time for C-section for example, what percentage of patients getting surgery receive appropriate prophylactic antibiotics and things like that. And then there is the outcome indicators such as the mortality and morbidity as well.

That said we have definitely had some challenges, starting with the way documentation happens in the first place; that still has not been addressed by this database. Once you get the charts, there is still incompletely filled sheets; there are missing pages; there are simply some parts of critical care that are not documented. So it is a little bit up to the interpretation of the data clerks. Also in the process is the fact that we don't always get the charts, particularly charts that are of interest, for example the maternal deaths won't go straight to medical records, they may be audited by the department, by the administration, by the ministry, so this database doesn't automatically get them. Even at the level of data entry, can you imagine putting in 100 charts per week? There has to be some human error in that. Here is definitely illegible writing; it seems like doctors across the board have poor handwriting. There also interpretation errors. So there are four data clerks that are interpreting from what is written in the chart. Three of the data clerks do have some background, but they're not necessarily obstetricians or clinicians. Some of the data that they are gathering is open to interpretation, which is one thing that we are working on. And then infrastructure issues like electricity outages means that on Friday for example, no data entry could occur.

Moving forward to the things that we are going to do, one of them is to make sure that this is actually valid data that we are collecting. That can be used then as a monitoring and evaluation tool, incorporated formation into the departmental activities so that the departments can actually use this to change practices, change systems and to improve outcomes. It allows a hospital to follow trends and it allows us to test interventions and policy improvement measures. For example, if we add five residents, does it

actually change any outcomes? This should be a good way of monitoring some of our ambitions here.

Also, in terms of research, this was created more as a monitoring and evaluation tool and not exclusively for research, and, because it is a collaboration, some of the issues that we have to think about are who gets to use the data, who gets to publish from it, who gets first author, and things like that. One of the things that we want to work on developing is an MOU on accessing the data from both sides, but making sure it is fair and equal. Ideally it would be nice to roll this out to other departments – internal medicine, pediatrics – and then think about the sustainability of it. Right now we only have funding that takes us through to January 2015. If we can make that sustainable, then we can think about rolling this out to other parts of the country and then perhaps to the continent as well.

So that is all we have for you. Thank you.

Open MRS Presentation

Frank Anderson: Alex was a student working for me at the Center for Plant Medicine in Mampong, Ghana. He applied for a Fulbright scholarship and was awarded that to work in Mampong and help them start an electronic medical record system. It was the same open access data that we use, so I asked him to introduce that to us. I think that is an incredible system what you have in Uganda and is a great example. Maybe Alex give us all a bit more of the bare-bones for that quickly.

Alex Ocampo: I could not have asked for a better segue than from our friends at Uganda and Harvard for my presentation because this is a software that is completely revolutionize the way that our clinic here in Ghana does things. As Frank said, I was one of his former students. I had my degree in statistics and I'm here for nine months in Ghana, implementing this electronic medical records system for the Center for Scientific Research into Plant Medicine in Mampong, Ghana, just about an hour north from here in Accra.

These rooms of course are all too common. This was my first day of work in Ghana. This is a little video that you can see. I was taken to the medical records room and just realized what my nine months were going to be here. You know, it is a system that works. It has worked for years. But of course as digital technology came on, there are more efficient ways to handle medical data that allows us to provide better care to patients. I was met by

these 40,000 paper folders, but also by these notebooks of reports that have been generated that need to be delivered to the Ministry of Health.

Of course, my colleagues in Ghana and I knew that there are better way to do things. And that is what led us to OpenMRS. And as they have already touched on, OpenMRS stands for Open Medical Records System. It is not an out-of-the-box, ready to use EMR, but it requires almost no programming experience. I'll say a little programming experience to customize your own EMR for your clinic, whether it be a small outpatient clinic or a big hospital. The best part is that it is a 100% free, open-source software developed by Partners in Health, and I'm sure this audience is quite familiar with Paul Farmer and his organization.

Them in collaboration with the Regenstrief Institute, which is an institute in Indiana and are experts in data management and are closely affiliated with the University of Indiana Medical School. They have developed the software and it has a proven track record in some of the most challenging environments on the planet. I'll show you a map of the different implementations where it has taken place in. Actually, we checked this morning and of the African countries represented at this conference, 12 of the 14 had at least one documented implementation, so it is being used probably somewhere near to you.

Some of the features of OpenMRS, as we just saw in the last presentation, our data entry forms that you can customize to your clinical workflow. They are formatted through either custom HTML forms. It is very simple HTML; most people have no coding knowledge can easily generate forms. But there is also the option to use Microsoft InfoPath, which is almost as simple as designing a Microsoft Word document with blanks where you can insert data. The main thing is that it has a flexible concept dictionary, and this is something that you can define the concept that you want and then you can add it to the dictionary and created data entry form with that piece of data can be collected. So even if you're using social behavioral data like if you want to know the number of people and somebody's household, you simply defined that piece of data as a numeric value and then something that you can add to your clinical work flow forms. And of course there are patient dashboards or you can see all of the information for one patient in one place.

This picture on the left is an implementation in Kenya. This pictures implementation Uganda. And this one on the top right is from our clinic in Mampong, Ghana. A few more of the features, of course it has most of the essential features of any electronic medical record system, so the ability to

generate reports is super important. What used to take my friends and colleagues three days to tally from the paper records can now be done with the push of a button. You can imagine that not only does it make things more efficient, but it allows them to focus on the real important things: doing research, tracking patient outcomes, and seeing how our clinics are doing in providing care to patients.

It allows us to move our efforts from these monotonous tasks towards actually making sure that we are providing better care. Security passwords and customized roles, so that certain people can use certain data. Of course somebody just collecting demographic data at the registry doesn't need to know diagnosis and lab test results. It can operate off-line but also has the ability to sync data between different centers once Internet connection has been established. It also works across all systems and devices, so it is not limited to Windows or Mac or Linux, it can work on anything, including tablets. I have even connected to it from my smart phone before. So this idea synchronization across multiple centers and the ability develop your own specific features if you care to do so are two of the main benefits.

What I think is the most powerful thing about software is that there is an online community in manual available to anyone who need support. This is from the implementer's meeting in Kenya where people who are implementing this across the world came together to discuss best practices and how they are using OpenMRS to solve their needs. One example that I will tell you from this community is simply this email address: implementers@openmrs.org, which is an online community where anybody can pose a question. The example provided that our clinic wanted to automatically generate patient ID numbers when a patient came to a clinic. We are struggling on how to do it with the specific ID number that we used. So I had one of my staff email this listserv and ask this question, and I think within about two hours somebody from Rwanda responded and said that, "Yeah, we had that same problem and this is how we did it." Maybe in the US there are some companies where you hire someone from the EMR company to come to you and service or system, but in some of the areas where we reworked that is just not a reality. This community is so supportive and so interested in getting the system out there so that we can all provide better care to our patients and our clinics. They also provide documentation online beside the community where you can go and learn more about how the system works.

In summary, OpenMRS is a simple and free solution to paper medical records, which has a proven track record around the world. It has basically all of the essential EMR tools that you need. It has a supportive

community that you can always rely on. At the end of the day, this is all about enabling us to provide better care to our patients. That is really what these systems are all about. If you have any questions, anything on the technical details or how to get it, “openmrs.org” is where you can find all of the information. Of course you can talk to people in the audience who are using it. I actually have everything you need to start it up on a USB drive right now, so if you want the files, I can just give them to you. But of course it is free online, so feel free to approach me throughout the conference if you have any questions.

Frank Anderson: Alex lives in Mampong, and we called him down to volunteer for us and he has helped create copies for us and everything. He’ll be starting his PhD in epidemiology at Harvard next September.

Human Resources for Health, Rwanda Curriculum Presentation

Kwabena Danso: Now we move on to the next presentation from Rwanda, the Human Resource for Health team.

Maria Small: First thing is I am going to thank you all for allowing us to present this information about HRH. Secondly, I’ll issue an apology because we prepared a 20-minute talk and I’m going to cut it down to 10 minutes, so after five minutes someone can raise their hand for me.

I am Maria Small, and I am a Maternal and Fetal Medicine specialist from Duke University School of Medicine. But as you have heard already, there are many of us involved from different academic institutions in this program. I’m not going to rush this slide though. This is the reason for our presence here and the reason for this program in terms of the OB/GYN part of this HRH program. That is Millennium Development Goal number 5, which is a reduction of maternal mortality. This is the map, and Rwanda is located in central Africa. You have heard some of the demographics already, I’m not going to emphasize those again. The population is 11 million and is fairly densely located. Eighty percent of individuals live in rural areas. This slide is just a highlight what many of you know in this audience and that is that we practice healthcare and a social and political context. 1994 was a time of the genocide. Many of the clinicians fled the country or were killed and this led to some of the lowest life expectancies of any country in the world during the time period around the genocide. Most of those deaths were due to unsafe births and infectious disease.

Against that backdrop, Rwanda still has a critical shortage of physicians. For a population of over 10 million people there are about 600 physicians.

The root causes we have identified as a group: inadequate faculty and few trained subspecialists. Despite those challenges, however, Rwanda has come very close to meeting targets in maternal mortality reduction, HIV, TB, and malaria. All Rwandans have health insurance and the life expectancy has risen from 48 to 63 years of age over the last decade. I'm going to just highlight the Demographic and Health Survey; this is a survey conducted every five years with a sample of the population aged 15 to 49, men and women, and the response rates are actually very high at around 99%. I think Dr. Merkatz already highlighted something about these numbers, the majority of women do deliver at a healthcare facility or in a public sector facility, and 69% of those do have a skilled provider. Like many places around the world, 80% do not have any postnatal checkup.

We have talked about unmet family planning needs, and of women who do receive family planning, the majority of those use injectable methods. Antenatal care is widely available, about 98% of women receive some form of antenatal care but the majority do not receive the recommended three maternal visits. I think Dr. Merkatz had a lovely slide with bar graphs showing the decline in maternal mortality over the five-year ratios since the surveillance surveys were performed. Similar to the declines in maternal mortality, infant and child mortality have also decreased over the last thirty years.

The HRH program, as you've heard, is a new paradigm for cooperation among US institutions and academic institutions in Rwanda. Instead of small-scale cooperative efforts between individual academic institutions, this is a consortium of institutions and the idea is to increase medical and nursing professions according to the Rwandan government's plan. The funds actually come to the US institutions directly from the Rwandan government instead of from the US government. The responsibility for this program is all within the hands of the Rwandan government and the expectation is that after the seven years of the program, it will be independent and self-sustainable.

This is a diagram of the funding stream. The Ministry of Health of Rwanda receives the funds. Those go into academic institutions and Rwandan academic institutions and teaching hospitals. In terms of the initiation of the project, the Rwandan Ministry of Health approached the Clinton Health Access Initiative, and then they made invitations to universities across the United States. Of those we have the 16 medical schools that are involved in the program, many of them are represented here, and we also have schools of nursing, public health, and dentistry. The funding, in terms of the administrative cost, the US institutions agreed to a 7% administrative

cost and no overhead cost for the conduct of the program. The US government channeled funds from PEPFAR, the CDC, the Global Fund, and approximately \$27 million has been allocated to this program without a disruption in the central services.

This is the stream of process. The National University of Rwanda determines the needs, and then the extra candidates who may be interested in the program submit applications. Then the US institutions will vet and interview those candidates, and those candidate names are then presented to the Rwandan subcommittee. Then they are either selected or declined, and letters are issued from the Ministry of Health. The process, in general, for a generalist physician, the expectation is that they will stay in country for one year and then for subspecialists, the expectation is that they will commit to at least two months in country. The average is 2 to 3 months.

This is something that we have already discussed. These are the training targets, so that we can see at the top the goal is to increase the number of physicians from the baseline of 600 in 2011 to approximately 1,100 by the end of the program. The program started in 2012, so this is year two, and the goal is for 100 faculty members to go from the US to Rwanda each year, have full-time faculty members there for one year as generalists, and subspecialists will rotate throughout the year for 2 to 3 month periods.

The twinning model that we discussed earlier is a partnership with a Rwandan faculty colleague and a US colleague to go through clinical curriculum development, research, and bedside teaching. This is the structure, just a sample of the structure – morning teaching rounds, weekly M&M's, weekly journal clubs, daily lectures, and monthly resident research presentations. There is a high emphasis on consistency throughout the two medical center teaching sites, and that is primarily assessed by their evaluations and exams at the end of the year. The residents receive uniform evaluations and also skill assessment evaluations. This is in terms of evaluation and monitoring. We have a baseline evaluation in which twins do a quarterly survey together, so that each twin evaluates the other. There are annual evaluations of the program, then also a midterm evaluation in 2015, and an evaluation at the end of the program there will be a final evaluation. In 2012, when the program started, there were four senior residents in OB/GYN. The first year, twelve interns or first-year residents started, and this year, sixteen OB/GYN residents started.

Again to emphasize the fact that we practice in a social and political context, I think many people are familiar with this quote, “Women are not dying because of a disease we cannot treat, they are dying because society

has yet to make the decision that their lives are worth saving.” That is part of this emphasis of this program, is that you have to have government partners, government support, and a political will for this to work. Thank you.

University of Malawi, MMED Program Monitoring and Evaluation

Kwabena Danso: Let’s now invite Susan. Frank prefers to be the last speaker, so we will put him to the last spot.

Susan Raine: Thank you for offering me the opportunity to speak to you today about the monitoring and evaluation program that we are instituting for our new MMED program that we just launched a few months ago in Malawi. Because we are a large group of cooperating institutions, as you can see from my slide, we decided that it would probably be very helpful if at the creation of a new MA program, we put into place some formal monitoring and evaluation of our program and that we do it together rather than have any one institution develop something, implement it, and then have another institution replicate or try to do something on their own. We thought to be much simpler if we just did it together. That is a bit of a theme of our collaboration in Malawi I am proud to say.

The program focus obviously for our MMED program is capacity building. We initially wanted to sit down and outline what the goals of this MMED program were. The first is obviously the training of registrars for Malawi, which included such things as curriculum development, didactic teaching, shoulder-to-shoulder teaching in the hospitals and clinics, preparing our registrars for the certifying exams and ensuring that they are able to find post-training employment. In addition to that, we also wanted to tackle development and implementation of best practices in Malawi. It is really helpful, I think, that the vast majority of obstetricians and gynecologists who are actually practicing in Malawi are part of this group that is training in our MMED program. So essentially we decide that something is best practices, then de facto it is best practices. So that is helpful.

In addition, we have a society in Malawi of obstetricians and gynecologists that we will also be able to utilize as a vehicle for vetting our best practices. We also want to strengthen our research capacity. When you have new trainees and you want to fully educate them and have them do research and be able to successfully have a dissertation, that is a very important concept for our program. And then obviously we want to perform monitoring and evaluation.

The purpose of this MNE framework was to ensure that we actually achieve our planned results. It was to improve and support the management of our program; it was to generate a shared understanding among all the partners; it was to motivate the stakeholders; it was to ensure accountability for all the partners; and it was to foster public and political support.

In terms of internal MNE reporting, we wanted to generate key data for our program managers on an ongoing basis and allow us to continuously assess our progress and make sure that we are meeting our pre-established program objectives. In addition we wanted to be able to institute appropriate quality improvement in a timely fashion and hopefully in a preventative fashion. Externally, we wanted to also be able to prepare custom data analyses to present to funders and other key stakeholders. So while we are all internally reporting to ourselves, for instance as the Baylor representatives, internally I want to know what's happening with our program. I also have a larger responsibility to my home institution in Houston and I need to report back. The same is true for each and every one of us. We need to be able to report back to our supporters and our funders of this program.

One of the things that we did was that we developed sort of the logical model and we looked at it in terms of what inputs we were going to put towards a program, what activities we were going to perform with those inputs, what outputs did we anticipate, and then from the outputs, what actual outcomes did we want to achieve, and then finally what impacts we hoped to have.

As you can see our impacts are very lofty but are also few. We started out by choosing to simply decrease neonatal and maternal mortality. Obviously, it is one of the very lofty impacts that we hope to have, but we try not to over-complicate the situation. In terms of inputs, you can see that they are the normal things: it is money, it is personnel, it is the basics. Activities that we are going to perform are things along the lines of implementing the curriculum: deploying our personnel, ensuring that we're providing critical care and treatment, and the like. In terms of outputs, they are again really quite simple. We want to have a comprehensive training curriculum; we want to ensure that our trainees are receiving high-quality education; we want to develop comprehensive practice guidelines; improve our patient care; and be able to implement research studies. We hope that if we are able to do all of that successfully, then we will have our outcomes, which include increasing the number of licensed and certified providers in Malawi that will improve all of our adherence to practice guidelines, that

will have improved clinical outcomes, and that we will be able to have everyone participating and engaged in publication of research.

We have basically four project goals for our program: the first is education, the second being care and treatment, the third is research, and the fourth is program management. I think that is probably a pretty consistent theme from what I'm hearing, sort of in the order from all of you and all of the participants here today. We know that goal one and goal two frequently go hand-in-hand; you can't really educate and train with the clinical care and treatment. That was our desire to place those hierarchically as a most important. Research would be key to us understanding the health care situation in Malawi better for women and being able to make improvements as well. As well we want to maximize performance in our program and manage our costs, and that is part of what this MNE framework is about.

Just as illustrative examples, I just decided to pull a couple of things to show you where we are headed with this. For goal number one of education, one of our objectives is objective four: to teach and train the registrars to increase the local healthcare providers with expertise in OB/GYN. I think that is a common theme in a common objective that we have among a lot of us. Some of the indicators that we have chosen to use are things such as student-teacher ratios, a number of trainees, passing national certifying and licensing examinations, and the percent attrition of students. Hopefully that will be zero.

In goal number two, which is our care and treatment goal, our third objective is to diagnose, treat, and monitor patients to improve maternal health outcomes and you can see that we have picked many of the common indicators that we monitor, particularly in the MDG goals, including the number of antenatal care visits women attend for uptake of ART and the like.

In a third goal, our research goal, our second objective is actually to develop collaborative research programs and increase the knowledge base for maternal healthcare delivery. Some of the indicators there are going to be the number of trainees that we have completing formal good clinical practice training and completed training and research methodologies. I'm actually happy to say that as of today our first four registrars actually completed their formal training in research methodology. Even though almost all of us are here, we have a couple of people back in Malawi stoking home fires who completed the process today – for instance, the percentage of studies that are resulting in peer-reviewed publications for the trainees in the faculty.

One of the really important things that we need to do as a program – it is great to write all this down and come up with a really comprehensive MNE framework – is realistically to have someone implement it for us and keep the process going. None of us, with only a few faculty teaching in both cities in which we're running this training program; no one has a bandwidth to do this. So we plan to hire a fulltime MNE officer who will actually be based in Lilongwe, which is the capital. We have our training sites both in Lilongwe and in Blantyre.

It is very important because we have our registrars in both cities. It is important for us to have parity between the programs. We can't treat either one of them as more or less important. The idea is that we would hire this individual to act as the custodian of this framework, conduct any training that needs to happen for any personnel that collects the data, they can enforce the internal process, conduct the data review, disseminate the results to all of us, and begin investigations when we pick up irregularities. That person is going to have a tough job, because they are going to have to do this in two different cities and they will need to travel. They will be dealing with very, very busy hospitals and different systems in different hospitals, though they are under the same umbrella. It is quite a challenge, but we are optimistic as we begin the recruitment process that will find the appropriate person for this job.

All of this is because we have these four wonderful people, our inaugural cohort of trainees who began this past September. Of course, out of four people we would wind up with two Priscillas because that is not at all confusing. But they are really a stellar group of people and we are really honored to be a part of their training. Thank you for giving me the opportunity to participate in this meeting.

Ghana District Hospital Presentation

Kwabena Danso: Thank you. We were commenting that the logic model is a very pleasant tool. I think that we would all adopt it. We now call on Frank to give his presentation.

Frank Anderson: Well, who would have thought that all of this is going on out there? It is incredible. I am going to just give you a brief presentation on the data that one of the students who visited some of the district hospitals gained. I am interested in the impact that OBGYNs have when they arrive at a district hospital. So this kind of data that we are talking about is a little bit different. When the original Carnegie Program was established, their main outcome was looking at the number of

physicians that then became certified by the West African College of Surgeons. Looking for outcome data was difficult.

The first thing that we did was to go to some rural district hospitals to do some qualitative research. We did interviews with physicians, nurses, administrators, and obstetricians and gynecologists. In summary, all of the interviewers recommended OBGYN placement at rural district hospitals. There was a real sense that people needed to have that. OBGYNs introduced a wide range of positive improvements. They noticed an increased number of referrals into the hospital, decreased referrals out, introduction of new drugs such as misoprostol, new equipment, updated clinical protocols, new availability of gynecological services, greater confidence from the supporting nurse midwives, and increased training opportunities for house officers and medical students.

When we think about this idea of sending obstetricians to the district hospitals, it actually transforms those hospitals. When we talk about emergency obstetric facilities, when an obstetrician goes to a facility, they say I need oxytocin; I need misoprostol; I need to do what I can do as an obstetrician and so that is another level of concept to consider as we move towards this effort. These are just some of the comments:

“If left alone, I would say that every district hospital should have a gynecologist. It is sad if your wife, sister or mother, because she is pregnant, dies. It is very sad. So I would recommend that every district hospital have at least one gynecologist.”

I won't read all of them, but these slides will be made available to you online. But you get the sense that there is a clear interest in having an obstetrician at the facility.

We also did some quantitative data collection. We did some register issue. In district hospitals in rural areas of Ghana, you have a referral book, an admission and discharge book, and you have a labor and delivery book that are all sitting there next to one another. But if you wanted to follow, you know, Mrs. Tetteh who got referred from her village and then was admitted, then needed to know what her procedure and outcome were, then you would need to find her name in all three books. We worked with these facilities to create a larger registry that had all of the indicators in one book (which fills up pretty quickly), but it gives us a chance to compare places that had an obstetrician with those that did not have an obstetrician. What I am going to show you today is not the final answer, but it is my struggle with trying to find quality indicators to show the effect of

obstetricians. It is something to think about, when looking at rates of obstetric referrals in and out of facilities, rates of complications in each hospital, rates of retention of obstetric patients, and case fatality rates.

Just from the retrospective data, we looked at places that had newly placed obstetricians compared to those that didn't, and we saw a reduction in fresh stillbirths, in post neonatal deaths, a large increase in the treatment of malaria and pregnancy, and also an increase in the number of births at a hospital. It is not great, but it suggests some things.

We tried to do some statistical analysis on some of the other issues in maternal mortality ratios. When you add an obstetrician to a facility, you may have increased complicated cases and have increased rates of maternal mortality. I don't necessarily think that outcomes will be better when you have an obstetrician. There are still huge problems in fresh stillbirths, lack of fetal monitoring, lack of assessing inter-uterine conditions, and we will have other problems. Just looking at the indicators – fresh stillbirths rate, master rate in stillbirth ratio per 100 deliveries, C-Section rate, SPD rate per 100 deliveries, antenatal care rate per admission, delivery per admission, and low birth weight per 100 deliveries. These are just some of the indicators that we are working with. We also looked at reasons why patients were referred out, and it was mostly because of a doctor's absence.

We found that when an obstetrician's district hospital, where you have two doctors. You have a medical officer who used to all of the obstetrics as well. When he had a complicated obstetric case, he sent it to the referral hospital. They had to doctors there in the medical officer can do what he knows how to do in the obstetrician can take care of the obstetric patients without sending them three hours away to the hospital. I'm still interested in looking at the effects of placing obstetricians and district facilities. I think it gives us some data to support our efforts, although we all kind of know that when obstetricians are doing hemorrhages in the middle of the night, lives are being saved. Otherwise those people would be traveling another three hours. Babies are being saved. How can we measure that?

We are not at a place, from what I can tell, where nurses that are working those facilities are ready to use computer systems, I'd be interested in seeing how that gets adopted by some of the different types of health workers. It could be challenging. I also think that the data collection indicators should be in harmony with the Ministry of Health. Now some of the data we hearing is internal monitoring data and hospital data, which is interesting, but I think that if the Ministry of Health were involved, at least some of the indicators would be looked at across the country, giving them a sense of the

maternal morbidity in the country. I think we have an opportunity to help them think about what things to measure.

I also think that the idea of quality of care monitoring is going to be the next phase. Once we have enough obstetricians in place, the next step is the quality of care, what is the outcome, and what types of interventions do we need to improve those outcomes. That is when we start talking about intervention research and health systems research. We are on the verge of all of this. Right now we are breaking bread. We are creating the workforce, the group of experts in obstetrics and gynecology who can then move on to do these types of studies for us. So that concludes my presentation, and it is time now to go to the breakout sessions.

Kwabena Danso: We are a little bit behind time, so immediately after the feedback, we will go to the breakout sessions and work in our groups.

Frank Anderson: So what time is it now? 4:15? We have dinner at 6:00 and your rooms are waiting for you to do your worksheets. I've been asked about the worksheets and I want to encourage you to put in actionable items in your worksheet. We have done a needs assessment, so we know a lot of the problems. But I encourage you to put the how-to's and what-to's on your needs assessment sheet, because those are going to be the types of things we are going to look at to have some actionable items for your own funding sources and how we might approach this as a larger group as well.

When you are filling out your forms, it is important that you have clear next steps and how-to's. Today you may have learned about implementing a monitoring and evaluation system. You may have learned about Ministry of Health policies to have an obstetrician in every district hospital. Things like this. Think about those things and put them in your form so we can move ahead with those brilliant ideas that we have heard today.

Certification and Accreditation of OBGYNs

Speakers:

Lauri Romanzi, Gabriel Ganyaglo, Uro-Gynecology Sub-Specialization Group

Vanessa Dalton, Emmanuel Morhe; the University of Michigan – KNUST
Kobina Nkyekyer; Korle Bu Teaching Hospital, Ghana

Frank Anderson: Good morning! We have two sessions scheduled into late breakers that have been added. We're going to hear about a urogynecology program and we are also going to hear about the Lancet Commission on Global Surgery and an invitation to be a part of that. Before we get started with our session today, I have one announcement, too. We made a change on our agenda, and you can see that on the PowerPoint presentation. Originally, after this session, we were going to work in our small groups. That is going to be shifted to 11:00, so at 11:00 you all have two hours to work in your country groups.

Immediately, after this session, you will go to your professional group. There'll be three professional groups, the American OBGYNs, the African OBGYNs, and representatives from various African ministries of health and education. The African minister people will be meeting in the boardroom and Madeleine knows where the rest of us will meet. We will remind you that at the end of the session. Before we start the technical components of the session, I would like to invite Ray de Vries to the microphone to give some impressions.

Sociologist Comments

Ray de Vries: Good morning! I am beginning to feel a little conspicuous traveling around between groups. People say, "Oh no, here he comes. Let's stop what we are talking about." I only have a very few things to comment on today. I did spend some time going between the country groups, and I heard in some exchange, which I thought was quite interesting, and also quite indicative of the level of cooperation that we have here. It was between an African partner and in American partner, and the African partners said, "We need to go to USAID." The American partner responded, "Who's Hussein?"

What is interesting about that is that we have gotten to the level of trusting each other. I think if you are in a group and you don't have trust in each other, you just let that go of your head and think, "I have no idea what he was saying, but let's just move on." So we have reached a level of working with each other. I thought it was quite funny.

I have to say yesterday it was very encouraging to me to see partners working together in this kind of way, but is also a bit overwhelming to be sitting in groups and hearing all of the obstacles between our dreams and the realities we are seeking. This is encouraging and discouraging at the same time, because people were drilling down and realizing that we have to think about budgets; we have to think about the way tuition dollars flow back to residency programs; or we have to get that funding because we have to get more faculty. On the other hand, we know that the dean isn't so willing to give. Seeing that level of detail is really critical for success, but on some levels it is a little discouraging as well.

Also, there are things that you would not expect to affect the work that we want to do: government policies on pensions, which affect the way caregivers decide, "Should I stay in the country or should I leave the country?" Things like hiring freezes that really put pressure on caregivers, and those sorts of things. We heard a lot both in the plenaries but also in the country groups about how histories of displacement ripple through and affect what we want to do. But in the end, I have to say, it seems to me that the worksheets are actually working. For some of you, it may seem a little too heavy-handed or little too patriarchal, but listening to people it seemed as if people are getting into the important, detailed questions.

Just a final word, and this is more of a general word, because I'm not saying that I saw this at all. An insight from sociology is that when people work together in organizations, they often have what we call goal displacement. That is your original goal gets displaced by immediate goals. That is often reflected in misplaced metrics. I'll give you a couple from my own university. We often at the University of Michigan make public where we stand in getting NIH dollars. Are we fifth? Are we second? Oh we move moved from seventh to fifth. This is how many billions of an NIH dollars we got. That is goal displacement, because we get the money to do good work in the world, but now at an administrative level, the goal is, we want to move out to third. There's no question of what we are using that money for. Are we doing the good work that this money is intended to do? Let's talk about, "That's the real goal, but we displaced that goal." I think that is the danger working in any type of interdisciplinary cooperative activity.

I have a graduate student who did some work looking at interdisciplinary collaborations, and she distinguishes what she called artificial collaborations from natural collaborations. The basic difference gets to this displaced goal, that in artificial collaborations the secondary goal becomes primary. That is, my Dean needs to see me bringing in grant dollars; I am going to join this project. I do have something to contribute to it, but my real goal is to garner something for myself that I can then use to display my productivity. Compared to interdisciplinary collaborations where people say, "We really care about this, and our primary goal stays our primary goal." Secondary goals are required but the focus isn't lost. It tends to be true that the artificial collaborations don't get really far, and that natural collaborations do. So far, although we all struggle with this balance between the two kinds of goals, it seems that we're keeping our eye on the goals here. At this point, I am a little tired, but I'm also encouraged. Thanks, everybody.

Frank Anderson: Thanks, Ray. It's been great to have Ray here, hasn't it? To have that perspective and have some reflection? Thank you, Ray - it is great having you here. And, Dr. Danso, can you make a comment?

Kwabena Danso: Good morning once again. I think that so far the enthusiasm has been kept up and going around the African group in the Zero Room yesterday. I had a lot of positive feedback and it is encouraging. I think the enthusiasm is there. What we request is that we do continue that enthusiasm, carry it back home, and do whatever it takes to see this initiative and objective realized. So far, I would say we are doing well. I would thank you all for that.

Uro-Gynecology Sub-Specialization Presentation

Frank Anderson: In our first session today, we are going to be talking about certification in general and talk about some models of sub-certification and sub-specialization. This morning we have Anyetei Lassey and Lauri Romanzi, who will talk about an effort in uro-gynecology. Dr. Lassey is a member of the West Africa College of Surgeons and also a member of this uro-gynecology group.

Lauri Romanzi: Good morning! I'd like to thank all of our colleagues at the Kwame Nkrumah University, the Gates Foundation, and the University of Michigan for making this possible and giving FPMRS to be presented here, because it is a bit of a challenge. We are presenting today with Africa's first formal uro-gynecology fellow, Dr. Gabriel Ganyaglo, with regard to this issue. How do you build FPMRS capacity in Sub-Saharan

Africa? It is a bit of a challenge. Most of the funding comes from government organizations and NGOs that are focused solely on obstetric fistula. Obstetric fistula is a compelling issue. It is a morbidity that is related to a common maternal mortality, which is obstructed labor.

Obstructed labor either kills the woman, or if she survives, we all in this room know that she will suffer any number of horrific morbidities, with one of them being fistula. Fistula women traditionally did not get any attention. They had no money; they were the poorest of the poor. In 1996, thereabouts, when the WHO and the UNFPA began to focus on fistula as a silo-funding project, it was necessary, it was time. It has been very successful.

As a system has matured, what we find is that if you listen to the doctors that you are training, and if you look at the women in those communities, what the doctors want and with the community needs is full service female pelvic medicine and reconstructive surgery. This unfortunate pneumonic is the new term for uro-gynecology. It comes from the American Board of Obstetrics and Gynecology; I apologize for it, but we will refer to everything uro-gynecologic as FPMRS moving forward.

I had the opportunity to work with this fabulous general surgeon in Togo, Dr. Edwe Sewah. We did fistula repair for a few weeks on mercy ships, and then did a site visit to his hospital, a regional hospital way up-country that serves 600,000 people where the gynecologist had died the year before and all of the gynecologic issues fell onto him. The third thing his regional director said to me after, "Thank you for making the ten-hour journey; can I get you a cup of tea." We are so glad that Dr. Sewah has fistula skills now; we are sure they will be of use to the community. But really we have a much bigger problem with prolapse. "Is there anything you can do to help us with that? We know we are not doing a good job." This has been a challenge, because the answer typically has been no.

The traditional or the common wisdom for fistula was that there were approximately 2,000,000 women with fistula roaming the globe, most of them in sub-Saharan Africa and Southeast Asia. We now have some very recent data coming out of the London School of Public Health, more realistic, data-based numbers that show it is probably a little over one million with an annual incidence of 6000 per year. Keep this number in mind as you look at the data coming out of Pakistan. We have new data showing an annual incidence of fistula around 6000 per year and the entire fistula funding has matured to the point that it now has its own map founded and funded and maintained by three very powerful funders in the

world of fistula care, who are still focused on the silo-funded model. Silo-funded model means you are only funding one clinical entity. For instance, cleft palate, and all you will pay for is cleft palate. Fistula; all you will pay for is fistula. Does everybody in this room understand what I mean when I say silo funding?

We have necessary care being rendered in all of these areas where fistula is a very big problem. On the flip side of all of this funding is that we see almost comical demonstrations of the misfiring of this concept of silo funding. Depending on which official document you read, the alleged incidents of fistula in Pakistan is anywhere from 5000-8000 new cases per year. The latest data tells us that we have 6000 worldwide. The Pakistani numbers in retrospect are interesting. In response to this, the UNFPA built seven fistula-dedicated centers, where only fistula care can be rendered. My colleague, Dr. Samya Hussein, who is a medical student looking for a project at the time, took three days to figure out that after seven years of the first fistula center opening, five years from the last center opening, all told, with over 200 full-time clinician employees, these fistula-focused centers that won't do anything else were doing a whopping five cases per center per month.

Why aren't these centers full of fistula patients? It is not the focus of this talk, so I'll move through this quickly. But either our numbers are wrong, and/or remaining barriers to care need to be addressed. I think the most disturbing thing is that nobody knew of this. A medical student brought it to everybody's attention at an appropriate forum, and according to her, two years later nothing has changed. The easiest thing to do with these centers is to open the doors and expand the focus to other female pelvic medicine issues of which there is a great need. We have several published studies out of Pakistan in outpatient literature showing that they do in need have significant issues of unmet need for women with urinary incontinence and pelvic organ prolapse, and yet, the marketing focus, we will call it, remains on fistula and only on the tragedy of fistula to the exclusion of other female pelvic conditions. Symptomatic fecal and urinary incontinence and pelvic organ prolapse in low-income and middle-income nations is also a significant issue for women. Many of the low-income nations are known only for their fistula issue. Ghana has since graduated into the middle-income category, but be that as it may.

Some of it is prevalence; a lot of it was hospital based. This was a very loose meta-analysis with a lot of difficulty comparing data sets as you can imagine. We will take it for what it is. Which I think since they took the time to do these papers in these resource-challenged settings, the

methodology we can say wasn't the most rigorous, but the fact that it was done speaks to an unmet need. They would not have done it if they were not trying to demonstrate something they know their community needs. I think perhaps, we might look at it that way.

I would like to point out a bit of an apartheid issue going on. For the big funders – the WHO, the UNFPA, the USAID – if a woman has prolapse and she is in Asia, then they are ready to pay for it. In Nepal, it is recognized that pelvic organ prolapse is a big issue in the western region of the country. UNFPA has not hesitated to fund it in full. In addition to their ongoing funding, which has always been present, for fistula care. In the same office, you have one desk and one officer for prolapse funding, and another desk and another officer for fistula funding, existing side by side, without any conflict and without any reticence or hesitation.

I conducted a regional needs assessment for UNFPA Afghanistan that took several months. They wanted to streamline access to fistula care. What we found in each of these regions is that they have an issue with fistula, which has been difficult to document between the geography and the ongoing conflict; it is not an easy recipe for prevalence studies. But there are some fistula patients in Afghanistan.

However, to a doctor, at every single site, what came back to us on this assessment was that they are looking for full-scale FPMRS services. That is what we took back to the UNFPA office, and they said, "Fantastic! Let's do it." They couldn't embrace it fast enough, and yet in Sub-Saharan Africa, the exact opposite is true. There is a lot of resistance to expanding fistula funding to include FPMRS, despite the fact that there is a prevalence and need. It is illustrated very well in the Democratic Republic of Congo, where Dennis McQuage, the founder of Panzi Hospital, has had no problem getting funding for fistula patients and women who are victims of gender-based violence, but has been fighting constantly for the prolapse patients who show up at a ratio of 3:1 compared to fistula patients. In their fistula outreach centers, they will routinely do 30 fistula cases and turn away 80-100 prolapse patients for lack of funding. Lack of funding. And these women leave in tears.

So what can we do? Well, you can take the silo model and tweak it a bit and say, "We are finishing at four but we might take some cases after four on our own time. Are you okay with that?" And they typically say, "Sure, go ahead. Just don't put it in your report." The sustainability of that is completely dependent on your trainees. These are my two trainees in Somaliland who are very devoted. When you do that, you can double your

caseload, which is excellent for training and sustainability for the community. This is just a synopsis of six months of work.

Dr. Ganyaglo, will you please come up? We have other sustainable models which are emerging and we are very proud to announce the initiation of a fellowship here in the Ghana College of Physicians and Surgeons. Dr. Ganyaglo is the very first fellow. This is a highly sustainable model started by the Ghanaians who have invited the International Uro-Gynecology Association to facilitate the development of the program.

Gabriel Ganyaglo: Thank you very much Dr. Romanzi for this opportunity. At the inception of the Ghana College, the concept of subspecialty training as a fellowship program was born. Professor Lassey who was introduced earlier and Professor Okariado who was also in the audience were tasked to develop a curriculum for this program. It took a lot of work and eventually the product was based on the Royal College module. So far, we have trainees up to module three of the program. We only have modules four, five, and six to complete. Hopefully, by the end of this year or early next year should have our first products completing all the modules for the training. The key thing for this curriculum is that the focus is on the fellow also providing general gynecological services. You can see our needs, the Mampong needs in the country are not at the level where you sit in your small corner just doing female pelvic medicine reconstructive surgery. So it is important for us and it is part of the curriculum. The key also is that it is based on what we need not on what has been proposed by either ACOG or the Royal College. It has adapted to suit in-country needs. Dr. Romanzi has been very instrumental in insisting that it should be a Ghana-based program and so far, that is where we are. Professor Nkyekyer will be talking about certification so you get to see it has all been adapted to suit the Ghanaian needs.

How did we get it all started? After the first visit by Dr. Romanzi and another colleague from the International Urogynecological Association, last year we started the program. So far we have had six faculty come in. I wish they could come more often but they are very strict recruitment criteria. Dr. Romanzi is particularly very strict on that to be sure that we get the best of the best coming to teach us this course. You don't get opportunity to come and tour the country in the name of coming to teach in the program.

So far, I believe we are around the quality assurance bit. Her presence here makes her the sixth faculty to come and from next week, she will be working with us in Korle-Bu Teaching Hospital. Do we need cystoscopy? Yes, yes, yes. After we have learned all of the surgical anatomy of the

utero-sacral ligament, then you want to begin to start looking into the void but without cystoscopy, that is a big limitation. Multi-channel urodynamics has been discussed. That hopefully may come towards the end of next year.

What about the other countries on the West African sub-region? There is a talk of collaborating with the West African College of Surgeons to follow the Ghana example of subspecialty training. We seek to make Ghana the hub of training in female pelvic medicine and reconstructive surgery, within the sub-region at least and then later on the entire continent. But how much do people know about female pelvic floor issues? Even at the Ministry level, knowledge is a bit doubtful, and talk about the rest of the larger community. We need to get into a drive of sensitizing people about the need to talk about female pelvic floor issues and encourage them to report for treatment.

Do we want to go abroad? Yes, but when? There is a lot of talk about that. Fortunately, we are still getting a lot of offers but at the International Urogynecological Association together with Professor Lassey and Professor Okoriado will be the two to determine that. By and large, this has been the collaborative effort between the Ghana College of Physicians and Surgeons and the International Urogynecological Association. Coincidentally the co-chair for this meeting is also a uro-gyn, so we seem to have a lot of blessings in the confidences of faculties that are helping to start this program. I'll hand this over back to Dr. Romanzi.

Lauri Romanzi: Thank you, Gabriel. Another sustainable model is what we are doing with Rwanda's Human Resources for Health, where there is funding for an embedded female pelvic medicine faculty specialist on site. Over the next year and a half we are borrowing from the silo-funded model and are doing an intensive train-the-trainers model in a small group in the first phase, and in the second phase using the trainers to expand to a system of FPMRS access to care throughout the country. This is a small group, which is in so small. This is a key group of senior advisors and support. We have included a lot of nurses; I won't belabor the issue, but it is crucial when you're going to develop an FPMRS morbidities-based, high surgical volume service into a general OBGYN referral center, through the doors of the which roll by a never-ending cascade of mortalities: women hemorrhaging, women in sepsis, women with prolapsed cords, women with status epilepticus.

How do you get the FPMRS system up and rolling? If you don't invest in your nurses, it won't happen. Everyone on the team is also doing program

development. Our two junior attendings are busy making amendments to guideline advisements through the Rwandan Society of Obstetrics and Gynecology for consideration by the Ministry of Health. Here are just a few of the guidelines that we have considered. We are monitoring this FPMRS system through a simple registry, the first part of it served as the facsimile of prevalence, the second part of which serves as a facsimile of quality assurance. We borrowed from the FIGO fistula manual to do an amended surgical skills assessment of fistula prolapse and incontinence over time. We are also doing private-public partnership. We are not too proud to go back to our silo funders and ask if we can have some supplies and some money and if we can do a little bit of don't ask don't tell. So far in the process, the answer has been yes.

Our three models are to use the existing silo funding and do don't ask don't tell FPMRS on the side. That's one method. The other method has been illustrated with the Ghana model. And another sustainable method is through the Rwandan HRH model. The underpinning to all of these approaches is to create a vision that is shared to get people to stop worrying about problems and thinking about what is possible. That allows your opportunities to come to the fore and I have to say, I got this from my source of all wisdom these days, Twitter! I've had great fun tweeting this meeting, and I hope you have, too. This is one of the most beautiful tweet avatars that think I've ever seen, so congratulations to you. Just last night – you know you get 140 characters so you have to be succinct – here comes Robert Gates, US tips on the business of medicine: no money no mission. I think we all understand that. And I think I'll leave you with some words of wisdom from one of the great thinkers of our time. For those of you who are not American, Will Farrell is one of our favorite comedians, who tells us, in case we don't already know, “every sixty seconds in Africa, yet another minute passes.”

Family Planning Sub-Specialty Fellowship Program

Kwabena Danso: Thank you very much. Now we will move to the next presentation given by and that is going to be given by a pair; Dr. Emmanuel Morhe and Dr. Vanessa Dalton. Dr. Emmanuel Morhe is from Ghana and Dr. Dalton is from the USA at the University of Michigan.

Vanessa Dalton: I think I'm going to do some introductions. I'm going to talk about another subspecialty fellowship program that started in Ghana. I was part of the University of Michigan team that helped facilitate this but I really just wanted to introduce a few people that have been the founders of this. One is Professor Danso, and this is Emmanuel Morhe, who is part of

the first cohort of fellows who went through the family planning fellowship program here. Also, the other person we were really wanted to recognize for this is Tim Johnson, because, of course, his vision and his Ghanaian counterparts are really the reason why this all happened. Unfortunately, I'm disappointed that he did not make it. I just wanted to introduce Emmanuel Morhe and let him talk a little bit about what the program is and the process of both the curriculum and also how it has gotten integrated into medical education in Ghana.

Emmanuel Morhe: Thank you very much. The objective of this panel this morning is to discuss certification and accreditation. These are very important aspects of establishing a pre-service training program. I'm going to use the family planning fellowship program that was established in Ghana as an example. Like anyone seeking employment, there are basic questions that you need to ask before you get the employment. First, what institution where you trained in? Is that institution being accredited? Who has accredited that institution?

Then the next set of questions is: Has the person seeking the job completed training? If he has completed his training, has he been given any certificate? And who did so?

The third set of questions is, do you have the requisite license to practice?

Using the family planning program, I will present it and Professor Nkyekyer will follow and give details about accreditation. I'm just going to focus on our family planning program. With regard to the pre-service training, we all knew that it is the best way of addressing the inadequate human resource challenges that we face in sub-Saharan Africa. We know that pre-service training plays an important role in preparing new professionals and also strengthening the continuous medical education, and accreditation is very important. With regard to the family planning fellowship program, it was the first sub-specialist program of the Ghana College. It was started as an international family planning fellowship program, which was a collaboration between the University of Ghana and Kwame Nkrumah University, both in Ghana.

The goal is to reduce maternal mortality. The objective of the program is to build human resource capacity and to train highly skilled experts in the provision of family planning and reproductive health in Ghana. We know that accreditation is very important and therefore in order to get accreditation and certification, we need to get major stakeholders involved. There was early involvement of major stakeholders such as the Ghana

College of Physicians and Surgeons, the Medical and Dental Council, the Ministry of Health, the Ghana Health Service, and local NGOs. Other people that were involved in the early development of this program included the training institutions at universities and then the teaching hospitals. There is also the involvement of trainers. Then we should not forget the potential fellows and residents who have been recruited in this sub-fellowship training program.

To begin with, there was a need to develop curriculum. As often said, we don't need to reinvent the wheel. Therefore, the planners went to the University of Michigan where there was an evidence-based fellowship program. That program has been very successful and has spread across the US. When we went to the University of Michigan and started studying their curriculum, there was an inter-disciplinary group of people who were from Ghana and went to team up with US experts, and they developed curriculum that was suitable for the country.

Then, the next thing was faculty training, because we need to put in a strong faculty in order to develop a very strong pre-service training program. These faculty are trained in two places in the US, and it involved clinicians, researchers, and public health officials who were selected from the two universities and various institutions in Ghana and were then sent to the US to have this training.

The training focused on leadership, clinical skills, teaching, mentorship, research methodology, and evaluation and documentation. Then they came back to Ghana and started the program. It was a two-year program and it began in 2008. And it began with two obstetricians and gynecologists who had the fellowship at the West African College. They were recruited into the program; two from the University of Ghana and two from Kwame Nkrumah University. They underwent training and the training was basically competency-based and it involved clinical skills training and development, research training and result development, with an award of an MPH degree, and leadership and advocacy skills and development.

After two years of training, the first cohort of trainees graduated from the program in 2010 and was then certified by the Ghana College of Physicians and Surgeons in 2011. Currently, we have eight fellows in the program who are being trained under the Ghana College of Physicians and Surgeons, because the Ghana College of Physicians and Surgeons took ownership of the program. Graduated fellows are already established in the medical council and offer services in various institutions in Ghana. Currently, five fellows are out of the program.

The first four inaugural fellows are all faculty members. One in KNUST, one in the University of Ghana, the other one is in the University of Ghana School of Public Health, and then fourth one is the founding head of the Department of the Tamale Teaching Hospital. The first fellow that has been produced under the Ghana College of Physicians and Surgeons is currently at one of the original hospitals.

Currently the graduated fellows are involved with so many activities. They provide the direct mentorship to current fellows, residents, medical students, and public health students. They also provide pre-service clinical and research training for medical students, residents, midwives, and nurses. They are involved in continued medical education, particularly serving as consultants for NGOs in family planning and reproductive health. They play a leading role in the conduct of research in the country.

One of the big achievements of the program was the development of the Public Health and Family Planning book. This book was written by some of the mentors of the program and some of the graduated fellows of the program. It was an attempt to put together various aspects of reproductive health. I must indicate here that it was one of the first texts in the Africa sub-region that tries to put together reproductive health issues in one text.

In conclusion, establishment of an in-country, pre-service training program is feasible in sub-Saharan Africa. However, it involves careful planning. It also needs committed leadership. Ownership of the program is good, but we must also remember that cost-sharing approach is important for sustainability. Long-standing collaborations as well as mentorship are very important for continuation of the program. I would like to give a special acknowledgement of several people who contributed to the successful establishment of this program. Thank you.

Ghana College of Physicians and Surgeons—Certification of OBGYNs

Kwabena Danso: Thank you, and I think you agree with me when I say that we continue to re-echo one of the key messages that we gave at the Rome meeting. Collectively both American and African participants said, “Yes we can.” There are evolving messages and evolving stimulation that, indeed, “Yes we can.”

Let us have the other aspect of this panel: certification and accreditation from Professor Kobinah Nkyekyer. Professor Nkyekyer works primarily with the University of Ghana Medical School and he is the Faculty Chairman for the Ghana College of Physicians and Surgeons.

Kobina Nkyekyer: Thank you, Professor Danso. Good morning. I'm going to talk mainly on certification. My outline will be to give you some historical perspectives and look at the current certification mechanisms and also with the licensing involves. The training of specialists in Ghana before independence – just in case you don't know, we became independent in 1957 – and in immediate post-independence students were sent abroad, mostly to the UK, and then later to Germany, and much later to the then Soviet Union, where they had their medical training.

On completion, some came back, worked for some time, and then returned to the countries they trained in for specialist training. Others continued with specialist training in the countries where they did the primary medical education. In 1962, the University of Ghana Medical School was established. This medical school graduated its first batch in 1969. In 1975, the KNUST was established. The specialist training in Ghana started around 1983 and we expected to graduate at least ten people.

What happened was that after the end of the first year of training, you took the part one membership of the Royal College of Obstetricians and Gynecologists. After another year or two, you were granted a scholarship to an institution in the UK where after another two to three years you were expected to have completed the full membership and then return home to provide service.

However, for various reasons, there was a problem of inadequate numbers of specialists and obstetricians and gynecologists, and then we had the Carnegie-sponsored OBGYN training program in 1989. This resulted in the full training of OBGYNs taking place in Ghana as opposed to the previous arrangement in which you have to go abroad to complete your training. That full training led to the attainment of the Fellowship of the West African College of Surgeons. Even though we have the West African College of Surgeons, it was felt that we also needed our own college. After some years of preliminary work, in 2003, the Ghana College of Physicians and Surgeons was established. That is currently the body that oversees all postgraduate medical training in the clinical areas. Candidates have the option to undertake the training in both systems or in either of them. In the meantime, two more medical schools have been established. The School of Medicine and Health Sciences at the University of Development Studies, Tamale was established in 1996, and the University of Cape Coast Medical Sciences was established in 2008. Indeed, it was only in August last year that the University of Cape Coast School of Medical Sciences graduated their first batch.

As far as the current certification mechanisms are dealt, I'll first talk about the situation with the Ghana College of Physicians and Surgeons. For entry into the program, you must have passed the primary examination of the college or any examination that is considered to be equivalent. And then you will go through an interview before entry into the program. Let me mention that when the whole thing started, we used to use the old system in which you pass an entry exam and interview, but we realized that it would be better if the candidates passed the primary exam before they entered, because in the previous arrangement, you came in and were supposed to take the primary exam at the end of the year. We thought that was a bit of a distraction.

Now you have to pass the primary examination, and after an interview you are admitted into the training program. After completing satisfactorily all rotations during the three-year training program, including the six-month rotation outside the teaching hospital, you take an exam. Of course there are other mechanisms for assessing progress through the training program. There is an exam, on the successful completion of which one is awarded a member of the College. The ministry appointed such a person as specialist obstetrician gynecologist.

The member is supposed to work a year outside of the teaching hospital and then can return if you or she so desires for the fellowship training. There is a two-year program in family planning and reproductive health, as we had mentioned which has been in collaboration with the University of Michigan, a program in uro-gynecology in collaboration with the International Uro-gynecology Association, the gyn-oncology in collaboration with the University of Michigan, and we have recently started what we refer to as a general OBGYN fellowship. For these fellowships, one has to write a dissertation, and an exam involves a viva in which there is a dissertation defense and then a viva over general areas in that particular specialty.

Oral exam - upon completion one is rewarded the fellowship of the College and becomes eligible to be appointed as a senior specialist. The fellow is appointed as a senior specialist by the Ministry of Health, and so is eligible for an appointment to the faculty positions in the medical schools. As far as the West African College of surgeons is concerned, entry requirements are the same as for the Ghana College. In the West African College, after the three-year training, you take in part one examination, which is made up of written and clinical examinations. For that you continue straight into the fellowship program. This is also a two-year training program, and you have a dissertation and a viva in which there is a

defense of the dissertation and issues on general OBGYN. Again, the fellow is appointed a senior specialist and is eligible for faculty positions in the country.

If you qualify from outside, of course, there is the issue of validation in the education being recognized. If necessary you'll take an exam, which is made up of a written and oral components, and then you are given the registration to practice. I'll talk more about the Medical and Dental Council issues later.

If somebody has a qualification outside of the sub-region, then there is the place for the person becoming a fellow of the College by election. The qualifications the person has must be equivalent or considered equivalent to that of the College. He must have been qualified for at least three years, and he must have had one publication in a peer-reviewed journal. They must have contributed to the practice of the specialty in Ghana. This means that there are some people who come around and provide service in the community or are giving help with the affairs of the specialty in the college. Then the college requires two referees of good standing. I am insisting to add that this applies to Ghanaians. But if you are a foreigner, then you would have to be working in this country before you can apply for a fellowship to become a fellow by election. The same more or less applies to the West African college. For them, whether you are from the sub-region or not, you should have been practicing here for three years before you qualify for fellowship by election.

Let me quickly deal with the license to practice. The Ghana Medical and Dental Council has three types of registration: the provisional, which is for house offices or interns for that matter. For our purpose, especially since we get visitors, there is what is called short-term temporary registration. If it is up to three months, then you will be given a temporary registration without having to take an exam. But if it is going to be longer, then you have to take the exam that all who qualify out that this country would have to take. Of course, there is a full registration which you get after you have taken the exam. But I must say, in some situations if you come on the invitation of the medical school or a dental school, there is a provision for exemption for taking the exam for full registration. Thank you.

Kwabena Danso: Thank you, thank you Dr. Nkyekyer, this was quite insightful.

Frank Anderson: We also heard about the MMED program is the more prominent East Africa. I think we heard details about that, but we don't

have a presentation on it now. This model takes a lot of people in the country to actually need certification and to have that ability. There are different models, but I think you can see this model also offers a country the opportunity to make decisions about how they proceed with specialists in this quite rigorous process that ensures that your specialists have achieved a certain goal. I personally think that helps with retention. From the outside it seems that that really helps with retention a lot, when you have worked very hard to stay in your country to become a leader in this life. So, thank you, Dr. Nkyekyer.

Frank Anderson: Blair Wylie had an announcement to make.

Blair Wylie: I am very inspired by the two presentations on subspecialty training. I am wanting to get the act together for those of us who are in high-risk obstetrics and maternal and fetal medicine. Just an announcement that at lunch MFMs who are here, let's all meet together. Those of you who are trying to start programs in Africa, come tell us what we can do to help. Those of you who are pre-contemplative come together so we can replicate what has been done. Can I ask a question? Am I allowed to ask a question?

Those who are the established subspecialty training programs in Ghana, are those available to individuals outside the country? For example, could a Ugandan come to Ghana for FPMRS training? Could Africans from other countries come for subspecialty training with the knowledge that subspecialty training hasn't been established everywhere?

Kwabena Danso: Yes I think so. Well yes, provided that the person has the requisite qualifications and meets the conditions set out by the Ghana Medical and Dental Council. We had some trainees from the Gambia who did the membership and went back. One of them has applied to come back and do the uro-gynecology program. Obviously, it would be easier for people who have already done our training, but certainly in particular cases it should certainly possible to look at the situation and deal with it as it should be dealt with. That possibility is there.

John Mulbah: Thank you for that presentation from Ghana. My name is Dr. John Mulbah. I am also the Chairman for the Liberia Medical and Dental Council. I would like to learn from Ghana in the case where a student is returned from a country after an undergraduate training and you found out that the curriculum of that country does not meet the standard of the Ghanaian curriculum. The student has returned with the diploma of MD. How have you tried to handle this situation?

Kwabena Danso: This is a difficult issue. In fact, there have been a couple of instances. In that instance, the recommendation that came from the Medical and Dental Council was that those individual have to be attached to the training centers and work under supervision, just like trainees, for some time and take exams. In fact, even currently sometimes, those who are trained outside, mainly from countries like Russia, when they come, they do take an attachment. They do some sort of two to three week attachment in the major disciplines before they take their exam for final registration. So what I'll say is that it will be an issue where the Ghana Council should make a decision on. The Council should have the capacity to verify exactly what kind of certificate the person has brought and what actually goes into training for that certificate. That is the job for the Medical and Dental Council.

Kobina Nkyekyer: Let me add that if you come to Ghana with a specialist qualification from outside, especially if your basic medical qualification is not from Ghana, then no matter where you have come from, if you are going to practice in this country, you will have to take an exam. I have been on the examiners board, so we sometimes have people who have come from other parts of Africa – South Africa – wanting to practice here for various reasons. They have to take the exam. For most cases – it is a fair exam – the person who has been well trained usually does not have any difficulty with the exam. Particularly if your primary medical qualification is not from Ghana, then even if you come as a specialist, then you have to be examined in your area of specialization. But a general rule is that if your primary medical qualification is not from this country, even if you trained in Nigeria for your basic medical degree and you come here with that degree to work, you must take an exam with the Medical and Dental Council before you are granted full registration.

Frank Anderson: Okay, so two more questions.

Jack Ludmir: I just have a question for my colleagues from Ghana. First of all, congratulations. I think one of the most frustrating things in working in different countries is who is responsible for writing the examination and creating the questions? I congratulate you that you have your system, but I would like to know who is responsible, on a yearly basis, to write those questions, in particular in our specialty, in OBGYN?

Kobina Nkyekyer: The faculty has fellows who provide questions for the examination. The questions are submitted. We screen the questions and decide which ones to use. They are also involved in the clinical exam. I don't know if that answers your question.

First of all, we encourage people to bring us questions and we set up question banks. I still don't know if I am answering your question or don't understand what you are saying. It is the fellows in the faculty who provide questions, especially those who are from the academic centers who provide the questions; we vet the questions and then decide which ones we want to use.

Jack Ludmir: Would you be willing to share that exam with other countries who still don't have a model and don't have enough people to write questions?

Kobina Nkyekyer: I don't think it would be a problem. We probably need permission from the College before we can do that.

Kwabena Danso: Let me add here that in any particular examination, even those who submitted questions do not know if their questions are appearing. You are asked to submit questions to the College. The questions are screened and may be modified, they may be merged with other questions. So in any particular examination, it is the chief examiner, and that is the faculty chairman who knows which questions are appearing for that examination. I think this is important. It happens in the Ghana College and also happens in the West African College. We submit questions all the time. If you submit questions today, your question might appear two or three years later. You will not know until one day, maybe when you are called to be an examiner and say, 'Oh, this question probably came from me.' That's how it is.

Frank Anderson: You know there are thousands of questions that exist out there that we could mobilize questions from everyone. Jeff?

Jeff Wilkinson: Can I change the topic to the fellowship training programs for a second? I think the fellowship training is a critical part of expanding expertise of care in any region, including sub-Saharan Africa. Certain centers will be critical to establish fellowships. One thing that I would encourage you to do is to not repeat the same mistakes that have been happening in the US or Europe just because they have been happening. Number one example being urodynamics that was brought up. But even more seriously, I think it emphasizes the need to get excellence in the residency training programs in the subspecialties so that when they finish most of the graduates can do 80% of the prolapse cases and do a radical hysterectomy. For the foreseeable future, fellowship programs are not going to be the norm, so excellence in training in the residency is the critical part.

The last point is that, most fistula surgeons who are trained in Sub-Saharan Africa also are not trained in pelvic organ prolapse so I don't think you can expect to go into current fistula centers and expect them to immediately take up the pelvic organ prolapse and stress urinary incontinence training, mostly the prolapse. But it is a laudable goal. Of course, everyone with pelvic organ prolapse and stress urinary incontinence needs attention as well. The morbidity and suffering with fistula patients can't be denied in relation to that, but I applaud Lauri for her efforts, because she is really leading the way along with her Ghanaian colleagues and others.

Gloria Asare: I have a follow up question to the foreign graduates taking exams. Have you had a situation where after affiliation, the examination candidates fail a couple of time? If yes, what do you do in that situation? And then sometimes, countries that are doing this training have a bilateral agreement with the host country. So there is also the politics around that. Have you experienced that and how did you handle it?

Kobina Nkyekyer: Let me answer the second question first. Where there is bilateral government-to-government agreement, candidates that are sent for training may be given an exemption by the medical and dental consoles so that they can have their training. And that has happened before. When somebody comes and is to take their exam, the councils usually advises that they spend some time in one of the major hospitals so that they will get to know how things are done here. Obviously, if you train in a completely different environment, you may not be familiar with the peculiar problems that we have here. So the Council advises that before anyone takes an exam, they have an attachment with one of the big hospitals.

Regarding your question about somebody who takes exam once, twice, or thrice, what may happen is that the candidate may be advised or asked to have a special attachment and training again and then take the exam. If you don't pass the exam, and you want to practice here, than that would be a difficult situation. As I said, on the governmental level, there is always the possibility that the Ghana Medical and Dental Council for the purposes of somebody coming in to train, may grant them temporary registration.

Kwabena Danso: A little addition is that in those bilateral agreements we always require the provision that if one country is training for us because of lack or needs, the person they train should be qualified to practice in that country in the first instance. If, for instance, we're training somebody for Liberia, at the end of the training if we do not accept that person to practice in our country, then Liberia should not do the same. That provision must

build that after qualification that person is otherwise qualified to practice in that country. That solves a lot of problems.

Frank Anderson: Thanks, we are going to need to move on, because, of course, we are behind a little bit. One thing that we haven't done either is take a group picture. Group picture, Donatus, can we do that? I think we should do that before lunch. Of course, Madeline has this taken care of. Before you get your plate for lunch, we will have our picture taken on the front stairs downstairs. Before we do that, we will be moving into our thematic working groups. And Madeline is going to explain where those are going to be. Our technical material is up now. Now is the time to process. I have got some discussion guides for each of the group, for the American group to discuss what we are going to do next, the African to describe what they are going to do next, and the governmental groups to get together and describe what they are going to do next. We can hear about that this afternoon and talk about our process this afternoon. But we are going to have our thematic working groups now, then we will have a coffee break, then we will have group work for two hours, and then we will have lunch.

Madeline Taskier: So, as you guys can see up here, for the thematic working groups, the American OBGYNs will be in the zero room on the ground floor and Frank is going to moderate. With each group, we set up the tables the same way so break yourselves out as you are most comfortable, but we will have discussion questions at each table. You are going to work together at those tables for fifteen, twenty minutes to warm up, break the ice, start discussions. Then Frank is going to moderate a general discussion in those rooms that we can all sort of share. As I said, the American OBGYNs will be in the zero room on the ground floor with Frank. The African OBGYNs will be in the seminar room on the third floor with Professor Danso moderating with the same format – little breakout work groups and then a larger discussion – and Gaurang will also be in that room, and the Ministry of Health professional society representatives will be in the Board Room, also on the third floor. Ray de Vries is going to help moderate that and I'll be in that room as well. Does anyone have any questions?

Kwabena Danso: In the African groups, we will not be going into country groups. We're going to mix up, so it is not like the groups that we are used to. We're going to use maybe two or three tables and we want a mixture, so that what comes out is a blend of ideas. We don't want the same country groups.

Madeline Taskier: Just a quick reminder, as Frank said, you have a coffee break, then we will move back to the original breakout rooms that you guys have been in the last two days just to finalize your group work and your team plans, and then we will have lunch. But before we start lunch, we will have a picture on the front steps of the Ghana College, right where you got dropped off at the bus. We will meet there at 1:15 for the group picture and then have some lunch. Then from 2:15 to 4:30 we will have each country team present and have an open mic following up. Then we will have closing and finish at 5:00. Also, if you have to go to shuttle for your flight, just find Andrew or me. The shuttle has been on call from basically 3:00 pm on to get you back to your hotel you can get to the airport on time. Remember that you need to be there more than two hours in advance because they close check-in at an hour and a half before. Also regarding flash drives and worksheets, we will announce this a little later, but make sure you're saving everything on your desktop as well as your flash drives because I know there are multiple versions. Of course we want to collect that later, but please make sure you are saving that in both places, that would be helpful. There have been some updates to the Dropbox as well so go ahead and check that.

Frank Anderson: We are not having a separate professional society group. So the American OBGYNs would be with the professional group. It is not professional societies. It is just the governmental people in the boardroom. Does that make sense?

Kwabena Danso: There is an ACOG representative here. There is a Royal College representative here. We have also a FIGO representative. We have AFOG too. They can also form a little group so that we have their input. A lot of technical support will be needed from these associations and we need to hear from them. Do you want to stay here? Fine.

Frank Anderson: If there are some professional societies that would like to stay, I do not have a discussion guide for you but feel free to come up with your own process. Now is not break time, but you go straight to the rooms now – board room, zero room, or seminar room.

Madeline Taskier: Thanks, everyone

African OBGYN Perspectives

Kwabena Danso: What are the major lessons learned from this meeting that pertain to academic African OBGYNs?

African Participant 1: Thank you. Actually, I am not an OBGYN but as Vice Chancellor that North-South partnership collaboration is well-developed. Regarding the South-South partnership, I don't know what to do about this. I think we should think about the strategy for South-South partnership.

Kwabena Danso: We are starting with the one for African OBGYNs.

AP Koroma: Yes, on this: What are the major lessons learned from this meeting? I am Phillip Koroma from Sierra Leone and I think that I did not have the opportunity to present but I would like to first of all express my sincere thanks to the Ghana College of Physicians and Surgeons for assisting us in Sierra Leone, having our boys in your country training to become OBGYNs. Sierra Leone as it is, we are definitely in a shortage of OBGYNs. I am, as I am speaking to you, the most senior one in the country. Then I was Senior Registrar. I have learned a lot, that partnership and collaboration will definitely be important in my own country.

I will also want to know if you Ghanaians will please open up our school. Looking at our program for these three days, I have learned a lot. If we do not partner or collaborate with most of you, then we will definitely not succeed. We are short of staff. -I have been in the provinces for ten years and for nine years in the city as the only OBGYN. I am a Fellow and Senior Registrar. We started our program in 2008 according to my predecessors and up until this year, we have produced none. That is why I want to use this opportunity to plead with you Ghanaians once more, to please come to our country and assist us in this particular program. We are now partnering with Johns Hopkins. We have done a lot in these few days. Even the certification and deployment process is not so much ready. Everyone is stationed in the country. The old ones are 70 years and above. So, there is a big problem in our country. I have definitely learned that collaboration and partnership are very important for our country.

Kwabena Danso: So, partnership is important. Those who are a little bit higher up should assist those who are beginning to also come up. This is what we have captured. We will build a consensus and then will move on. Any response? We are still on the first question. What are the major lessons learned that pertain to Academic OBGYNs?

Stephen Rulisa: The lesson I learned is that what we are told to share what we are doing in order for the Academic OBGYN program to be successful. The agenda needs to be lead by the local nationals and then the partners can help to achieve the objective - not that the partners come with their own objectives. What I want to say is that local partners of the African Academic Institutions should first define exactly what they want and how they want it, so that whenever the partners come, they cannot deviate you from where you want to go. They can only help you to speed up the process.

Kwabena Danso: This is clear, right? Yes.

Bellington Vwalika: I am Bellington Vwalika from Zambia. What I have learned is that with the partnership that we have with northern partners, if there are programs such as the fellowships that you have introduced, then there is no need to reinvent the wheel. We can just adapt and make them suitable to our environment.

Kwabena Danso: In other words, there are resources and material around, but we need to adapt it to suit our local conditions in solving our problems.

Hillary Mabeya: My name is Mabeya from Kenya. I think what I picked up from this conference is that we need to increase inter-African organized exchange programs because the training of uro-gynecology here. I should come from Kenya or I should send a colleague from Kenya to have training in cost reduction and there is synergy in what we are doing. From nothing, you can actually do something. My take home message from here is that maybe we need to interconnect more than we are doing.

Kwabena Danso: Yes, South-South connection. It boils down to that. The first point upon which we have regularly agreed.

John Mulbah: My name is Dr. John Mulbah from Liberia. What I have learned and enjoyed from this meeting about partnership is encouraging. But I want to admonish every one of us to take ownership of our program and to be focused and perseverant. If you take the newly-born program in Liberia, it is just last year that we visited Ghana. And when we came to

Ghana - right in this room - we were advised by the professors here that no matter how many constraints you have ahead of you, you must be persistent. Today we see our program established and we will partner with the western countries. But I think we need to take ownership of our own program and make sure that nothing can stop the establishment and progress of these programs. Thank you.

Kwabena Danso: On my part, what I would like to add is that African or sub-Saharan problems and challenges are best solved by sub-Saharan Africans. Whatever we need from elsewhere is a means for us to get to the end - we should not leave the pathway to them. We welcome the support, but we have to lead the support. I remember way back in primary school when we learned history; there was a textbook of history, makers of civilization. There was one part that was talking about Mango Pa, who was the one who discovered the river, I think it was Kongo or So. But at the end of it all it was an African who lead him to the river, isn't it? Yes. He came from somewhere and went to the river, but it was an African that showed him that there is a river here. So, Africans should solve their own problems. We need help, yes, but we have to solve our own problems.

Yirgu Gebrehiwot: I think one important thing to remember is that most countries are at various development levels and we cannot talk about one solution that addresses everyone. The solution has to be context-specific. Probably the most important take home message is that countries have to define their own needs, they have to identify their own priorities, and they have to identify their own challenges. Their partners can help in solving those already identified problems. If we expect that every solution will come from out of Africa and every partner will save us from whatever difficulty we are in, then I think the misery is going to continue. So we need to make sure that we have concrete actions, action plans, identified priorities, and identified challenges so that our partners can chip in on the process and galvanize the change that is occurring in the continent.

Kwabena Danso: On this note, we can close this all. African problems are to be solved by Africans. Partners can help, but we should lead the way based on our own priorities and the kind of solutions that we want.

Now we can move to the second question: How do you envision this group of African OBGYNs continuing to work together? And, for that matter, under what auspices?

I think this question is very important. There is no doubt that every country is doing something. But we also know that the sum of various

parts is not necessarily the same as when the various parts are geared towards the same direction. Whatever activities we are doing, how can we continue to work together in this respect? Comments?

Stephen Rulisa: I think we Africans know exactly what we want and we know exactly where we want to go. So I think the best way is to forge our own partnership of African institutions first and then solve the problems. Then the partners will come at different levels because we are at different levels of this program. What may work in Ghana may not work in Ethiopia or Rwanda. Even if we solve the same problem of maternal mortality, we need different tools to solve it. I think if we first forge our own relationships and make ~~it~~ them stronger, I actually think it should be much stronger than the relationship we have with the other partners across the ocean.

So, I think we should first forge our partnerships to be very strong. We have an example in Rwanda where we use our Human Resources for Health. We told all American institutions that, 'Before you come, first get together in the US and come as one group'. We put together 27 institutions in the US, like Yale, Harvard, and others, and we don't see them as Harvard, but as partners from the US. They come as one group now to solve one problem in our country. We know exactly where we want to go and they can chip in at different levels. So I would look at it this way: In Africa, we should first forge our own partnership and make it much stronger so that whenever a partner comes, we say, 'You know what? That solution can work in Ghana but that solution cannot work in Rwanda. We need it this way.'

Kwabena Danso: Okay, first let me give a follow-up question directly to you. How do we do that? Do we remain in our individual countries? How do we communicate? How do we know that you know that Kenya is doing ~~that~~ this and Liberia is doing that and Ethiopia is doing something else and the Democratic Republic is doing that? How do we do that?

Stephen Rulisa: I think this should be the first step. I would propose we draft a tool that would go to each of us to capture different questions that we would want to hear. For example: Who are you? Do you have a running program? What are your maternal mortalities? What are your challenges? What are your biases? And then we have a database from each of us, and then we know who is at which level. Then among this, we would elect some kind of coordinating mechanism. Who is coordinating where? Who is the chair? Who was the secretary? Who takes leadership? Then we form a partnership that is driven by certain bodies that we can forge now.

Kwabena Danso: I think certain words have emerged from his discussion: Coordination, leadership, and so on.

Yirgu Gebrehiwat: I think I can see opportunities here. The opportunity is the newly formed African Federation of Obstetrics and Gynecology. AFOG has 28 member societies from Africa. The rest are not members because they do not have societies or they have too few obstetricians in country. In fact, I had it a discussion with two of my colleagues, one from Sierra Leone here and I also had a discussion from a colleague in Botswana. We have got a meeting between the 21st to the 23rd in Khartoum next week; I am going to bring up these issues. Members of AFOG have to be societies. Where there are no societies, an individual OB/GYN in the respective country can serve as a focal point. So that would be a good platform for streamlining whatever activity. One of the goals of AFOG is to improve the quality of Obstetrics and Gynecology training in the continent. That will give us one very important platform.

The second issue is universities. I mean, African university should also learn to work together. For example, we can suggest the formation of a consortium of African universities. All of the 13 institutions can come together, can have their own charter or code of conduct, what they want, how they want to deal with the respective medical universities. American universities should also come as one group. You have both a professional body (AFOG) and you have a consortium of African academic universities, because the very natures of academic institutions and societies are entirely different. Then we have a third group, which is a consortium of US universities. As an accessory group, they can sit down and discuss on what base to move. We are talking about the etiquette of change. We heard talk about things that are happening until 2015 and then beyond 2015. We know that we are not going to make MDG 5 by 2015. For most sub-Saharan African countries, it is quite obvious. It does not mean that we're going to sit, defeated. We have to plan, we have to learn from our mistakes, and we have to move forward so that we make some substantial change in the history of 2015. This is what I think should be the way forward to move this agenda of training more obstetricians in the continent. If you look at it, 1000+ is like having 90 or 100 obstetricians in the next ten years or so. Is that enough? I don't think that is enough.

Kwabena Danso: 1,000 new.

Yirgu Gebrehiwat: Yes, new. In ten years, I tell you, I have got like now 77 residents in my program. In the next four years, I am going to go beyond that. So what I am talking about, is that for the next ten years, it is

not 1000+ new, but that we need more. Okay? Sierra Leone needs more than 100. Botswana needs more. This is an opportunity that we need to seize, but we need to work more and we need to work hard. The mechanism as it is, is a tri-part relationship: university consortium of African universities, US universities, and African Federations.

Kwabena Danso: Okay, thank you. Two suggestions have been put on the floor. One is the African Federation of Obstetricians and Gynecologists and ~~then~~ the other one is a consortium of African academic institutions in the training of OBGYNs. I think we should be directing our discussion in that direction. Yirgu, I think this idea of 1,000+ is ... we need to know what would have been produced under this condition. So the 1,000 is the 1,000 we would have produced on top. Certainly in two to three years time, it should change, because the demand will be higher.

Gregory Halle Ekane: I am Dr. Halle – Ekane from Cameroon. The aim of making this comment is not to bring up controversy, but I think it is important to highlight ...

Kwabena Danso: Controversies are welcome!

Gregory Halle – Ekane: Okay! It is important to emphasize that value should be given to values. I was a little bit surprised that because of our discussion I did not hear any participant talking from Nigeria. This is a country that has a world-solid postgraduate program. I just brought in the country to make an example of how South-South collaboration is important, and I think we have every interest to protect values. There is no doubt about it. I also heard somebody make a comment about accreditation in the postgraduate programs and Ghana, and they mentioned South Africa. In South Africa, somebody from the University of Cape Town has to write an exam again for a university that is renowned in the world. Some of these things have to be looked at so people do not feel marginalized. There are certain values that already there, which we have to maintain. I don't think we should give the impression that we are falling back. A university that may be in Cameroon should not try to evaluate somebody from the University of Cape Town. There is something that already poses a problem, so values should be retained, and I think that the way forward is to continue. We don't have the impression that we are trying to pull on certain groups of people. That is the comment that I wanted to make.

Kwabena Danso: Thank you. Let me respond to the one about the exams. I think a country asking foreign trainees to write an exam is not

something that we can control. This is on a national level. If that country thinks that trainees are coming from elsewhere and that they are okay, then I think it is a local issue. If a country thinks that even if you are in the same country and if you want to practice in one region of the country, then they will let you take some interview, then that is one issue at this meeting that maybe we cannot discuss.

Gabriel Yao-Kumah Ganyaglo: I think his point is about the complementarity of certificates.

Kwabena Danso: Well the complementarity of certificates would come at a certain level. It still becomes a question of national policies. I don't think that we want to go into that. Even in the United States, if you want to move from one place to another, you take exams, isn't it?

Stephen Rulisa: Different states

Kwabena Danso: Even if you take an exam this year after some time you still have to come back and take exams. But the other point about Nigeria, we are still in the formative stage. I think at the appropriate time we will get them involved.

African Participant: I also wanted to make a little comment about the exams and the universities. The fact that the candidates are being examined does not mean that their certificates are not recognized, otherwise they would not be examined at all. We have examined people with MSUG and found that we could not completely and immediately let them go out and practice in the country. That does not mean that we do not accept their message. We accept their message but the particular individual; we do not completely feel that we could let him out immediately. He accepted and he went to a hospital, brushed up, came back six months later and is now practicing. The certificates are acceptable but the individual must be evaluated.

Kwabena Danso: In Ghana now, if you come out of medical school, there is a time window, within which you are supposed to start your hard jobs. If within that window you don't start your hard jobs, you go ~~so~~ somewhere, you come again and you take your exams again. Let's move on.

Josephat Byamugisha: Thank you very much. I just want to go back and look at the 'how' of the way forward. Two suggestions are on the floor: A consortium of African Universities and then also all the professional bodies.

Kwabena Danso: AFOG

Male African Participant: Yes, that is right. I want to also bring in the issue that we are aware that in some countries - especially in Ghana and I know Nigeria, for instance - whose graduate medical education is under the auspicious of the postgraduate medical college, which is entirely independent of the University. Therefore, if you are looking at the umbrella body, we should not forget about these well-recognized institutions that have the national mandates to run the programs. I know in some countries it is under the universities, so that would have probably been difficult. But we also need to recognize the third component, which is where the national colleges are, the ones mandated to do things.

Kwabena Danso: So maybe in that respect, we are aspiring to be named African Academic Departments and Colleges.

Mr. Chairman: We are supporting you from behind.

Josephat Byamugisha: Thank you Mr. Chairman. The first one is some point of information. What is a recommended OBGYN to population ratio? We don't seem to have the figure; but if there a recommendation from the WHO, it would help us a lot in terms of the numbers that we require.

Yirgu Gebrehiwat: I don't think there is such a fixed number. For physician to population, the WHO number is 1:10,000 for developing countries.

Josephat Byamugisha: For OBGYNs?

Yirgu Gebrehiwat: Per Population you mean?

Josephat Byamugisha: Per population, yes. We should have some estimates.

Stephen Rulisa: The ratio measurements of physician to population is an idea that they don't go into specialty.

Josephat Byamugisha: The second one is that there are groups that are existing that we need to use. SAMS – sub-Saharan African Medical Schools. I think there is an association like that because they assess various medical schools. Some of these should be utilized. The other one that I see that has a lot of work; the president of AFOG now, there are lots of

things that you need stats, yes they are looking at. You have very many small blocks. We have the West African College of Surgeons, East Africa, East, Central, and Southern Africa, Eastern College of Surgeons. I think there are extra organizations and we may have to start thinking seriously about the ... and we also have things like the American College of OBs and GYNs ... so we don't we have African College of ... If all of these can unite. So then the countries are almost splitting the others. You want to come, do exams. We could look at it from a big perspective... and AFOG should head up in this aspect.

Kwabena Danso: Okay but let me ask this question. The medical schools, so far - don't they all come under universities? When we capture the university department...

Yirgu Gebrehiwat: I think the issue here is very relevant. What we need to do is probably pick the bodies that are responsible for postgraduate training. It could be a university, it could be a college, or a council, whichever. The second issue that was raised about the regional blocs, we are all quite aware of all the regional blocs. For Maghreb Countries, for West Africa, for East Africa, and South Africa – that is one of reasons that so far with us there is no European college, the American College, for Asia and Oceania; we never had one big umbrella organization for Africa. Now we have it, but that is not going to be the end point. We need to move forward and bring in all these sub-regional groups. We need to look into training. We need to look into establishing an African College of OBGYNs and when we address those issues in years to come, then all the issues of not recognizing certificate X or certificate Y will be sorted out. We will have a similar standard in those countries.

Kwabena Danso: Let me take a last comment and I think we can move on. The idea is emerging that we need to form some sort of consortium. A consortium of institutions responsible for – let's make it generic – responsible for training OBGYNs. Then also for professional bodies – the Association of African OBGYNs, which is now in place under the auspices of FIGO. Those are the two platforms. Any other that we bring into that? So you conclude this thing for us! [to Stephen Rulisa]

Stephen Rulisa: I'm not concluding, please. [Laughter]

Kwabena Danso: After this comment we go on to the next question.

Thomas Egbe: I am Thomas Egbe from Cameroon. What I wanted to say is that some universities don't yet have postgraduate training. It is a

good thing we are here. Those universities can learn from those who already have a program. So what should we do, in that as we are here, we should have an internal group where the universities that do not have a postgraduate training program can easily contact other people and seek advice. How can we go about this? And, it is easy for us to move that way. It is not all that easy for everybody to have a meeting where everybody will be there. You can communicate from time to time as the consultancy advices.

Then, secondly, I wanted to make a comment concerning the exams that recognize the certificates. Generally it is very difficult for a country to take a decision and have exceptions. For example, in Ghana they say they have to examine people who come from outside. They cannot give an exception for other countries. They have to examine everybody. So it is a national level - you cannot say, 'America is a well-developed country'. You need to examine them. Because not everybody that comes from the USA has the same competency.

Kwabena Danso: It is competency for the place you are going to. If we are understanding that if you are a doctor, that does not mean that you can function effectively in all parts of the world. It depends on where you are going to work. That is the bottom line. With your permission, I think the first part of this presentation should go to the first question. Some countries are beginning or don't have a program at all. Those countries that have should help them. I think that goes to the first part.

So, now we move on to the third one. How would you as a group like to work with other organizations? How could partnerships form? Do we agree that we have addressed this? Agreed? [Murmurs of affirmation]

The last two questions. What other major issues need to be discussed? And then, what would you like to see happen next? Let's take the first question, which is, 'What other major issues need to be discussed?'

Stephen Rulisa: I can say that the other issue I want to talk about here is the issue of quality of training or accreditation. As much as we would like to harmonize our program, we should also emphasize that as much as we want quantity, we should not forget about quality in training. I would want us as a group to not lose track on the quality of education that we to promote. I visited one medical school that I won't name, which is training post-medical education, undergraduates, doctors... The whole medical school has three doctors who are generalists. They teach physiology, anatomy, gynecology, surgery, pediatrics - everything. And these people

graduate as doctors. This is why I am surprised when you say, 'Don't examine someone?' It is too much. So these people are doctors. But can you imagine a little bit of the quality of education that they would give? So, much as we need numbers in Africa, we have to look at quality as well.

Kwabena Danso: Yes, person at the back?

African Participant: Yes, I do not know whether it is the appropriate forum for this issue to be addressed. There are linguistic problems. You realize that most of us assembled here are speaking English. But I wonder whether when you go north of Ghana, just across the border, east of Ghana, west of Ghana – I don't even know, I think they speak French. But here we are. How many of us are comfortable with the language? I think that just from this beginning, we should begin to understand that we should have brought in the francophone colleagues. Yes, we should have brought them in – some of them are conversant with English language – at least to begin with, so that they don't appear to have been intentionally left behind in the formation of such an august body. I don't know why this has yet to be addressed.

Kwabena Danso: In fact, in Cameroon there are two languages; English and French. Maybe is it too much to suggest that medical schools should think of learning the other language. This is a little controversial. Okay Prof. Klufio.

C.A. Klufio: Klufio from Ghana. I think in Africa we will all agree that obstetrician gynecologists are the leaders of the obstetric team. I am sure we will also agree that in Africa and in most developed countries, we cannot operate effectively without a strong midwifery service. It so happens that as leaders of the team we have more clout than the midwifery service has with our government. I think while we are trying to increase our numbers, we should think about how we can strengthen and broaden the midwifery services. In some countries, midwives can compete with obstetricians in the delivery of normal cases. Not so with us. We need them. We desperately need them. I think we should spend a little time on that. Thank you.

Kwabena Danso: Thank you. I think in the first meeting in Rome we recognized that the American College of Nurse Midwives was present at that meeting. I think is good that we make this a point. In fact, we have to be concerned about anesthesia. We have to be concerned about child health because when you bring out the baby, who is going to take care? These are peripherals that we need to ...

C.A. Klufio: We need midwifery. It is very central. [laughter]

Kwabena Danso: Okay these are other centrals.

C.A. Klufio: No, no, no. Midwifery is central. Anesthesia may be peripheral. Even neonatologists ... many obstetric trainees are made to go through the neonatal division. But for obstetric practice in Africa and for many years to come, obstetricians will be the leaders. The practitioners will be the midwives. For many years to come. And if we don't carry them along, so they know when to either call or refer to us, our effort will be in vain.

Kwabena Danso: I think we should avoid the word 'peripheral'.

Yirgu Gebrehiwat: You know in fact, that reminded me of one thing. When you try to expand postgraduate training, if you don't have a strong undergraduate service that can feed into the postgraduate program, then there will be a problem. You will like to do like 100 obstetricians and don't produce any medical doctor in country. Then from where will you bring that candidate? I think we need to go from a proper mix, training a proper mix of professionals, so when they go out they can properly practice.

African Participant: One major issue I consider which did not seem to come up so far is the advocacy role of the obstetrician as the leader of the obstetric care team. We need to form a strong team to address advocacy.

Kwabena Danso: I think we can add this one to it. Any others?

African Participant: I think history has shown that we are very good at developing documents, as an example, Maputo Protocol. When you release a very beautiful document, if we have followed it we would have made a lot of progress by now. I want to suggest that in our discussion we should pay particular attention to timelines and identify clear prime movers of specific actions that we are going to take.

Kwabena Danso: So in the time line implementation and steps, and we need to identify champions to move this forward. Everyone here should be a champion. If we take the football team, we say that we have strikers, but everybody else is in the team. The last question is, 'What would you like to see happen next?' Next steps.

African Participant: Next steps – one should be that we should find a time to meet again as a group to move things forward.

Samuel Obed: We should have periodic reviews of what we are going to embark on. When we say two or three years, where have we reached? If we are falling behind, we should double up, so that we can catch up finally.

Kwabena Danso: We met first in 2012; it was October. And now it is 2014 February. I was tempted to call it Rome +2 but I was reminded that it was not exactly two. Using the figures, it is still Rome +2, if we keep adding Rome +, it will remind us whether we are behind or not. Accra is now Rome +2. Okay next steps.

African Participant: I think the next step should be applying what we have learned so far for those who have preexisting programs. To make an appraisal of what they are already doing and what corrections they can do for their existing programs to make them sound better.

African Participant: I think the next step should be creating the database that Dr. Stephen has spoken about and then working along with the African Organization of OBGYN to see how everybody can be carried along. We know what everyone is doing, we have the database, we have the contact for anything that will strengthen our collaboration and corporation.

Kwabena Danso: Building the database and starting measurements so that we can know what we are doing.

Stephen Rulisa: What I would want to see from here is most countries or programs revising their way of doing things. I would want to see more training. If you don't have a program in your country, start looking internally. Why should you send someone to the US or Europe or China when there is an immediate neighbor where you can take even a bus and have OBGYN training with the local context. I think that is more applicable if you study in a local context. You can do it if you are African. The existing schools are enough to train our Africans and cheaper than sending people to study abroad and come back without local context.

Kwabena Danso: Using African resources and training institutions.

Stephen Rulisa: Yes, exchange programs, rather than...

Kwabena Danso: Only in the extreme instances maybe ... [in reference to overseas exchange]

Joseph Ngonzi: I just wanted to make a comment on the logistics and the funding. For some with future engagements, do we still have to look to our

partners to make this happen? Even as we develop some of the future documents or whatever they may be, we also need to look at the funding. How do we make this sustainably African?

Kwabena Danso: I can just react a little bit to this. What we are doing does not prevent you from continuing with your partners. What we are doing, eventually we hope to put it into a collective effort and look for big funding with all the various components. Even within the big funding, a donor might decide to pick particular partnerships based on the statistics that are available. So this one does not prevent anybody from continuing to do what you are doing. What are we saying? We are saying that let us all note that we are all moving in the same direction.

African Participant: Maybe next we should get other neighboring African countries involved, especially the francophone countries so that at the next forum, we will have representations from a bigger number.

Kwabena Danso: Next step should be the involvement of other francophone countries and all other sub-Saharan African countries, which have not participated so far. Yes?

Josephat Byamugisha: One of them is encouraging visibility. Most of these activities are not easily accessible on the net. So I think we need to have a lot more. If we are searching, it could be a website, it could be AFOG, but we need more information that we can access from the continent. The other one is the issue of the report. These deliberations, I think it would be good if all of us could be able to look and say, 'Where are we?' 'What are we doing?' Especially the action points that would be helpful.

African Participant: Being a polygamous collaboration, I would want to see more involvement of Europe collaborations rather than American collaborations only. Thank you.

Kwabena Danso: Involvement of Europe and other continents.

African Participant: Chair, I think what I would really want to see next is this team moving to develop its own team of trainers. I really go with the idea of us having a database of trainers to say who is going to train and what type of company do you go for. I think there is a lot you need to learn from the College of Surgeons of East, Central, and Southern Africa. I think they have done quite a lot of trying to set up a system of training. Just relating to them I am sure the College of Obstetricians is going to learn

quite a lot. Depending on universities to raise these trainers for you, I think, is something we have to think about twice. I am a dean of a medical school. The universities have problems employing lecturers. I think now it is for the obstetricians to let Ministries of Health see how best you can actually train under the auspices of the universities. It is a ball game that I think we need to learn how to play in Africa, because things are just not going our way. I am talking to my colleagues everywhere and everyone complains. 'Why do we have a lot of obstetricians under the Ministry of Health and none under the University?' I don't think that is something we can solve tomorrow, but you as an association are able to dictate, saying we need to train obstetricians and that we will persuade consultants who are there to train. And you are going to train them to be trainers? Because not every practitioner is a trainer. So I think we need to work on that and that is something you can work on quickly. As I said, the College of Surgeons has done it. As I was saying, there is a consultant somewhere who says, 'Well, I think I can take one resident this year who wants to send me one?' And so people are shuffling these trainers amongst themselves and if they are competent, then they are certified. I think you have to work at that, if the obstetricians are going to increase numbers in the near future.

Kwabena Danso: Thank you, but I think you can talk with other colleagues around to share their experiences. I am a former dean, so we can talk and I can give you the experience of Ghana. It is not only OBGYNs who are employed by the university who should be involved in teaching. The country must look towards making it possible for every OBGYN to be a teacher.

Yirgu Gebrehiwat: I think this lesson is something that we will seriously look into. What happens with AFOG and the West African College should be like a platform from which we start when we look into the African College issue. When it comes to what should happen next, I see it at two levels.

The first level is that the activity is here. I think of what Frank has started and what Michigan has started. They have already identified partner-led institutions, they have identified collaborators from our side. So, what should happen next?

We need to have a concrete set of actions. I wish we could have the consortium established. I wish we had some sort of planning or logical framework of where we want to reach by what time. Because what has been raised is that there are too many places going on in this part of the world. I mean the Abuja Declaration in 2001 - nothing is happening. The

Maputo Plan of Action 2005-2006 about SRH - nothing much is happening, which is why most are not reaching MDG 5 by 2015. If we want to go beyond talk, then we have to put in a concrete set of actions. So a consortium, a clear logical framework for our activities, and a need assessment, each of the institutions doing a particular need assessment of where they want their the partners to chip in. I think these are very essential issues.

I think the last point is how we can streamline it with national goals. If universities plan for themselves, I am sure they are likely to fail, because in the end, your trainees are going to be employed by the Ministry of Health. So, what is the need of the particular Ministry of Health in each particular country? Can they chip into this process while utilizing whatever foreign assistance that is there? Doing realignment and harmonization with national plans and priorities should be some of the things we need to do in the coming two years.

Kwabena Danso: Thank you. What I would add is that previous declarations, if you look at it carefully, they were lead by political will. I think this one is being mooted by academics and professional groups, so maybe the next step should be that academics and professionals must now come to the forefront and move on the path of addressing maternal mortality and morbidity as well as neonatal mortality and morbidity.

So, on this note, I would like to thank you all for your involvement, cooperation, and the enthusiasm you have given to this. There is a wealth of information. The secretaries will pair their write ups and I think we will still appoint them to present when it comes to the presentation. Thank you.

African Ministry of Health Perspectives

Speakers:

Robert Odok-Oceng, Uganda
Violet Opata, Kenya
Ron Mataya, Malawi
Bernice Dahn, Liberia
Victor Mbome Njie, Cameroon

African Participant: With partnerships, we can train more OBGYNs. I am saying this because in my country it is really just the department with the universities that are doing the training. But looking at what others are doing, I've seen that it is possible with partnership to train more. I've also seen that we have some opportunities within the country. For example, currently only one university is training and another university has just been opened like two years now, so there is an opportunity for us to really ameliorate the deficiency.

Ray de Vries: So, I think one of the questions that Frank is interested in is, 'What will happen to allow you to do that, to work with other countries?' How does that happen? The problem with meeting like this is that we come together, we have good ideas, but then we go back and we have a lot of work to do. Unless we have something planned, something concrete ... We don't have to answer that now. [Laughter]

African Participant: Let me take it.

Ray de Vries: Yes, please!

Robert Odok-Oceng: I am very grateful to be able to participate in this meeting because this OBGYN, to me, I thought it was just another medicine. When you do medicine, you also do it. Therefore, you have enough of them. I did not know that there was a specialization, which I learned from here and from my colleague in Uganda that we have five medical schools, but only two training OBGYNs at masters levels and very few come out. The few who do come out are taken up by mainly by Sudan because Sudan is in a very poor shape in terms maternal health compared to Uganda. Of course, they pay better also so that we have a big shortage.

The fistula that they were talking about is a big problem in Uganda. Many women really also have it suffer. Some women decide to commit suicide because they cannot imagine living like that for the rest of their lives and very few people can handle it, even the medical practitioners that can handle it are very few. What I'm going back with in terms of policy is first to bring awareness in the Ministry of Education, where training the medical personnel falls, so that we target in terms of funding.

We ask universities to give us the data on OBGYNs and how many there are. Of course, our government is putting a lot of money in maternal care and maternal health, but I didn't know that this was a big component, which we did not ask who trains and should have been at the forefront. We have so many health centers for where there are theatres and doctors are posted there because women always have obstructed labor and deliveries, and they should have cesarean operation where the child is delivered safely; that is the intention. When there are so few people who have the expertise to face the challenge while the maternal health is in danger. So I think we shall put some money in the budget and target the number of trainees using government resources. Of course, with the collaboration we are happy. In our group yesterday, we were talking about what level we can train. So if we can partner in this organization and this corporation, so if we can have staff from the US coming over some months to this unit and to do the mentorship, in five years we have may have developed our faculties at that level and continue the work. Now, there are only two universities and there are very few who don't have faculties. Through this cooperation we can have access to qualified staff in the US who can be allowed to come and teach their units and do their mentorship. As a government, we should put money after talking to the universities and they should let us know what is their need, so we can put some money for training and expand the facilities for training. We are lucky that we have got some money from ADB. That project is under me so I would also see that it is improving the facilities and the faculties of medicine in this respect. Because we have not started yet; we are about to start the project.

Ray de Vries: We have heard two problems, the problem of not having enough faculty and one you mentioned earlier, the problem of keeping trained OBGYNs in the country. In your country, it seems that they move out. Are there other problems in addition to these that you all see and think about ways you can address those? Are those common problems with faculty?

Violet Opata: Thank you for this opportunity. I will want to take it from the perspective of university in the relation to the ministries, both the

Ministry of Education and the Ministry of Health. At the university level, the collaboration is already existing under the School of Medicine and the IU, which is the Indiana University. From this perspective it is very clear that there are areas that can be taken up, that is training, research, and then as we undertake that, we must be able to align within the Ministry of Education to ask, 'What are the expectation for these programs to take off if we are a trainee?' The Ministry of Education has clear policies for any program to be implemented in any institution, that is if it is a university institution, it must be accredited. Accreditation procedures must be undertaken. Therefore at the school level and the department level, the department must develop the program that must meet the accreditation criteria that is offered by the Ministry of Education. That goes through the Senate, and after it goes through the Senate, it goes through the Minister of Education, that is under the commission of the university education for it to be approved. That is one aspect that we must align what we are collaborating in in line with what is required by the Ministry in order to control quality.

Then the other aspect is also to align us with the Ministry of Health and look at in today's universities. What are some of the areas that the Ministry of Health will want to be researched on, so that we bring the output to the Ministry to implement into their respective area? There is lack of collaboration between those two areas because the university is focusing on research, which is not informed by the Ministry. We need the Ministry to come and say these are the lines on which we are really hard-pressed. We need the university to take it up in order to do research and come improve the situation in the society. I am very happy at the moment. The Ministry of Health through the first lady have come up with a program for improving maternal mortality in the country, but we need now to narrow it down to the university. How can the universities come up and help in achieving this particular pertinent goal? So the issue of policy must be clear, the issue of accreditation and certification must be in order, in order to run this collaboration. But already, we have the collaborations ready. Thank you.

Ron Mataya: From the Human Resource perspective, we at the Ministry level have to ensure that we have an enabling environment, so that we attract the trained obstetricians to be part of the faculty. For instance, in Malawi we have some people who are in the private sector. This could be roped in to increase the faculty within the training institutions. But at the same time, we also need to ensure that those who are coming out of the college have the job opportunities and are incentivized to stay within our country. I think there is need for us to collectively work as different

Ministries of Health to ensure that movement of trained obstetricians that do come out do not find it easy to move from Malawi to Zambia, for instance, so that we retain whatever training efforts we are putting out. That is one aspect that we need to think of.

Something else that I've learned is the approach that Rwanda and Liberia is doing. Whereby the Ministry of Health is the main driving force ensuring that specialists are trained within the countries. Right now if you come to – let's say for instance, my country – the training initiation is either a grouping of specialists or a specific type of specialty that is starting off its training. Probably the Ministry of Health needs to put more effort or resources to ensure that adequate resources are put out for the training or the different specialties. I think that is something that I learned here.

Ray de Vries: Tell me more about Malawi. Is there a way that the Ministry of Health, or maybe also in Liberia, can interface with the Ministry of Education?

Ron Mataya: Yes, we do interface. The training institutions are owned by the Ministry of Education while the hospitals are owned by the Ministry of Health. The Ministry of Health is responsible for health policy, so there is an interface.

Bernice Dahn: And then in addition to that, the education for some reason, the Ministry of Health understands the health training program better than the Ministry of Education, so they feel more comfortable working with Health to design these programs.

Robert Odok-Oceng: What I have not mentioned which clearly applies to all of us is that the council or medical councils work together with the University Commission or the National Council for Education, which is the regulatory body to accredit and license institutions. They don't do it alone, although these institutions of education work together with the Ministry of Health to license and accredit and ensure quality.

Ray de Vries: Is that true in Kenya?

Violet Opata: Yes, it is true.

Bernice Dahn: What did not come out clearly in the presentation is the retention issue. The retention issue has been a global challenge. It has not been a one-country problem. Just listening to the presentations, I did not get really how people are retaining. Maybe it would have been good to

hear, especially from Ghana, since there was a time when all of the professionals were out of Ghana and were in different countries. The strategies they used to bring them back or train and retain now. Right now Ghanaians are working in Ghana and that is different than before.

Ron Mataya: One thing is that is glaringly obvious is that the different countries are at different levels in terms of establishment of training facilities. I think one of the things that I want to learn from maybe our Ghanaian counterparts is that back in 1989 how did they get country buy-in to training our programs that are local, because right now what Malawi does is that we send our junior doctors outside of country – they go mainly to South Africa for training. So now that we are establishing new trainings in country, to try and convince people to actually join this training is quite a challenge. The Ministry will probably incentivize so that we are attracting young doctors to come forth for this training, because right now it is very difficult for us to train them.

Bernice Dahn: Though we are just starting, this is a response to your concern. I know that the doctors in Liberia express concern for quality. For us to be able to ensure that concern, the clearing exams are essential to them. So we agreed that yes, you will be certified locally, but that you will be provided an opportunity for the West African College exams. We also won recognition from the West African College. It is necessary to build the confidence that with what you are actually giving me, I can compete with my colleagues in other areas.

African Participant: If I may, won't it be a way that you will lose in the field your training?

Ray de Vries: I was thinking the same thing.

Bernice Dahn: In terms of quality, yes. Right now, I am planning a strategy to bring all of the stakeholders together to chart the future. The reason is that if we don't and we train and don't remunerate well, we might lose them. Currently the way we have started, we are having challenges with the Finance Ministry who is telling us that people need to pay defect and so, the strategy is to bring all of the stakeholders together and prepare a good presentation that can put everybody on the same page and then we plan how we move into the future. We have started with doctors in four disciplines that will train other disciplines. We will do sub-specialties in the end. As we are doing, we will also need the nursing profession improving. It is bigger than just the four disciplines. We really need to plan the future.

Victor Mbome Njie: I am Victor Mbome Njie from Cameroon. I think the meeting has been very enriching in terms of learning. In Cameroon, the context is really very peculiar, firstly because of our bicultural nature – English and French are our official languages. It goes along with the culture. I came along with two colleagues from faculty. A new faculty in English-speaking Cameroon which is just passing out the first batch of medical students. We are going to pass out the second batch. We are just going to start postgraduate training. Now in Cameroon, maternal mortality is really high and the ministry has made it a priority to improve maternal health so that we can cut down maternal mortality. We have indicators in the field. The big lesson I am learning here is that the need to train OBGYNs is one way of improving service delivery costs to cut down maternal mortality. We are going to need an increase in human resource potential to do that in the field. Now I think one of the challenges from this meeting is what do we do before we can get the first batch of trainees of specialists? Something on the field. Are we going to improve the capacity of midwives? Are we going to intensify training of registered nurses? One of the indicators on the roadmap of the Ministry of Health is to increase the number of assisted deliveries. And the big question is assisted deliveries by whom? So we must train at all levels. We must train nurses and midwives and then make sure that this partnership can take off as soon as possible to start training OBGYNs. Then on the other side, they have started training gynecologists before, specialist training in Douala University, the French-speaking University. With that again, we must now organize and move forward. We have one college. Are we going to work with the Ghanaian college, the West African College? It is quite a big lesson for us.

Ray de Vries: I think that is the big idea that Ministries can share. Ministries that have been a step ahead can manage that problem. We have heard some models here in the meantime, while you are trying to get going with postgraduate training, how you can get something organized, how you can use help from other countries in Africa, countries outside of Africa? I don't know if having the idea of having the ministers meet somewhere to share this. It sounds like people have plans, and the idea in Liberia sounds really good. If we can get together and ask how we are going to plan for the future.

African Participant: The question is what are the major lessons learned. We have learned that right now we are not producing enough OBGYNs and with partnerships, we can do much more. And also, that we have to be careful on how these partnerships are formed. I think you made that very clear. I think that is one area that we neglect. And then that affects certain

ability. Just to be very clear, it should be a win-win situation for those who are coming to help us and ourselves. When there is transparency, everyone who puts their cards on the table ... because what happens is that when people feel that they are not fully involved ... for example you can come to Zambia. They tried to speak and, “oh no, no” and then they will try to speak and say okay, then they will listen and let you do what you do. But after that, they go and the program just dies down.

For me that was really discouraging because I experienced it back home, where you get this feeling that people are just doing research and projects. People have this agenda, in fact researchers we call them mosquito researchers, because they come and draw blood and go away. We don't get a share of those results. For us, right now the projected number of OBGYNs from now to 2015 is seven per year. The establishment is such that we need two per general hospital. We have 101 general hospitals and currently we have about 40 OBGYNs.

So there is a need for us to increase. Of all the countries we have seen, it seems that we are the ones that are a little bit behind. Most of the other countries have partnerships which have really stabilized and they are moving forward. We already have right now another – like I said, the medical school has been open on the Copperbelt, where already they are saying, “We are going to train MMeds.” But who asks the question, “What is in place? Who are going to teach certification and all those things?” So this also has helped us. It is not a matter of training. You have to really think through the selection, the screening, have people who really have experience. This partnership has a fast forward initiative to have more OBGYNs. For me, that is my take home.

Ray de Vries: It is even more complicated because in listening to groups talk, let's say you train 15-20 OBGYNs, those OBGYNs need nurse midwives, need nurses, need equipment to work with. That is where the Ministry of Health is important, because you can see that. An OBGYN can work by herself.

African Participant from Kenya: Let me tell you a little bit about the Kenyan factor, but first what I have learned, having been exposed to another partnership with the first university that starts training at postgraduate level. First of all, what we have gone through confirms that the developed world has realized that at one stage you may not have everything. You know, somebody will have opportunities and somebody else will have other opportunities that are very different. You may have money; you may not have the facilities. You may have the facilities but you

may not have the money. The learning materials – when I am talking about facilities, I am also talking about learning materials. When you are talking about an OBGYN, there should not be a difference between one from America and one from Ghana for example, or one from Ghana and one from Rwanda. Ultimately it should be one type. Of course the individual differences will be there. But because it is about saving women's lives, really the ultimate goal should be about producing one OBGYN that is able to help any country at whatever level to reduce all those bad indicators.

And so it is unfortunate that we have one side of the world that is very developed and another side of the world that is underdeveloped. That to me, from what I have seen, the opportunities for the partnerships are more than ever before and the attitude, I have really come to like about it. It is not the one of poaching. It is one of creating opportunities for practice and being able to save women's lives. That is what I am learning. I am very happy about it.

Because of the differences, the individual differences that we see in countries in worlds, in meetings, in international meetings, it has been recommended throughout the world that if by any chance that a country is lucky to have resources, it would only be prudent to help the other country that does not have resources so that we sort of start reducing the gaps. The work of the Ministry or government is really to take the lead in any effort that has a reflection of a country's goals.

That is what is happening in Kenya now. We are realizing that the intersectoral collaboration, which is between the Ministry of Health that employs these people, the Ministry of Education that trains these people, and the Ministry of Finance that finances the two processes. That in the last many years has been very minimal, but now we are realizing that these ministries cannot prosper independently; we just have to work together. Still at the individual level, for you to come out as a reputable person, you need the opportunity. The best opportunity will be provided by the Ministry of Health and then the University will support your research capacity so then you are also felt in academia circles.

That has been realized and we may not have that many American universities partnering with our universities in Kenya, but when you go into the universities you realize that the opportunities are there and how lucky that Americans are there working with us; us providing the facilities, the patients; them coming in with technology, sharing skills and experiences, and it is coming out very well. The University of Nairobi, which is the old medical school, has the University of Maryland and the University of

Washington. Now supporting a sort of devolved medical education. Taking our medical students into our hospitals. Not just in teaching hospitals.

The numbers are overwhelming and they are coming out into the rural areas for many reasons, not just for the learning opportunities, but also stimulating sort of a devolved training that we know in the end will help us retain and it will help us in having our clinicians getting opportunities or learning opportunities at the very early stage of disease development. Because if you confine them in national universities and hospitals, then most of the cases are the very complicated cases that come there, and sometimes the diagnosis is already made, as opposed to when you send them out there in the smaller primary care hospitals where people come from home with very early stages of disease. So we feel that it is a major, major opportunity for learning and also for research.

The other thing is the research component, which we have been very weak in. There is a lot of investment in now building the capacity for research in the faculty. We are seeing that is starting to retain them in the university. To me that is also a major achievement and I feel that it is an opportunity to welcome the support in collaboration and partnership that these universities in the US are really helping us.

The issue of retention has us having to do with recruitment and fortunately Kenya is in a stage of transition. We have just moved from one national government to now two levels of government and we have 47 county governments which have just been formed. At the moment, they are mapping the Human Resources for Health and we know that the gaps are there. We are not even half way in terms of OBGYNs. We have only registered 323 and the Ministry has managed to retain 85 of them. What we know is the country should be having 260, so the other 60 or so out of the country. But retaining 85 in the public sector against 260 is not of course a good percentage.

Ray de Vries: Where do they go? Do you know?

African Participant from Kenya: The US and the UK. Basically those two countries because of the way we have elected in the past. Then a few in South Africa, because at one point in the early 2000's, everyone in Africa was going to the South, like Botswana. I think at one point the Minister for Health – was it Botswana or Swaziland? – it was Botswana I think; the Minister of Health was from Kenya. We have many colleagues, like those

who are my classmates, I have two in Botswana; I have three in South Africa; I had two in Namibia and Swaziland.

Ray de Vries: This seems like a place where Ministries of Health really need to talk to each other. How do you prevent yours from going to South Africa? And if you look, I don't know if it is shown here, but the differences in pay across African countries, you can understand why people move. I don't know if that could be solved with an international panel of African countries.

African Participant: Yeah, I think there is some agreement written that people can't employ doctors or health stuff from other countries.

African Participant from Kenya: The thing is that of late, Namibia is not respecting that that anymore.

African Participant from Zambia: Yes, but what has Namibia done? They have come to Zambia; they have engaged and said we have looked at areas of collaboration. We have actually agreed that these are areas we can collaborate. This is one of the major issues that, like she said, we did not hear about. So I think that as we go back we need to learn on how we retain. For example, just in general we have what we call after internship, every doctor does a rural posting. In that one, for you to even do postgraduate you have to have done two years of rural posting.

Ray de Vries: Yes, that is true in Ghana.

African Participant from Zambia: Maybe postgrad as well, there can be a period of where one serves...

African Participant from Kenya: Let me tell you something that we are struggling with, whereby we have the country's needs sort of overwhelming the regulatory requirements. For example, for purposes of recognition you need to work under a senior gynecologist after you have finished. The country needs more senior doctors in the primary care facilities. Today we can afford to have two gynecologists in a primary care facility. You find that fellows who are finished and we as a Ministry deploy them to the primary care facility. Because the number of doctors is increasing, we are also increasing the number of internship centers. So we need a list of gynecologists, pediatricians, physicians, and surgeons in a primary or in a hospital before we establish an internship center for the young intern doctors.

So it becomes difficult to place the newly qualified gynecologist under a senior gynecologist because then people will continue suffering. But for the purposes of having the right people, the properly trained people, the regulatory requirements were you stand tall over and above the country's needs. But those are issues that I feel we still need to make a decision. I think the numbers today, I think somebody said that the numbers today is our biggest challenge. What a struggle with them first ...

Ray de Vries: Haha, before we go too far. So, what would you like to see happen next? What should be the next step for this project but also for the Ministries?

Robert Odok-Oceng: I think the Ministries, as you're suggesting, the government Ministries of Health and Education need to talk not only at the level of the country, but the regional unit. We have an additional East Africa community, we have West Africa communities, we have Southern communities. Why do I say this? I know that we do not have qualified faculties for that level of training. But when we come together, we can borrow. It is cheaper to borrow from Ghana than it is to get to the US. Much, much cheaper. Also Kenya to give another case. That would help one to educate clear policy by the Ministries on how to move. Because it is true that there is collaboration between health and education, but it is also true ... I do not know whether our country's things are fine. In terms of hospitals, presenting that the students have too many interfering in their work. Of course, the Ministry of Education and the universities have funded students when you don't give them opportunity to go for training.

So I think the interface of the two Ministries with two Ministries from other countries makes them learn, so this friction is taken away. You say that we cannot do without one another. Which are the four ministries? Health, Education, Finance, and Public Service. For a public service employee, Finance funds the process and pays the latter. Then education training - health employee that work in health. So these Ministries should really come together and have common strategies to achieve this. If that is done, I feel that can happen. Most of the time we save money. If we don't think fast, money will be wasted.

Violet Opata: What I would like to see is to network the regional colleges to support one another. The support could be with faculty within the region. It could be student exchange. If you listen, it could be presentations, the shortcomings in some of the programs, in programs what they have, what they don't have, or what another institution in the region could have. So you could also have those short-term visitations and trainings in other countries. We could share examiners and also maybe

question banks and things like that. All those things would help to make the program better.

Ray de Vries: Yeah, there is no sense in every country doing it themselves from the start when other countries have done it and it can be easily modified.

African Participant from Cameroon: I would add to what the two have already said. The strength of all of what we are saying is because all of Africa, sub-Saharan Africa, has a common denominator, which is the key in maternal mortality reduction. That should go into policy. It means that Ministries of Health, we have different strategies; we have different realities on the field. So I would love to see a situation where we go back, each of us. Each country looks at the specific of what it is doing. We share that and then we come out with a common front. That's okay, this is common here, this is common here, this is what we are doing, and then we will build off from there. We develop a partnership amongst Ministries that will influence policies and will influence direction. That will strengthen our cooperation and then we can start sharing – the colleges, the existing colleges, which are the existing colleges, which are the new colleges that are coming up, who is mentoring them, what do we have in place for sustainability?

Ray de Vries: You think countries can do that? Every country has its own pride, so it is like, “Oh, well Cameroon. But this is just how we do it in my country.” I am just asking for kind of a realistic look at whether we are willing to share and listen to each other.

African Participant from Cameroon: I think that from what he said and what she said, the fact that we have a common challenge in maternal mortality. Why should African countries not come? What policy decisions are we taking as a sub-region? Now we must take leadership for us to be able to turn around the challenges on the field. The partnerships are not enough. We must take ownership and leadership, and we can only do that if we can sit at the table and say, “This is what is in Cameroon, this is what is in Liberia. What is in Kenya? What is in Zambia?”

African Participant: We must accept that there is already a community. In East Africa there is already a community. In Southern Africa there is already a community. So there is a framework in place. Only that we are not utilizing it, we are not exploiting it. Because in Uganda to in East Africa, we share everything we do. We are harmonizing our education and curriculum in the region. We are harmonizing the curriculum, we are

harmonizing our staff to move across the border. Our president is really pushing the East African Federation. So I think that that framework is a good ground or springboard when you bring this automatically in the region. Now if it is done in East Africa and it is done in West Africa, then you can see how it is spread in the South.

Violet Opata: Already as he has mentioned, we already have the collaboration framework. For example, in East Africa, when you look at universities, we already have what you call inter-university consults within East Africa, which is our framework that is uniting almost four countries or five.

African Participant: Five

Violet Opata: Yes, five countries in places. And therefore, if that is the case, it means that the training program that is being offered in Kenya can easily be adopted in Rwanda or even in Tanzania or Uganda. That being the case, it means that the accreditation policies can work for all of us without necessarily having each country. Therefore, if an accreditation body in Kenya approves a curriculum, it means that that curriculum is accepted in other countries, and therefore a student can move from Makerere and come to the University of Nairobi and come to Moi University without necessarily hearing, 'We can't allow you because your curriculum is substandard curriculum.' Really the thing is that the way forward is that the community, whatever, collaboration is very essential.

Ray de Vries: Is it a suggestion that you come together in these regions – West African, East, Central, and South?

African Participant: I am of a different view. We are at different levels in the countries and as has been said, in the past we used to send people to go out to train and they have remained. But now we have an opportunity in our own countries to have the trainings within our own environments but with the help of those who are advanced, who are quite developed. The natural course is to say, "Okay, develop our own school, train our own trainers, or employee people from outside." Obviously that takes a long time and is expensive. But through the partnerships, we have an opportunity to think outside the box and utilize the resources without getting people permanently from Europe or from America, and without us also getting people to go out.

There are two things. One, there is the training. Two, there is the collaboration. I think we have to define very clearly what we want to

achieve by the South-South collaboration and to be very clear on what we want from the partnerships. We have enough patients, maybe the patient load for competence-based practices. There is no need for me to take someone from another country. But we can agree on exchanges maybe for trainers to come and assist in training, whether it be from America or another region, but not to remove people. I'm just saying that in my country, for example, we are just opening up another university, an opportunity to also do the MMED program there. But we need help in establishing an MMED program. How do we do that? So with the knowledge we have gotten to go back and define our problem, define our way forward in terms of developing these partnerships and to define clearly what we want to learn from our colleagues.

African Participant: One thing that I think I would like to say is that some of the partners that are in Malawi are also from other countries. We could potentially also use that network to try and strengthen the linkages between the different countries. I know that UNC is in Malawi and also in Zambia. One of our partners is also in Liberia. We could try to use this network for the betterment of the training, especially when you are thinking about the exchanges of the different registrars.

Ray de Vries: Is it literally the same people? Or is it the same institutions?

African Participant from Malawi: Um, a bit of both. Well, they know each other. They are from the same faculties.

Bernice Dahn: Well I was just trying to support what he said earlier about the framework assisting that we can use. If you take the West African College of Surgeons for example, it would be where you can start. From there you can go to the West African Health Organization, the ACOWAS, the African Union. Those kinds of frameworks exist. It is itself a good platform. Another thing, too, is to see how these organizations, especially the West African College of Physicians and Surgeons, the way they function now. Are they meeting the needs of various countries? Maybe there is a need for a reform, because if you have an organization that is administering training, it cannot train to meet the demand. And countries are beginning to start their own programs. Maybe it is better to go in a decentralized manner and then have a way of harmonizing and making sure that the training costs across is the same and things like that, instead of the status quo.

Robert Odok-Oceng: Collaborations become faster and more efficient when you come into a region if all of the collaborators working in the

region come there together. Their impact will be greater because the information is got by many people. At the same time, rather than you going to one institution - for example in my country we go to Mbarara. Mbarara is in southern Uganda; it is very far. So a lot of medical schools are there, but we don't know what is happening in Mbarara. But if we are there together, in the region with the other Eastern countries and the University Council of East Africa brings together all universities, you find that automatically things are recorded and the information moves around. If a person from this organization meets, for example, in the University Council in their meeting, the information that he would have labeled would have affected and enticed other countries. That is the deed of the framework. Which starts from the region after the African Union Level.

Ministry Participant: If you have to get it on the government's agenda, then that is the way to go. Once you start with the colleges like West Africa, it goes to WAHO, it becomes an South African Ministry meetings and it becomes an agenda option. From there is goes to ACOWAS, and from there is goes to the African Union.

Ray de Vries: Comments?

Ministry Participant: I think that the long term is important. I would love to ... I mean maybe when I am gone for posterity that this partnership could help us have partnerships in Africa where the West African College is somewhere in East Africa overseeing training, making exchanges, having people on the field. We must take ownership of it. It is cost effective. Then we can really be having people training within our context to understand our specificities and make it better.

Ray de Vries: And this is why it is so important that you all are here, because a university-to-university partnership is important, but if that is all that is, as you were saying, that happens at some corner of the country, the Ministry if it is going to be sustainable, the Ministries have to be ...

Ministry Participant: Yes, engaged.

Ray de Vries: So thank you all for your comments and thank you for being here. You are probably the most important part of this meeting.

Ministry Participant: This is another issue. That the kind of people we train are stationed in urban centers but the biggest problem or the biggest maternal health problems are in rural areas. We cannot get the support

there. Is there a way this partnership can find a way also to train clinical officers, training nurses or midwives who deal with this problem? Because they are the ones sustaining our health sector.

We are not saying it, but it remains a fact that doctors are in urban centers, these clinical officers with diplomas, the nurses, midwives with certificates and diplomas and the ones in rural areas and they are faced with this difficult situations. These mothers are dying in their hands because the doctors are not there. So how have you thought about it on your level?

Ray de Vries: Well, I think one idea that we learned in Ghana, though I have to say that it hasn't been completely successful, is that if you train enough obstetricians, eventually they move out.

Ministry Participant: Right, because there is no space.

Ray de Vries: There cannot be so many obstetricians in Accra.

Ministry Participant from Kenya: In Kenya, what we have done is that we have concluded the process of revising our health policy framework, which is supposed to have started last year and is should to move on up to when we shall have our national vision achieved by 2030. We have a heart to reorganize the health service package and have now moved away from the level one, which is at the community level, to the level two, which is the dispensary, then three the health center, then four the district hospital, then the regional hospital, and then the national hospital.

We have regrouped that and said we should have level one, which is still the community level, and then level two, which is now the primary care hospital. By the end of the vision period, all dispensaries and health centers should be primary care hospitals so they are going to offer comprehensive or emergency obstetric care, meaning they should have operating theaters dedicated for obstetrics - cesarean sections and related surgeries.

That way you should have gynecologists at the first level of care at the hospital. That is the strategy. Of course a long-term strategy should require a lot of money, because converting every health center and dispensary to a health center is a lot of money. The idea is to change the thinking. Right now health centers and dispensaries are facilities for poor people, but people are the same.

So as we push for this National Security Insurance Fund, Social Security Insurance Fund, then we should develop this facility so that everybody who will be covered by that fund should be able to access services at the primary

care level. Then the secondary care facility now remains like the county referral hospital. The tertiary referral facility now is depending on where they are, now they will take their own fields to develop it into centers of excellence. Then we will still have the national facilities finally belonging to universities for the purposes of training their doctors. So, that is a long-term thing, but perhaps that is the best way so that you don't have two types of health system for two different people in one country. I think that is not a good thing to have. It is not fair.

Ministry Participant: You know, I think it is starting the mindset. You change the mindset, and then the next thing make it a policy, and then you mobilize resources, and you start doing things.

Ministry Participant from Kenya: And as one of the Ministers was saying, 'When the politicians buy in, then ...'

Ray de Vries: Exactly, exactly. And the framework is there.

American OBGYN and Professional Society Perspectives

Frank Anderson: If we could get a representative from each of the thematic groups to come up and give a brief review of what happened in the group. So, that would be the African Group, the Professional Societies in America Group, and the Ministry Group. So can we start with the African Group? African OBGYNs?

Gabriel Ganyaglo: Thank you very much. The first question was, ‘What are the major lessons learned from this meeting, that pertained to the academic African OBGYNs?’ It came out clearly that we needed to look within the African continent at our resources for curriculum, programs, and be able to support ourselves horizontally. We all seem to have collaborations vertically, if not to American or Europe, but mostly to America. So, it came out that we need to also establish partnerships with sister, Sub-Saharan African countries so that we don’t need to reinvent the wheel or start programs all over again.

It also came out that all of the countries need to identify their specific needs and be able to do adapt recommended solutions to the country-specific needs, and not to just apply recommendations across the board. One of the key lessons also came to show that we need to hone the programs that we develop. Some countries don’t have postgraduate medical education and those who have are close to the countries that don’t have. We should be able to support the neighboring countries to also establish their postgraduate training programs. These were some of the thoughts that came up in the lessons that came out from the meeting. Some of the responses do not necessarily reflect the question, but this were the sentiments that were expressed. I’m just putting them across.

Regarding how we envision this group of African OBGYNs to continue to work together and under which auspices. What came out strongly was yes, we need to continue to collaborate with each other, but probably under a consortium of African Academic institutions or African Professional Bodies. That was what was suggested.

How would we as a group like to work with other organizations, and how could partnerships form? The responses don’t quite answer the question,

but some concluded that the consortium of institutions drafting a tool to answer manpower needs of sister countries or the curriculum requirements of the different countries. This consortium could be tasked to draft a manpower curriculum needs assessment. We need to identify the needs at various levels of training and also consider using existing African professional associations. Many mentions were made of the African Federation of Obstetrician Gynecologists. The question was whether we could form an African College of OBGYNs. I think it came out somewhere in one of the plenaries. The use of internet services or the creation of the website that will link all of the training institutions or professional bodies also came out strongly.

What other major issues need to be discussed? I think this came up very strongly from Rwanda that much as we are looking at the numbers, we should pay attention to quality. This can be achieved through harmonizing training programs across the continent. We were given a sterling example of the East and South African block, where the specialist training was under the professional body and not the academic institutions, because a lot of the African institutions have difficulty creating lecturers and paying them. The professional bodies can be tasked to train, and these professional bodies can go around the blocks if that is what is in place. There was a strong suggestion for that to be included.

Now, linguistic issues on the continent was something that has not been addressed here and was something that came up as an issue that needs to be considered. Then the need for midwifery support; it came out that you can train several OBGYNs but you need a minimal movement power which has midwifery support and sometimes anesthesia support, so it was another issue that we needed to discuss.

Then, we cannot do postgraduate training when we do not have a good undergraduate base to feed into the postgraduate programs. There was the need to also strengthen the undergraduate training programs on the continent. Then, training and advocacy on women's health issues does appear to take a backstage where we assume that the obstetrician who is the leader of the team naturally is an advocate of women's health, but probably we need to look into training of advocacy. Then the implementation issues after all we have discussed.

The last question: What would you like to see happen next? I think what concerns us is that the cadre of African OBGYNs interactions and communications should not end here. There is a need, like a mentioned earlier on, to create a database of the training institutions and training

programs so that if you are in Makerere and you are interested in a program and you find it happening in Malawi, you could also just apply to Malawi, rather than look towards the Americas. That was one of the things we would like to see happen next. A website and a use of social media platforms came up. There was a strong suggestion for us to meet again probably as a regional group. The challenge was who would fund that kind of group meeting? Another point was to also consider periodic reviews of what has been agreed upon either now or in the short term. Yes, one of the other things that we would like to see happen is the fact that it does not always require money. Faculty support between Sub-Saharan African countries is something that be planned without a lot of money. We would like to see that happening, maybe between Zambia and Cameroon or Ghana and Nigeria. It was mentioned of Nigeria; it came out that we don't have all the Sub-Saharan African countries at this forum, so what will it take to get them on board. We should consider involving everyone. I think by and large, in five minutes I hope I have captured the sentiments of the African group. Thank you very much.

Frank Anderson: So, let's hear from the governmental ministry group. The honorable minister Ray [laughter].

Ray de Vries: I was drafted into taking notes, but I would much rather have one of the participants speak. Bernice is right here, she might say a few words.

Okay, I feel a little awkward doing this but I will summarize what happened in our group. We had a relatively small group; we had six people representing five different ministries of health and education. The overall message was we need to find better ways to cooperate from each other, to learn from each other, to start conversations between the ministries, to take advantage of what has already been done in some countries' ministries of health and education and transfer that to what is going on elsewhere. Especially taking advantage of existing relationships in parts of Africa, in Western Africa, East Africa, Central Africa, and Southern Africa. There already is a structure that can be used to spread this message among the ministries in each of these areas. There really were four things that we got around to talking about.

The first was training and the need for faculty. Some of the countries are in the early stages of training programs and they are looking for help from other countries. The message we have been sharing the last few days about no need to recreate the wheel for every country, but the countries that have been through this can adapt the things that they have done. Also, the

sharing of experts and expertise. So it is not just the expertise but is it somebody who can come from one country and help us in our country. The ministries can be place where this gets organized.

The second issue is what do other countries know about accreditation, especially for countries starting out. What can we learn from you on how to create systems of accreditation.

A very big issue was retention. Once you train an obstetrician gynecologist, how do you keep them in your country? The issue here was that we know people were trained in one country and move to another, and how can ministries cooperate and keep the people that they are training in country? What might be done on the ministerial level to deal with that problem of retention?

And finally, there was a question that I think we all have. We did not come to a conclusion, but the problem of how we get people we train to get out of the urban areas and into the rural areas? What can we do to get these people to move to where they are very much supported and very much needed? That is the high-flying overview, so do any of the ministerial people here want to add to that?

Anyone else from that table? I am sure I missed something. Because we can collaborate on the university level, but if we don't have the ministries, it is going to stay at the universities. We want to see country-wide change, not just change within different spots. I am delighted that these folks came and I want to make it clear how critical their presence is to what we are trying to do.

Frank Anderson: Okay, let's hear now from the American OBGYNs. This is Mike Brady from the University of Arizona. I'll speak briefly and then I would like any of the other folks to make comments.

Keeping the final goal in mind - and not goal shifting as a Ray de Vries mentioned this morning - will be key to what we need to do, because in any complicated partnership secondary agendas and secondary goals can come up. Those secondary goals can be good in that interim data points can serve to impress funders and gather more resources for the project, but they need to be transparent so we can invite our partners to call us on any goal shifting that we might be doing.

The second question is how we envision this group of OBGYNs continuing to work together. There was a lot of interest in working with

APGO, CREOG, and other professional organization – certainly with ACOG. There was talk of a Dropbox to share information. There was talk about a Listserve and some type of web community to share information with each other.

What you like to see happen next? What are the immediate steps? I think the immediate steps; we talk about partnering with other organizations, curriculum development was an important next step, and funding, developing individual funding sources was an important next step. An important question was brought up in two separate ways regarding gender and age issues, in terms of the learning environment. Sometimes young physicians will find themselves being junior faculty members in an African OBGYN department and interacting with physicians who are now in training within that department but are older than them. Sometimes the educator or the faculty member might be female and the learner might be male. And that brings up a complicated dynamic, having younger woman with expertise teaching an older man. That might be something to address in faculty development and training the trainers sessions.

American OBGYN: I just want to add that our group also came up with trying to facilitate the African-to-African partnership and trying to make sure that non-English speaking countries are not marginalized. Because we are an American group and most of the countries represented here are English speaking, we ought to think about how to overcome the language barrier and how to facilitate communication tools to access the need of the other countries. I think that was mentioned by the African group as well, so I think we are all on the same page with that.

Mike Brady: That was very good, thank you.

Frank Anderson: What about the professional societies group? Does someone from that group want to give us a report on what happened? Barbara Levy from ACOG? Thank you.

Barbara Levy: So we did *not* have a worksheet. [Laughter] So we were winging it. We had FIGO, the Royale College, ACOG, and in Africa we had SFFM, IUCA wasn't there but we were thinking about that, GOG, SRM. The thought is to put together – as an immediate goal – a council; a group of specialty societies including the Royale College, the Canadian SOGC, ACOG, and the sub-specialties into a place where we can do some coalescing, some collaborating coordinating and some framework development. You had talked about looking at curriculum. A place that we could put together some frameworks, some things that are not proscriptive,

but are an outline and then a menu of things to choose from. Trying to take all the resources that are available and put them in a central place. Kind of like a Dropbox, except much more organized, we hope, and accessible. Also accessible to our medical students both in African and in other parts of the world so they have access and communication abilities. That is something that a council can probably do that any one of the individual societies or any one of the universities, or even a consortium of universities, probably could not do.

We were pretty energized by the end of all of this, thinking that we really have momentum and that we would want to be quite inclusive of organizations that are working, whether that would include NGO's and other organizations that we haven't thought of. We want to ensure that we have a very open policy. Most of all that we communicate well with all of you, so that whatever we produce is of use and is accessible to everyone.

We talked about curriculum as an option. We talked about in-service questions and training exams as an option. We talked about residency as an option. We talked about the fact that if there were a council like that, that in substance agreed with all of these things but maybe not endorsed, because that word is problematic for some, but that supported this, and that it might provide additional resources and funding opportunities because it was a wide, broad group of people supporting all of those things.

I have my marching orders. I have everybody's email. And we will start to put that together. ACOG will for the moment be the organizer of the organizers and see what I can do. We will try to do a second very short meeting in Chicago at the annual clinical meeting of ACOG because many people will be there and try to open the door to many others who were not present at this meeting.

Frank Anderson: That is fantastic. Thank you Barbara. I know that is something that is waiting to happen, just like so many things that have happened at this meeting. They have all been waiting to happen, haven't they? And in some ways we have been able to work with some things. That's the old obstetricians joke. It was a natural childbirth too; we didn't have to use any intervention. Okay, next, we would like to hear from the country groups.

Final Country Presentations

Frank Anderson: What we thought we would do is to have each country come up, and if you have multiple partnerships in a country, you could come up and just answer the three questions: What are your lessons learned, what are your challenges, and what would you like to do next? Just in a five minute summary. We are going to start with the list as it is on your agenda, which means that Cameroon will be first. Thomas Egbe, Mike Brady - could the whole group from Cameroon come up?

Cameroon

Crista Johnson Agbakwu: My name is Crista Johnson-Agbakwu. I have had the extraordinary privilege to work with our Cameroonian partners. We actually flew to Cameroon before this meeting last weekend and had some time to get another faculty. This is Dr. Gregory Halle. Dr. Thomas Egbe was here at this meeting and Dr. Victor Mbome Njie, who represents the Ministry of Health. And we have been pleased to have Dr. Justin Konje who is representing the Royale College of OBGYN, but as a Cameroonian he offered tremendous insight for our group over the last several days in our breakout sessions.

This is an extraordinary learning opportunity for all of us and that we are just embarking on our partnership. There is not an existing residency program at the University of Buea and it is really insightful for us to learn the staggering health disparities that exist throughout Cameroon, but especially in the Southwest region where they are essentially only six OB/GYN's who are part of the University of Buea.

Here is Dr. Thomas Egbe; he has been our key collaborator with this partnership that actually began with our department chair, and then Mike Brady, who is our Residency Program Director. I will probably highlight and then have the others speak briefly. Some of the main themes that we have highlighted as both immediate and long-range plans for our continued partnership and growth is curriculum development and looking at ways that we can examine the accreditation process and really look at some of the immediate steps that we can take in terms of beginning some cross

institutional collaborations in terms of didactic grand rounds, videoconferencing, and case-based discussion between both Universities.

Funding is probably the largest challenge that we identified on both sides and we will be making strategic plans to enhance our ability to garner sustainable support for ongoing partnerships. One of the immediate challenges to starting a residency program is that the faculty of the University of Buea needs to have a certain level of professorship standing within the University of Buea. It's a time-based promotion process of six years and we do not have faculty who have reached that point in time yet and we are looking if we can potentially have visiting professorships from the University of Arizona that might serve in that role and allow our program to begin right away. Some of the major points and goals that we have are to obtain buy-in, not just from the University of Buea but also from the Cameroonian government. We have immediate steps to work with the vice Chancellor and the Ministry of Health in garnering that support. We are in the process of completing our MOUs, our Memorandums of Understanding, between both Universities and we are hoping that within the next two months, we can have it completely finalized. We are hoping to completely start our residency program in 2015. And, of course, as with all of us, our eventual goal is to increase obstetric practice within Cameroon and really make some progress towards reducing maternal and child morbidity and mortality. I'm going to let our partners say a few words, as well as Mike Brady.

Dr. Thomas Egbe: The process we've gone today and throughout this week has been very enriching for us because it is a first of its kind or the second of its kind after Rome, where we have specialists from all over with come to give ideas for us who want to open a new OB/GYN training in Cameroon. I think with the group discussion we had to open group or something like that, we're going to learn more and more from other people from the University of Arizona. I thank Frank for inviting us here and we hope that our partnership with the University of Arizona is going to give a good final result. Thank you very much.

Dr. Gregory Halle: I don't know whether I absolutely have to say something, but if I have to say something then I hope to express our sincere gratitude for the participants and the organizers for allowing us to take part in this august ceremony. I call it an august ceremony. I think at an institution like this, it is difficult to express emotions, but I think we will go back with a positive impression about your organization. At times you don't know the capabilities that you have until you are exposed to certain situations. Before coming here I did not have a clear idea of what exactly is

going to come out, but just having others around, I think this acted as a great source of motivation and I was personally surprised with the ideas that came up, just by seeing the others around. So I think we should all give a round of applause to ourselves for making these contributions.

Kenya

Frank Anderson: Okay, we have a change in the order because Kenya has to depart early. We will now hear the Kenyan Country Report. And if anyone else has a time constraint, please let me know.

Hillary Mabeya: Thank you so much. We were lucky from Kenya that we came with a team of people from the Ministry of Health and the Ministry from Education. We had a whole team and our partners from the United States. We had a bigger team that looked at the whole area. What came out clearly is that the Kenyan government has a new structure, whereby 47 counties are looking at a have a medical facility. In that order, it means that we need more specialists. The program is already in place, but what we need now is to maybe increase the number of trainees. At the moment we are training about five per year, but we need to increase in the next 10 years to maybe 10 or 15 per year, so that in 10 years we have maybe 100 or 150.

Our First Lady is very interested in maternal health so we are actually planning to maybe meet as a team from the Ministry of Education and Ministry of Health and form an agenda. The goal of the agenda is actually to increase the number of trainees in OBGYN. The Office of the First Lady is interested in maternal health so we would use that opportunity to kind of push the agenda for government buy-in. The other thing is that training for the residents has to be supported by the Ministry of Health because of the employment part. So what we came up with was when we go back home we will meet as a team from the Ministry of Health, the county representatives, and then we might be able to put up a strong team to advocate for more residents.

The needs for countries in Sub-Saharan Africa, we were able to look at what kind of support partners can give. We are lucky in Kenya that the partnership that has been there for the past twenty years can be moved. Support is especially important in the areas of exchange programs, but the fact is that this workshop has actually given us an idea on how we can support our neighboring countries in terms of exchanging, countries that have a strong experience in some areas like uro-gynecology for example. We will explore how we can we use that local experience instead of starting a new program. Is there a way we can use other countries to train, rather

than setting up completely new programs. I think a lot came out from our discussions and we hope that we may be able to do monitoring and evaluations to see what new things we can add on top of that. I don't know if I have left anything out.

Frank Anderson: Now if we can have the Ghana contingent come to the front, the Ghana representatives.

Ghana

Kwabena Danso: I think we can have Dr. Edu, if he is here, to join me and Dr. Gumanga for the Ghana group. Please if you can come up; I may leave out something very important.

By and large, we are a bit fortunate. It is a project that is the center for this conference, but that notwithstanding, the country funding needs assessment came up critical both ways – in country fundraising and external sources, for equipment as a whole, particularly with the evolving sub-specialty training programs came up strongly and funding to equip faculty in research and research mentorship, recent graduate proposal writing, and indeed an establishment of a grant office. I am told Michigan has something like that; Nogouchi has something like that. It came out very strongly that if we could be supported to establish a grant office, that would go a long way to help faculty in their research efforts. That is a bit on the academic or teaching side.

When it comes to service, the need for a fetal assessment unit also came up after most of our deliberations and it has generally been agreed that it would be important to consider the establishment of a fetal assessment center to attempt to reduce the number of the perinatal mortality rates. One of the thorny issues that has come up is the difficulty of visa acquisition for the resident and student exchange programs. We have been informed that the visa requirements have changed from B1 to J1 so now we know it needs a lot of planning ahead of time.

The need to support the new medical schools to begin residency programs took the better part of the discussion. Professor Nkyekyer was the chair and he is also the faculty chair in the college. Those sentiments have been taken down for consideration so that Tamale Teaching Hospital and Cape Coast Medical School can eventually, in the long term, also start residencies in OBGYN to beef up the numbers. Communication from external faculty to local fellows had a few gaps. I think we have spoken frankly about it. Those will be smoothing out. The need to copy all academic heads in

programs and not just to send mail down to the fellows also came up strongly. I don't know if Dr. Gumanga would like to add a few points to the Ghana deliberations.

Dr. Gumanga: I think that basically you have captured the main things, because here we are limited by a very high clinical load; I was checking the notes I had and have seen that the major issues have been brought up. It is very important for me to add that the most heated thing in our deliberations for the group from Ghana was how to get new medical schools to start residency programs as early as possible. In these few meetings of the faculty and of the college, those are going to be issues that are going to be brought on the agenda. Generally there is an agreement that there is a possibility to increase the current numbers by 10 if the others come on board, if not more. Thank you very much.

Kwabena Danso: I don't know if anybody wants to add anything to the Ghana group work. Professor Nkyekyer? Okay, thank you very much.

Frank Anderson: Actually, from the Michigan side, I was in and out. But we were also having this conversation, that, as you know, this Ghana group is a mature group. They are already starting to discuss supporting other residency programs in other parts of their country. They also have an opportunity now to improve the quality in their labor and development units and to provide the example so that in the next five years, we will be hearing how the Ghana program has done quality improvement projects that can be replicated throughout the consortium. That is my challenge to you guys and I think that at this point, you have the opportunity to do that and show us how it is done in Africa. Thank you.

Liberia

Stephen Kennedy: First of all, I would like to extend thanks to the partnership from Liberia. From the Liberia College of Physicians and Surgeons, I represent them. We also have Professor John K. Mulbah who is the chair of the Faculty of OBGYN. From the Ministry of Health, we have Dr. Bernice Dahn. From the Icahn School of Medicine at Mt. Sinai, we have Dr. Ann Marie Beddoe and Dr. Lise Rehwaldt. And from the Baylor College of Medicine, we have Dr. Yvonne Butler.

There are a couple of lessons learned. What we found is this section to be quite productive, in the sense that as you know the Liberian program started about three, four, six months ago. We were less ambitious. Our focus was primarily developing curriculum, faculty development and

deployment to be able to address the issues relative to the shortage of specialists within the country. Also, it was less ambitious as well because at the time, our thinking was primarily based on the World Bank. This section has provided us the impetus to begin to consider a broader perspective from a partnership standpoint. What that means is for example is that over ten years we have looked at possibly, based on our strategic plan, to train 40 OBGYNs. We did not factor into that extended partners and what additional resources they could have brought to the table. By having this forum, we realized that instead of 40 over 10 years, we can produce 75 to 80 OBGYNs.

Other issues to consider is that we developed a curriculum based on the West African Health Association model. The whole emphasis on implementation of the curriculum and less emphasis on revisiting the curriculum annually in terms of modifications based on experiences learned as you move along. From this forum, we realized that as we go back, we have to include that in our implementation plan.

Other issue that we gathered from this forum is that we were more interested in numbers in terms of faculty. We were looking at say for example, the Department of OBGYN. The first quarter of the first year was based on two residents per one faculty. That was the ratio we established. We placed less emphasis on issues like faculty development and did not consider the context of extended partners and additional faculty and sub-specialists who are brought into the picture. So, all I am saying in short is that there have been significant lessons learned from the time we spent in this small group section.

What are the challenges, basically, or the next step? As we leave from here and go back, the team is going to reorganize. Basically what we are going to do is revisit our priorities. We realized that – I don't want to use the word 'selfish' - but we have to broaden our scope and enlarge our priorities to begin to consider what our partners would bring to the table.

The next thing we have to consider is that we will have to re-engage our partners. We were one of the programs that said that we are desperate. Whatever you gave us, we accepted. This forum has given us the concept of rethinking that. We have to align our priorities with what could be provided by partners and in addition, also to be able to clearly organize and coordinate all partners to ensure we are able to meet the goals and objectives we set up in our strategic plan. Also we realized from here is that part of the next step is an aggressive effort to identify additional partners and lastly to be able to get together and begin to develop specific content-

specific precursors to begin foreign agencies to submit our proposals. Those were the key issues that we picked up from this forum. Thank you very much.

Frank Anderson: Wow, that was great. Thank you. The Liberia group did a lot of work. You guys are amazing. Which country is next? Senegal.

Senegal

Khady Diouf: Hello everyone, my name is Khady Diouf and I am working with two of my colleagues representing the Senegal – Harvard Partnership. This is Dr. Mansour Niang, he is a professor at the University as well as a professor at the medical school and also Professor Magatte Mbaye who is part of the faculty at the medical school. They also participate in resident education. I am a faculty member at Brigham and Women’s Hospital as well as Harvard Medical School. Our collaboration in Senegal – I guess to use the analogy of fetal development – is at the morula stage. So we haven’t yet developed such a strong partnership, but we have been in Senegal since 2012 when I joined the faculty at Brigham and Women’s with the idea to foster a strong partnership over the years.

The Gambia

Patrick Idoko: Good afternoon my name is Patrick Idoko. I’m from the University of the Gambia. It’s been a tremendous pleasure this week to get to finally meet Owen Montgomery and Allen Waxman and we really had a nice time getting to know each other and getting to talk through some of things we’ve been hearing so. Thanks to Frank and your team for inviting us. Thank you for helping us to see that it’s possible to move along with post graduate OBGYN training in the Gambia. Two years ago I was at Rome and I remember clearly the presentations of countries like Liberia and Malawi and we’re all in the same boat. One thing I remember clearly was we all have very few faculty and it looked difficult. Personally, it’s a big source of inspiration to hear that Liberia will someday have a post graduate program and that Malawi has already started one.

So I’ve titled my presentation here as “OBGYN Training in the Gambia: Can it Happen?” The reason I gave it that title is before the Rome meeting and immediately after the Rome meeting, I tried to make those of the Ministry of Education and the Ministry of Health to see that the way forward for us in the Gambia if we’re going to have an impact on the health of women and of children was to train locally. But somehow the general impression I get when I talk with people is that that’s a big step that we

cannot, we cannot go that way right now. It's almost like it's impossible. At the same time the politicians are getting upset because the medical school has been on for about more than ten years and we've had some graduates and for those graduates who are interested in becoming specialists, the government was training them but because there was no local training in the heart of the African country that makes them not available to offer services.

So since 1996 when the medical school was established, all the doctors that had trained in the Gambia were all working within the capitol in the urban area. So we have nine medical health centers and hospitals in the country apart from the teaching hospital. Each of these hospitals is equipped to offer both comprehensive and emergency obstetric care services. But only two of these hospitals have one OBGYN specialist each. So everything else has to get on to the teaching hospital if they're able to make it and the political leaders were getting frustrated.

When our first residents finished the halfway mark of their training in Gambia and they were called back and were unable to finish. It's been a big struggle to get them to come back to finish their fellowship in Gambia. We hope that we will be able to cross that barrier very soon. At least we have the assurance from the government that they are willing. Part of the problem is the government has not understood what it takes to train those graduates or specialization training.

So some of the things we have learnt here as we listen to all the other people who are talking was the importance of political support. I made reference to countries like Liberia and Malawi - we realize that getting that kind of support from politicians is very important to get a program started. Then we also learnt that partnerships need to be mutually beneficial. One of the strongest, one of the questions I've struggled with all this week is how can we be beneficial to Drexel and the University of New Mexico and we're still discussing all these things.

I think I've mentioned some of our challenges are the political will and commitment to get OBGYN training started in the Gambia. Part of the problem is that we have a very high turn over of policy makers. In one year we can have three Ministers of Health, for example, that makes it very difficult to get anything started.

Again, we have a very big problem with faculty. At the University of the Gambia we have two full-time faculty and four part-time people. It makes more sense to be part-time financially than to be full-time so it's kind of

difficult to convince people to come on board full-time. So we know that the Gambia is one of the poorest of the poor. If I can say so there are a lot of challenges when it comes to issues of finance. Our partnership has decided as a goal that we're going to establish an OBGYN residence in the Gambia and our purpose is to improve the health of women and children in the Gambia. The near term goal should start at least a three year residency, with faculty to train residents and ultimately the next faculty should start to see a drastic reduction in the amount of maternal and child mortality.

So what are the next steps? We will discuss what the University of the Gambia will do, and what the University of New Mexico will do and what Drexel will do. So from the University of the Gambia we will lead, we will spearhead the writing of a proposal for OBGYN training. We are hoping to get a lot of input from our partners, from Drexel and University of New Mexico. Also we'll be looking at all the other programs that happen in West Africa and probably also look outside West Africa at the East African systems as well and see how we can adopt.

Then immediately after this meeting we're going to begin our focus visits to more senior members of the invested community and also people in government and we will seriously consider hiring three additional faculty. Incidentally, our University has a MOU with Drexel, so Owen is going to review that MOU and send a copy of that to me so I can look at it. This is an MOU for the whole university - not just our department - so there's some kind of partnership already going on. Owen is also going to facilitate close contact between our department and senior members of our University. We are hoping that a faculty member from Drexel will be able to visit us very soon and see how we can take it from here. So I think those are our immediate next steps that we think we can. I don't know if I left out anything.

Owen Montgomery: I was particularly impressed by Patrick and I think that had this meeting occurred two years ago the Gambia would not be here and therefore Drexel would not be here as well. But Patrick is incurably optimistic and as an obstetrician that is a very good trait to have. But at the beginning of the meeting I think Professor Donaldson said, I think the message was yes we can and Patrick keeps saying yes we can. He is not daunted by the challenges in the Gambia. I think that this has also been an eye opening partnership between Drexel and University of New Mexico because either of us as US partners alone I think we would not support Patrick in his mission in the Gambia but I think together we're a very complimentary partnership. Drexel will host Patrick as visiting faculty and we're going to pick a time that he can also be at University of New Mexico

so we can continue the relationship. Over the next 18 months we've planned several meetings ultimately ending in FIGO Vancouver 2015 so we can continue the progress. So, I think leaving with just a very positive understanding of thinking that, 'Yes we can,' and we want to make sure that we continue to be a part of this partnership because there's so much that we can learn. As I said before, I think we were put in 'Room Zero' because we were at 'Ground Zero', but there's so much we've learned from the other partners in terms of partnership and infrastructure and some of the strengths that we have will become evident. But we need to help Patrick with his vision and I think the impact factor in the Gambia will be very evident very quickly. His goal was to train twenty OBGYNs in the next ten years and I think that with our help maybe he can realize that goal.

Frank Anderson: Thank you. Congratulations, Patrick. That's fantastic. Well, we have had to change the schedule because Malawi has to take off soon, so Dr. Mataya and the Malawi group - would you guys please come up and let us know what's going on? Can the whole Malawi group come up?

Malawi

Ron Mataya: So Jeff left us already and I think he did this on purpose so he wouldn't have to come talk. I think that I can say with some certainty that we had an incredibly productive meeting here and we're really so privileged to have been a part of this crowd. I think that I'm frankly shocked at how far we've come in the past six months. It seems like we've accomplished a lot in a short amount of time but when I think back to when this all began a couple of years ago it seemed like a dream that we would be where we are to today and now we're here. So, it's pretty exciting. One of the things that I think I'm most excited about that came out of all our discussions at our table was that we actually used the words 'development exit strategy' today and I can't believe that we did that. We just started and we're already saying that we need to have a plan for five years down the road to make my presence in this group unnecessary. Though I did say that I was hoping that they would let me stay. I did ask that and they said maybe. They weren't sure.

But we came up with actually what we consider, what did we call this guys? We called it action items? Yes. We came up with action items and I think we're all pretty happy with the action items that we came up with. I think it's all a little overwhelming but a great list. Do you guys want to mention some of them? So I'm not the only one talking? Ok. We talked about things like, we actually want to work on some issues that we consider

critical to the success of the training of our registrars. One of those things being the lack of support we have in both of our campuses around anesthesiology and around radiology services and our laboratory services. We think that those are real weak spots and we're going to take trying to look into providing some sort of solution to that very seriously. We also talked about things like, right now we're doing conference calls between our two campuses. We're working on boosting our IT support and we're hoping we can even move into something that involves video conferencing, Skype, something like that once we have powerful enough IT infrastructure.

We're talking about, with coordination between our campuses, that we need to go ahead and start putting on the books when are our quarterly faculty meetings going to be that are going to be joint for our two campuses. We've already got, I'm really proud to say that we have our first annual scientific meeting coming up in two weeks that's going to be attended by all of the Malawian faculty and many of the participating ex-pat faculty. I am unfortunately going to be back in the states at the APCO meeting so guys better make it fun because I'm missing it. But we want to get those regular meetings on the books and we want to be sure that we have continued funding and support to have those types of meetings because we're really excited that we're actually going to be able to get everyone together and really boost the entire profile of OBGYN in the country. I think that those are just some of the highlights of things that we got out of this meeting and talked about as a group and really appreciated that time to hear from other groups and we got some of these ideas from listening to all of you, so thank you so much.

Dr. Anderson: Ok. The next presentation, Uganda.

Uganda

Josephat Byamugisha: Ok good. Here comes Uganda. We are a big delegation but we are represented by three persons. We have privileged that have the academic institutions and the government represented by a commissioner of the Minister of Education. I am Joseph and we have Joseph here and Robert. We have three other persons right over there. Where are they? Meg, Adelene, and Blaire. Now in terms of representation you can see the various intuitions. We have three MMED programs. Two are the public institutions and one, which is in the private sector just coming up. We have got here an association of obstetricians and gynecologists of Uganda commonly known as ADGU which is affiliated with FIGO. We've 15 to 18 graduates by year that is those who are coming from the various institutions. About 150 OBGYNs. 60-80% stay all

around the city that is Kampala. Our population is predicted at 36 million and the doctor to population ratio is 1 to 20,000. Maternal mortality rate is 438 per 198,000 births but it has gone up by three in the last 5 years.

We observe that about 80 percent of our faculty have either private practice or some other way of increasing their income. One of the reasons being that we have the lowest salary in the East African region compared with other countries around us. So we have sub-specialties coming up, but we don't have people who are formally trained to be sub-specialists. We have an issue also that we've got a backload of recruitment so that even if these people are fine, they may not get the chance to be included. And currently, some specialists may be promoted but they can't move to those positions because they are needed where they are.

The other is retention which is difficult because of the factors which have been highlighted and we've got infrastructure and equipment gaps. Some of the simple things that the specialists seek to do their work. Equipment - especially the increasing technology, improving technology, and scopes. We need improvements. Even improving complete sets for operations. Let's move on. My colleague Joseph will take over from here. Joseph is the chair of the OBGYN department of the Mbarara University of Medical Science and Technology commonly known as MUST.

Joseph Ngonzi: Thank you. It's been a rare privilege learning of the countries stories. As someone, actually some of the things have been picked from many of the things we've been hearing from here and we thought we would also be able to implement some of them. One thing we have come to agree on is that we need to develop a country-wide vision for OBGYN training as it is in countries like Rwanda.

And level two, to create a strategic and business plan to implement. Our interaction with Robert Odok Oceng, our ministry representative, has been rich here than has been in country. We have been able to learn so many things here from him on behalf of government that we have no chance of learning back home. And we ask that supplement government funding to implement some of the ideas that we've already heard would be provided. We learned of government funding agencies so when we get back home we are going to work hard so we can be able to present our needs and find where we can get funding. We will start regular meetings with Minister of Health officials and also other stakeholders in this whole plan.

In our country the northern region has suffered from instability for the last 35 years. And government was just able to establish a medical school. So

far they have graduated about six batches of medical students and so we have great need in the area - much more than the rest of the country to get back and support that medical school to have postgraduate training on the agenda. We also discussed adding sub-specialist training within the country or we can even use some countries around us who already have got some of these areas covered like Kenya, like south Africa, wherever we can and where we can get it cheaper having in mind the quality we are looking for.

Also improving collaboration sharing between Mbarara University and also Makerere and other medical schools within the country. Thank you for arranging this meeting because we discovered there are things that we can do in country and it was a sure learning some of the things from here so when we get back we are going to see that joining our efforts and be able to learn from each other and Uganda. I think we will move and also improve collaboration in the east central and southern African region and leverage and also coordinate efforts from some key partners like any others that will possibly come in the future

And lastly, since hearing about the establishment of the Ghana college it's clear we need to support our society when we go back. We are going to put in effort in east central southern Africa obstetricians society first, using some of the ideas that we are able to learn from this meeting. Good enough - this year Uganda should be taking over leadership of this society. So this was a very timely meeting for us to learn very many lessons. Thank you.

Robert Odok Oceng: I just want briefly to inform you what at government level I think has been done, made possible by the government agencies an official here cost a lot. There is little discussion between ministries in every country, especially health and education because health institutions are under education and where they train from they are under ministry of health and some misunderstandings always there and we're busy trying to share our work and cooperate.

Now what I will do is to bring four ministries. For me it is very vital with the training of these health workers because Ministry of Education trains and Ministry of Health, they recruit and have the workers. Ministry of Finance finances the training and Ministry of Public Services are the ones in charge of equipment. The coordination between Ministries is very important. I know the graduate will get more technicians around him. Now when you train one doctor and you have no technician around that doctor, it will not be effective.

Therefore, as we depart we should think about how do we bring on board the midwives, the clinical officers, and the nurses so that they support these doctors because in Uganda 80% of the rural section is being helped by clinical officers, and nurses and midwives. Doctors are really almost 90% in the urban centers mostly Kampala so training at that level would not achieve what we wanted but if we train also we find a way of training up to nurses level then the people we are talking about there will be helped. So I don't know if this is a question for one of us. We take it home, think about it and get solutions maybe at the next meeting we can inform the meeting. Thank you very much.

Frank Anderson: Incredible. Every country has a different story based on where they started and where they ended up at the end of this meeting and this whole issue of communication seems to be coming up, doesn't it? Ok the next group is Rwanda. Rwanda group.

Rwanda

As Rwanda is getting ready I think it's important to make the point that other activities are moving towards reducing maternal mortality so certainly the increase of training of midwives, anestheticians, whatever we must to hand in hand with these. This will be the driving force, the pool to take along, the others if we realize that so it will be... for us to realize to present this as if this would be the only approach to solve that so we recognize that other sectors or other areas of health ...training is important. We are looking at it because it is in our domain.

Stephen Rulisa: We have one medical school in Rwanda. We have a limited number of OBGYN of 35 or 40 for the whole country, and over 80% of them are in the capital. We have one school that is training medical doctors. We have a unique situation where by we have a partnership of many US institutions - yet all are as one partnership. The Minister of Health, our government strategy of vision, OBGYNs. The partnership is not for OBGYN only - it's for all many programs.

The partnership includes residents and midwives, nursing schools and medical schools and all medicine in general. So the US institutions come as one. We don't see them as New York or Yale or Harvard, we see them as partners from the US institutions who partner with Rwanda's health sector to achieve one common objective. Beyond that we also begin to transform our partnership. By the time when the mentor goes back he has transferred all that he has to me.

The challenges we discussed are some of challenges in the health sector – there are very few number of trainers and the number of faculty is very, very low. One of the objectives is to train at the home country for seven years. So that by the time this partnership is over we will have at least trained more who can continue learning our residence program.

The other challenge that we discussed was different in African in procedures to have essential medicines in our hospital. So one of the changes we discussed is it becomes very difficult get medications very fast and we have to go through all the procedures which sometimes makes it's difficult to have access to medicines.

The other challenge that we had was we don't have the problem of retention of doctors because we don't have them. But once we discover that have them then there will be a problem of how to retain them in these hospitals. Now we don't have them so we are talking more of having them first be trainers and then in the future once we have more trainers then they can be retained in this hospital. So finally, in our country we don't have a problem of doctors going outside Rwanda. Everyone we have outside is coming back, so that is not the problem so far. The problem is that we need more so they can go in these hospitals and help to train.

Washington Hill: Briefly, I also think that the Rwanda program had matured to the point that we're ready for some monitoring and evaluation in the form of quality assurance but also on both sides of the partnership both to figure out what currently exists already within the Rwandan Ministry of Health because there is a system. We don't seem to know much about it and how to interface with that to make it possibly a little more transparent because we don't know much about it. That speaks to the lack of transparency and also on our side to beginning to get feed back from our Rwanda partners as to how HRH is doing.

Not only for OBGYN but I also think system-wide because we're here to facilitate Rwanda's goals and we're looking for some serious feed back because we actually don't have seven years - we have five years, right? We're two years into it so that's one of the challenges we have right now. We learned a lot from other countries that are in various stages of giving birth to conception mature countries so if there's anything we can help you from Rwanda's standpoint don't hesitate to ask. Thank you very much.

Frank Anderson: The next country will be Zambia.

Zambia

New Speaker: Good afternoon, everyone. Know that we are currently anxious to go back to our bases. I'd like to thank Frank and organizers for making it possible for me to bring my strong team. I'm supported by my dean of the school and a doctor who is also an obstetrician and he's director of the ministry and in charge of support services. And representing our partners is Doctor Ben Chi. Now, like most African countries, the response to the non-return of people we sent abroad for training, the university first introduced a masters program in 1982. And during this time we have produced just close to over 40 specialists. And it has made possible that most of these have been able to stay in country. Now over the years we've got really sub-specialized and we think that is the way to go now. And this is why we've learned a lot of things from our partners that are here. How some of them plan to go out and start the sub-specializations. All this time we only have on medical school but in the last three years we've seen one public medical school come up and two private ones. So we hope we can produce 15 specialists in a year and in 10 years will have 150.

What we've learnt here are some of the things we already talked about. Some of the fellowships that are offered in our partner's universities we would like to offer in our university. It's from these we can probably start also the sub-specialization by concentrating resources and efforts to particular people who have the knowledge and the knowhow. And also what we're learned is that this cooperation between Africa universities also very possible. Because through other programs we have tried to develop as a university some clinical protocols which are very similar to other countries. I'm happy to report that we have a market share with Malawi so that what needs to there will need to be done here as well.

Some of the challenges are also again similar to other countries. The university positions are not attractive compared to government. So most people would rather work in government than come to the university to teach. We also have problems of infrastructure and equipment. But I do hope the way will be much easier because our first lady is on obstetrician and gynecologist and she's passionate to help us to drive the agenda of maternal and neonatal health. Also the minister of health is also an obstetrician gynecologist and he is the director of support services so I do hope he can help us plan our next course.

New speaker: Well, I think for us we should just be thankful that we were included in this whole arrangement because the thing has given me time to

think about just what are the many programs that we are running and when I looked at the number 1,000, I think how do we get 1,000 for ourselves? But after three days something tells me, 'No'. Actually, if we did 15 that would be good enough so I said, 'Yeah, surely we can.'

Ben Chi: I want to say a few words from the partner perspective. I think like others this has been a very eye opening experience and UNC's work in Zambia has really been project focused. It's been very HIV focused until very recently when we engaged the university as well as the Ministry of Health in the Medical Education partnership. I think that the frame work that's been set out here from the Michigan and Ghana relationship as well as others helps us think about how we can engage from this kind of individual-to-individual or project-to-project relationship to something broader and institutional. I think that that's very exciting! And I think that having the department chair, the department to outline what they need and if UNC can't meet it, then how do we engage other US universities that are working at the school or some of you all? How do we fill those needs so that the institution is built up and it's not just about a single partnership but about the needs being met in-country. Thank you for sharing all your experiences and we hope to continue to hear about that cooperation and those relationships. Thanks.

Frank Anderson: That group did a lot of work as well. It's a nice perspective shift to expand that work in Zambia. Next, Ethiopia.

Ethiopia

New Speaker: Thank you very much for the opportunity to be here. We have learnt many lessons thanks to Frank and others from our attendance at this meeting. To mention some of them we are thinking we have a good supporting team to train gynecologists in our set up. We are thinking we have certain medical schools now which are producing about 3,000 undergraduates medical students, so this will be a good input for us so we are thinking that we could go even beyond 1,000 to fulfill the needs.

There is work ready to be done through a partnership so we really understand the importance of our partnership and it was a very good level opportunity. Most of our discussion was how we are going to improve our partnership so that we utilize our US different partners to the best level. We have sorted out some possible solutions. For example, we are going to set an academic consortium and the Society of Gynecology and Obstetrics will be the coordinator for this. We have planned also to adopt this Michigan chapter to use for us so that we have effective partnership.

There are many things that we have listed down- to understand the strategy plans in the country for our partners we have health sector development plan, we have educational sector development plan, so we've tried to communicate this. We were very hopeful thinking of creating an educational environment for our partners at the institutional level and skills for communication and advocacy from our university faculties.

Frank Anderson: They had quite great conversations. All the different partners working together met for the first time and used the partnership process to come up with some really new ways of working so congratulations on all. Next, Botswana.

Botswana

Doreen Ramogola: Good afternoon, everyone. We are in the home stretch. I feel completely at home. As the youngest person in an African home is said, this is usually the one who is said to run the errands, so here I am to do the errands. I really want to say thank you for hosting us, and Frank and your team, thank you for funding us to come here and it's just been phenomenal to be here with all of you and to lean from you.

So, lessons learned. I think the first lesson learned is that I need to learn French so I can communicate with some of my West African colleagues. I think that on a serious note really the message is it can be done. The resources are actually in this room and we don't need to go any farther. We don't need to recreate any wheels.

Just a brief background. Botswana is a country with 2 million people the size of Texas or France and we have a brand new medical school that started in 2009. Just to give you perspective in terms of our history Between 2004 and 2010 the ministry of education spent close to \$200 million US dollars training doctors outside the country - about 800 or so of them. None of them are back in the country and that is why it's really imperative to be able to do the training, and again, because the county is small and the population is small we really can do this. The curriculum we can get from all of you and the expertise we can get from all of you is very valuable.

So this exercise has actually been wonderful for us to take back with us and whoever will be the chair of the department had their work plan set out for them. That actually has been the biggest challenge is that unlike pediatrics and internal medicine where they have been able to do a residence training, obstetrics and gynecology has struggled because they have not been able to

recruit the chair to the department to really have this going. So hopefully one of you in this room will be able to come and help us set up the department.

I think I've really touched on those challenges. They are a reoccurring theme in terms of what is happening in all our countries. The bottom line is that we cannot put fourth faculty because there is not enough faculty in the continent. Perhaps in the country - so that's why training 1,000 and even more is imperative. We will be coming to all of you to ask for your material, your human expertise and to help us set the program. But, thank you again. In fact, we did bring a pediatrician with us who's actually worked as a senior member in the Ministry of Health and we thought this would give perspective..

New speaker: Thank you. I think she's covered the challenges that we've had and I think for me as a pediatrician when we look at child morbidity and mortality figures we've done quite a lot in terms of preventable causes. Now the biggest chunk - around 50-60% - is related to neonatal mortality and we'll have to discuss with our collogues who are obstetricians to address this problem. So I can't let it go far from me because I have a vested interest and also we've started a MMed program in pediatrics. I'm really looking forward to a program in OBGYN. I happen to be in the University and therefore I think I can play a role to assist since I really have a vested interest. Thank you.

Jack Ludmir: Just a word of thanks to Frank and the whole team here and everyone. I consider myself very lucky. I'm very humbled to be here. I consider myself a citizen of the world facing wherever you go the issue mortality. But I think you just heard my partners here and I think I would love to work for this woman. I think she is just a source of inspiration and I mean that she's a true leader. I think she can make a difference and that's the reason I'm willing to do whatever is possible to try to do, in a humble way, something good. I think we are delighted that we were invited here. I think that is an absolutely wonderful way of putting ideas together and not only ideas but I think the process is in place to make it a reality. So I thank everyone here.

Frank Anderson: I think we're all surprised to learn of Botswana's situation of retention and not having a post graduate training program. So, we're going to put this all together and, as Chris Johnson said, this will be the Bible of Implementation of Program. All this information is going to be a great resource.

Conference Follow-Up Letter

February 21, 2014

Dear colleagues,

Many thanks for participating in the 1000+ OBGYN meeting held in Accra, Ghana on Feb 12-14th 2014 at the Ghana College of Physicians and Surgeons Campus. Your great presentations, networking, group “worksheet” work, and especially your presence and engagement created a 3.5 day meeting that we will never forget. Special thanks to Elevate for the productive hypertensive disease course and curriculum development session on Feb 15th.

This gathering generated tremendous enthusiasm for creating capacity in Obstetrics and Gynecology in Sub-Saharan Africa among the major universities, governmental representatives, educational initiatives, specialty organizations, and professional societies.

From our perspective the major elements of departmental development that emerged from this meeting are:

1. Authentic Partnership including gender and age consideration
2. Infrastructure
3. Curriculum Development
4. Faculty Development in both academic and clinical roles
5. Community and Midwifery outreach, district hospital development and involvement, deployment and working closely with Ministries of Health, Education and Finance and any other relevant ministries
6. Research to improve clinical outcomes in country
7. Monitoring and Evaluation for community/population/public health outcomes
8. Quality Improvement
9. Certification
10. Involvement with Professional societies
11. Need for Funding and Support

From the meeting, it is clear that a global consortium of academic OBGYN departments is now in the formation process. It should therefore be possible to continue to seek funding to further consolidate and grow the group. We will use the plenary materials, discussions, and submitted plans to extract the major themes from each of the major elements and provide

Critical Components in Building Capacity

this information in an easy-to-access online forum. We are confident that we will all meet again in a similar forum soon.

A council of professional societies and specialty organizations to provide curricular and training support is also forming to support capacity building. Our African colleagues should also consider ways to engage African OBGYNs in this effort.

Thank you again for your inspiring work! We all inspired each other and created momentum towards eliminating the critical gap in Obstetrics and Gynecology in many Sub-Saharan African countries.

With our consolidated efforts, we will help reduce maternal and neonatal morbidity and mortality, and correct the gross inequities that will persist unless we act.

Let's get to work!

The image shows two handwritten signatures in blue ink. The signature on the left is 'Frank J. Oluwole' and the signature on the right is 'Kwabena'. Both are written in a cursive, flowing style.

Frank and Kwabena

OBGYN Program Development Worksheets - Instructions for Group Process

- Use this form to record notes and ideas from each plenary session topic.
- These questions are for general guidance; a tool to begin. Please add other ideas that have been left out or are important.
- Use each question as the start of a discussion. Expand and provide the “how to” details.
- Please seek a response from every member of the group; go around the table for everyone’s input. Always consider: How to accomplish, opportunities, barriers, and sustainability.
- For questions that seem repetitive, reconsider if new information can be added to the response.
- Appoint a “secretary” who can type the answers to the questions on the template provided on the flash drive.
- Appoint editors to smooth the text. The text should have solutions and provide moderate detail.
- For the final version, copy and paste your country/program needs assessment report as the first few pages.
- Please turn in the project plans flash drive in by 5pm Friday, February 14. These plans should be use as you develop and seek funds for your project.
- The 1000+ OBGYN project will compile all the talks and project plans for each topic to create a master plan/guideline/template for building academic partnerships.

- The 1000+ OBGYN project will also present these plans as a group to funders who may be interested in supporting multiple partnerships as a group with common components or in their regions of interest.

Partnership Needs Worksheet

- Given the issues described in the plenary presentations, the discussion, and the Elmina declaration, what are the key aspects of your partnership that need be discussed?
- What major Opportunities are created by your partnership (for both partners)?
- What major Barriers (for both partners) will make working together difficult?
- How will decisions be made within the partnership?
- Describe what you will do to communicate effectively. How will you avoid the typical problems of communication between partners?
- Effective partnerships require clear understandings of the roles to be played by each partner. Keeping in mind that roles also need to be flexible, describe the role of :
 - The American partner:
 - The African partners (Universities, Ministries):
- What other considerations are important for the success of your partnership?
- Describe a process that would enable both inter-country (American-African) and in-country partnerships (for example, Ministries – Universities) to train and deploy new OBGYNs, and translate knowledge into practice at the hospital, district and community levels.

Physical infrastructure plans

- Given the needs assessment results and the discussions from the Infrastructure Plenary session, what additional information did you learn about the basic infrastructure needs to create/expand an

Obstetrics and Gynecology department at the African Institution?
List/describe all essential components.

- Given the information in the Infrastructure Plenary session, what is required from an American Institution that seeks to partner with an African OBGYN department? Brainstorm and record. What could be provided given current resources, which would require new resources?
- What agencies of the African government/university would be involved in infrastructure building and what would be their role? What governmental resources available to build OBGYN departments, and what would external support provide?
- What (non-clinical) technologies are needed at your institution to either establish or strengthen the African OBGYN department?
- Describe the current clinical capacity at the African hospitals in terms of the number of OBGYNs, nurse midwives, clinical spaces and clinical equipment and anything else. Describe capacity/needs in Obstetrics (general) and High Risk Obstetrics, Gynecology, Gynecological Oncology , Reproductive Endocrinology, Family Planning, other .
- From the American partner, what resources are you to share at the departmental level, medical school level, and university level, other levels (faculty time, electronic resources, CME, grand rounds)?
- What is a proposed personnel infrastructure for this department, both faculty and staff. Describe the ideal department. How can you fill the gaps now and how can you fill them in the future.
- What can the American partner contribute – funded or unfunded - in terms of faculty time, internet resources, sharing other electronic or printed resources.

Partner Roles and Contributions

- What are the expected inputs from the American partner? How much faculty time can be committed to the partnership both funded and unfunded?
- Has an MOU been developed and/ or signed? What are the next steps for your partnership in terms of an MOU or MOA?

Critical Components in Building Capacity

- What are the expected inputs from the African partner? The university? The department? The government?
- What are the sustainability issues for the university based OBGYN training program? Describe the issues and suggest how they may be overcome.

Faculty Development Worksheet

- What are the African faculty needs in terms of clinical education and how could a partnership help fill the gaps? What is could be the role of the Professional organizations and international organizations?
- What are faculty needs in terms of research mentoring?
- What are faculty needs in terms of teaching and evaluation?
- What is needed to ensure African and American faculty can reach their academic and promotion goals? What is the role of the government in this? What is the role of the university?

Curriculum Development Needs Worksheet

- What are the current OBGYN curriculum needs at your institution?
- How many months is your current residency or specialist curriculum? How much time must be spent in each rotation?
- What rotations are included? What rotations would be useful/expected?
- What is the resident training schedule? What are the requirements for graduation?
- How are residents assessed?
- Describe amount of contact time between residents and faculty
 - Lectures
 - Rounding
 - Mentorship

Eliminating Preventable Maternal and Neonatal Morbidity and Mortality

- What is needed in terms of contact time between residents and faculty?
- Is there an accreditation board for this residency? Is there a role for regular program inspections?
- What inputs and information could come from your American partner to help solve these problems?

Deployment of OBGYNs Worksheet

- What is the current commitment by the African governmental agencies in terms of OBGYN deployment?
- What is the Ministry of Health's goal for the deployment of OBGYNs throughout the country? (i.e. 1-2 OBGYNs per each district hospital?). What are the opportunities and barriers to making this happen?
- What is needed to increase the deployment of OBGYNs (i.e. if sufficient numbers existed, could they be deployed across the country?)?
- What is the role residents and faculty in the training and or supervision of midwives and nurses and non-physicians (surgical technicians etc.) at the district and community hospital?
- Describe the role an academic OBGYN department could play in improving care at other health care facilities that serve pregnant women at peri-urban, district and health centers.
- Describe the role and academic OBGYN department could play in shaping maternal care policy.

Certification and Professional Societies

- What is the current method for the certification of OBGYN specialists?
- Are there other viable forms of certification available? What are the pros and cons of each method including the current one in use?
- Describe the role of professional societies in your African country. What role do you see for these societies in the future?

Monitoring and Evaluation & Research Opportunities & Data Collection

- What are the current indicators for maternal health being reported by the hospitals to the Ministry of Health or other?
- What other indicators would you like to track? What is the numerator and what is the denominator of the indicator and how can it be measured?
- Where are most data recorded? Are data available from a hand written register? Computerized systems? Other?
- Describe a health information system and the personnel and equipment that would allow you to accurately track maternal deaths and the case fatality rates (stratified by referral status), cases of severe post partum hemorrhage, ectopic pregnancy, hypertensive disease of pregnancy, eclampsia, preeclampsia and the case fatality rate for referrals in and those who were booked. Additional data would include APGAR scores, neonatal intensive care admission, early neonatal death/survival, and still births. What other indicators would be helpful to measure.
- What are the important Clinical/public health research questions?
- Does the Ministry of Education or other government agency or private group provide the OBGYYN professor time for teaching and provide time/resources/facilities and expertise for research? What could be changed to make this better?
- Describe what would be needed to create a supportive environment for research. What could the American partner offer to help build this?

Conclusions and Recommendations

- Summarize the goals of your partnership
- How many New OBGYNs could you train in 10 years given your current capacity.
- How many New OBGYNs could you train with enhanced capacity?

Conference Participants

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Frank Anderson, M.D., M.P.H. joined the University of Michigan, Department of Obstetrics & Gynecology faculty in 1999. He is currently a Clinical Associate Professor, with a joint appointment in the Health Behavior/Health Education department at the School of Public Health and the Medical School. Dr. Anderson is a generalist obstetrician/gynecologist and Director of Global Initiatives for the department. Partnering with universities and programs in less developed countries to decrease maternal mortality is a major goal of the initiative. In projects in Sub-Saharan Africa, his research focuses on both hospital and community-based interventions to improve maternal and neonatal health and to decrease mortality. A major theme dictating the partnerships is health research for development, ensuring that research programs answer local health problems and build local capacity while providing new knowledge that can be applied to other settings. Through a grant from the Bill and Melinda Gates Foundation, he is currently examining how principles of collaboration affect global health

projects. He teaches the Fundamentals of Reproductive Health course at the School of Public Health, and gives lectures across campus on issues related to maternal mortality, reproductive health and global health. His work also involves understanding maternal mortality in the state of Michigan. He sits on the Maternal Mortality Review Committee and the Michigan Maternal Accident Committee for the state of Michigan.

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Jack Ludmir, M.D. is Professor and Chair of Obstetrics and Gynecology at Pennsylvania Hospital, Vice Chair of Obstetrics and Gynecology at the Perelman School of Medicine of the University of Pennsylvania, and is currently the Past Chair of the Governing Council, Maternal and Child Health for the American Hospital Association. A graduate of Temple University School of Medicine, he completed his residency in Obstetrics and Gynecology and fellowship in Maternal-Fetal Medicine at the Hospital of the University of Pennsylvania. His interests in vulnerable populations extend to Latin America where he was coordinator for the Dominican Republic Section of ACOG, and is an evaluator of the standards and quality of maternity care in several Latin American countries. He has established formal relationships with several universities in Latin America and in Botswana to improve the care of women, including exchange programs involving residents and attending physicians.

Hillary Mabeya, Moi University School of Medicine, Kenya
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Dr. Hillary Mabeya is the Head of the Reproductive Health Department at Moi University School of Medicine and a consultant at the Division of Reproductive Health at the Moi Teaching and Referral Hospital. He completed his medical education at the University of Nairobi and followed that with time spent researching at the WHO and the University of Geneva. Afterwards, he completed a fellowship in HIV in Women at Brown University and is currently pursuing his PhD in medicine/HPV at the Ghent Universitair in Belgium. Dr. Mabeya is extensively involved in maternal care through obstetric fistula surgery and prevention through community-based intervention programs. He started the Gynocare

Fistula Centre, a humanitarian facility that has seen over 800 women suffering from fistulas and is involved in the rehabilitation of fistula patients through vocation training and income generating activities after surgery. Dr. Mabeya also has extensive experience in research and has been published numerous times.

Maureen Martin, University of Michigan, USA
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Ron Mataya, University of Malawi, Malawi
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Loeto Mazhani, Ministry of Education, Botswana
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Dr. Loete Mazhani is the Assistant Programme Director and Head of Pediatrics at the University of Botswana School of Medicine. She has 25 years of experience as a pediatrician in clinical, educational, and public health realms. Her previous role as Deputy Permanent Secretary and Director of Health Services for the Botswana Ministry of Health has given her a greater appreciation of public health issues and the intertwined relationship between maternal and child health. Neonatal mortality is now the single most important contributor to our child mortality. Collaboration between obstetrics and pediatrics is essential if we want to improve the situation.

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Irwin Merkatz, Albert Einstein College of Medicine, USA
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Dr. Irwin R. Merkatz is the Chella & Moise Professor and Chairman of the Department of Obstetrics & Gynecology and Women's Health at the Albert Einstein College of Medicine and the Montefiore Medical Center. Dr. Merkatz has dedicated his career to educating, motivating, and mentoring a new generation of Women's Health Care Providers

over the past three decades. During the past 13 years he has specifically focused on increasing the scope of our Departmental training efforts to include Family Planning and Global Women's Health, and has overseen the development of multiple projects in Family Planning in the US and in Sub-Saharan Africa. In these efforts, Dr. Merkatz has focused on training the next generation of global health care providers and addressing the unmet need for contraception and the unacceptably high maternal mortality and morbidity rates. Dr. Merkatz has demonstrated his dedication to this program most recently with the recruitment of two new faculty members in 2013 and 2014 with a specific interest in Global Women's Health. The introduction of the 1000+ Training Program to improve Women's Health in Sub-Saharan Africa is exciting and Dr. Merkatz is eager to undertake this new and timely challenge.

Ruth Merkatz, Albert Einstein College of Medicine, USA

Owen Montgomery, Drexel University, USA
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Dr. Montgomery is the Chairman for the Department of OBGYN at Drexel University College of Medicine and currently holds faculty appointments in the College of Medicine and the School of Nursing and Health Professionals. His areas of research and special interests include transdisciplinary and simulation based education, sexual assault prevention, medical and surgical care of menopausal women, and Global reduction in maternal mortality through simulation based surgical training of physicians and midwives. Dr. Montgomery has multiple publications and he is an invited lecturer and has presented locally, nationally and internationally. He is currently a member of the Executive Board for the American College of Obstetricians.

Emmanuel Morhe, KNUST, Ghana
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Simon Mueke, Ministry of Health, Kenya
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Dr. Mueke is currently the head of the Reproductive and Maternal Health Services Unit for the Ministry of Health of the Government of Kenya. Dr. Mueke is an experienced obstetrician/urological gynecologist and senior healthcare manager of 16 years and is currently working at policy formulation and coordination level at the Ministry in Nairobi, Kenya. He not only supports the delivery of reproductive and

maternal health services at county level but advises the Health Cabinet Secretary and Principal Secretaries on matters regarding Technical Evaluation of Medical Equipment and Plants, Blood Transfusion Services, Emerging Practices and New Technologies, to mention but a few. Dr Mueke represents the Director of Medical Services and the Ministry of Health in several other functions. He has therefore been nominated to participate in this Academic Partnership for Reducing Maternal Morbidity and Mortality. He is a reformist and fully supports the effort.

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Violet Opata Nabwire, Moi University, Kenya
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Opata Violet Nabwire is a Senior Lecturer in the Department of Curriculum, Instruction and Educational Media, School of Education, Moi University. She is a teacher educator in the area of Educational Media and Technology. She has taught, conducted research, and served as Postgraduate Coordinator, as well as coordinated collaboration programme at the University. She is currently the Associate Dean of the School of Education at Moi University. She holds a Doctor of Philosophy (PhD), a Master of Philosophy (MPhil), degrees in Educational Communication and Technology of Moi University, and a Bachelor of Education (Arts) degree from Kenyatta University, Kenya. Her academic interests are teacher education, curriculum development and implementation issues, educational media and technology HIV/AIDS, and youth and gender issues. She has authored several journal articles and book chapters in Education and is the author of *Fighting HIV/AIDS pandemic through Education: A Reflection of HIV/AIDS Education Programme in Kenya*.

Rachel Nardos, Oregon Health and Sciences University, USA
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Dr. Nardos is an assistant professor at Oregon Health and Sciences University and a staff urogynecologist at Kaiser Permanente in Portland, Oregon. She was born in Addis Ababa, Ethiopia, and completed her medical education at Yale University after finishing her undergraduate education at Franklin and Marshall College. She then completed her residency at Washington University in St. Louis, after which she worked as a staff surgeon for a year at Hamlin Fistula Hospital in Ethiopia. She returned for her fellowship in Female Pelvic Medicine and Reconstructive Pelvic Surgery at OHSU, during which she continued to collaborate with Hamlin Fistula Hospital on research projects, resulting in the publication of three scientific papers on the topic of obstetric fistula. She also started the project entitled “Footsteps to Healing,” a global women's health partnership that send surgeons, nurses, and anesthesiologists from OHSU and partner hospitals to Gimbie Adventist Hospital in rural west Ethiopia to perform pelvic organ prolapse surgery. She is currently working on a project to expand the Footsteps to Healing project to creating a multidisciplinary partnership with Mekelle University in northern Ethiopia along with collaboration with Washington University.

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Joseph Ngonzi, Mbarara University, Uganda
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Mansour Niang, Cheikh Anta Diop School of Medicine, Senegal
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Dr. Mansour Niang is an obstetrician gynecologist and a clinical instructor at Cheikh Anta Diop School of Medicine in Dakar, Senegal. He is also a captain in the Senegalese Army. Dr. Niang's main duties include OBGYN resident education and supervision at Hospital Militaire de Ouakam and other medical school affiliated hospitals.

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Kobina Nkyekyer, University of Ghana Medical School, Ghana College of Physicians and Surgeons, Ghana
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Prof. Kobinah Nkyekyer is an associate professor in the department of Obstetrics and Gynecology of the University of Ghana Medical School, Accra. He is the chairman of the faculty of Obstetrics and Gynecology of the Ghana College of Physicians and Surgeons.

Samuel Obed, University of Ghana Medical School, Ghana
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Professor Samuel A. Obed, MB, ChB, FWACS, FGCPS, is currently the head of department of Obstetrics & Gynecology at the University of Ghana Medical School and consultant obstetrician-gynecologist to the Korle Bu Teaching Hospital Accra Ghana. His research interest include Infertility & Reproductive Endocrinology, Ectopic Pregnancy and, Hypertensive Disorders in Pregnancy. He has published 38 peer-reviewed articles in medical journals, 9 chapters in postgraduate textbooks in obstetrics & gynecology, several abstracts in international conferences and a number of educational material on maternal care and adolescent gynecology for the lay public.

Robert Odok Oceng, Ministry of Education, Uganda
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Mr. Robert Oceng is the Commissioner of Higher Education and Training in the Ugandan Ministry of Education. He has a Masters of Arts in Educational Management, and a Bachelors and Diploma in Education. His previous job experience includes the Head of the Department of Higher Education, a member of the Council of Universities in Uganda, and a participant in the Joint Permanent Commission between Uganda and friends countries on education issues. Mr. Oceng is currently pursuing his PhD in Management and Administration in Higher Education.

Henry Opare-Addo, Chair, OBGYN Department, KNUST, Ghana
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Samuel Antwi Oppong, University of Ghana Medical School/Korle-Bu Teaching Hospital, Ghana
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Dr. Samuel Antwi Oppong is a lecturer at the University of Ghana Medical School and a consultant Obstetrician and Gynecologist at the Korle-Bu Teaching Hospital with over ten years of clinical experience, having worked in both the Central and Eastern regions of Ghana in the past. His areas of interests are in high-risk pregnancy – particularly sickle cell disease in pregnancy, cardiovascular diseases in pregnancy as well as gynecologic oncology. He has participated in a number of research projects development and execution. Currently, he is the director of the Sickle Cell Disease in Pregnancy clinic, co-director of the Perinatal Assessment Centre (PAC) at the Korle-Bu Teaching Hospital and P-I of the MOPOS study and Co-Investigator in the study of HPV genotypes in HIV positive patients on anti-retrovirals in Ghana. He is practicing colposcopies and does a lot of public education and advocacy work on cervical cancers prevention. Dr. Oppong is the training coordinator for the department of Obstetrics and Gynecology of the Korle-Bu Teaching Hospital. He is a fellow of the West African College of Surgeons, member of SOGOG and GMA.

Bert Peterson, University of North Carolina, USA
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Herbert B. Peterson, MD is the William R. Kenan, Jr. Distinguished Professor and Chair, Department of Maternal and Child Health and Professor, Department of Obstetrics and Gynecology at the University of North Carolina (UNC) Gillings School of Global Public Health and School of Medicine, respectively. He is also Director of the World Health Organization Collaborating Centre for Research Evidence for Sexual and Reproductive Health based In the Department of Maternal and Child Health at UNC. Certified by both the American Board of Obstetrics and Gynecology and the American Board of Preventive Medicine, Dr. Peterson served for 20 years at the CDC, where he was Chief of the Epidemiologic Studies Branch and the first Chief of the Women's Health and Fertility Branch of the Division of Reproductive Health. In 1999, he was assigned by CDC to the World Health Organization (WHO) in Geneva, Switzerland where he served until coming to UNC in 2004. Dr. Peterson's major research interests are at the interface of clinical medicine and public health and have focused on reproductive health. His focus in this regard has been assuring that policies, programs and practices in reproductive health are based on the best available science with an emphasis on the value of interdisciplinary approaches, including implementation science. In 2004, he was awarded the American College of Obstetricians and Gynecologists Distinguished Service Award. In 2010, he received the Allan Rosenfield Award for

Lifetime Contributions to International Family Planning by the Society of Family Planning and was awarded Honorary Fellowship in the Faculty of Sexual and Reproductive Healthcare of the Royal College of Obstetricians and Gynecologists.

Susan Raine, Baylor College of Medicine, USA
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Dr. Susan Raine is currently an Associate Professor at Baylor College of Medicine in the Department of Obstetrics and Gynecology and the Center for Medical Ethics and Health Policy. Dr. Raine also serves at the Vice Chairman for Global Health Initiatives and Residency Program Director in the Department of Obstetrics and Gynecology. Before receiving her MD from the Baylor College of Medicine, Dr. Raine completed her Juris Doctor (JD) degree at the University of Texas School of Law. She completed her OBGYN residency at the Baylor College of Medicine and joined the Baylor faculty thereafter, completing additional Master's degrees in Health Law and Education as a faculty member. Dr. Raine's professional interests span the full spectrum of medical education from medical student teaching, to resident and fellow training, and finally faculty development. Dr. Raine also currently directs the global activities of the Department of Obstetrics and Gynecology, with programs in Malawi, Liberia, China, and Papua New Guinea. She spends approximately 50% of her time traveling globally and administering the Departmental programs. In addition, Dr. Raine is active in women's health care advocacy, most recently serving as the District XI McCain Fellow in Washington, D.C.

Doreen Ramogola-Masire, University of Botswana School of Medicine, Botswana
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Dr. Doreen Ramogola-Masire graduated with honors from the School of Medicine of the University of Nottingham in the United Kingdom. She then continued her training in Obstetrics and Gynecology first in the United Kingdom and then in the Republic of South Africa at the University of Cape Town, where she also pursued subspecialties in Perinatal Medicine and Cervical Cancer Prevention. She has a joint appointment at the University of Botswana and University of Pennsylvania. Her interest in point of care screening modalities are suited to low resource settings, and she has extensive experience establishing and managing cervical cancer screening programs in Southern Africa. Since 2007, Dr. Ramogola-Masire has led the

Women's Health Initiative of the Botswana-UPenn Partnership (BUP- a collaboration between Botswana government and universities of Botswana and Pennsylvania), through which she is supporting the government of Botswana to scale up cervical cancer prevention around the country as the lead country expert. Her training in Perinatal Medicine has made her a key participant in issues of HIV infected pregnant women. She co-directed the first PMTCT clinic in the Western Cape, South Africa, and has been involved in the Botswana national HIV guidelines, and serves in the national HIV Specialist Panel. She was appointed the country director of BUP in 2009, supervising more than 100 faculty and staff in Botswana, and interacts extensively with senior personnel at the MOH, University of Botswana, CDC-Botswana, US Embassy and other developmental agencies in country in all matters relating to health. Her outstanding interpersonal skills, training, and great understanding of the local and regional needs have turned her into a national and international leader in Women's Health.

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Lise Rehwaldt, MD is an Assistant Professor at the Icahn School of Medicine at Mount Sinai in New York, New York. Her entire professional career has centered around innovative Resident education and Global Health. She has held leadership roles on a Departmental level as Chair at Queens Hospital Center, a NYC HHC Hospital for 7 years. She has been a Residency Program Director for 10 years of her career, most recently at Mount Sinai, where she herself trained. In her role as Residency Program Director, Global Health was formally integrated into the PGY-3 Resident Block schedule. Over the past 10 years, she has lead and participated in over 40 Global Health Surgical Missions, most all with resident involvement with a focus on local capacity building, in Niger, Nicaragua, Jamaica, Tanzania, Honduras and Liberia. Lise was involved in the initial Mount Sinai mission to Liberia in 2008 and this past January will mark her 15th time in the country that holds her heart. She is thrilled to be an integral part of the Mount Sinai/Liberia Academic partnership with her dear friend and Liberian colleague, Dr. John Mulbah, as collaboratively with others, we join to initiate the first Ob/Gyn Residency Program in Liberia. The program was officially launched on September 30th and formal clinical rotations

are scheduled to start this April. Having said for some time, Liberia feels where her home is, this will become a reality this April. She is grateful for all and thrilled to be here in Ghana with so many kindred spirits.

Lauri Romanzi, New York University, USA
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Currently engaged in academic program launch for Female Pelvic Medicine and Reconstructive Surgery for Rwanda through the Human Resources for Health initiative, Lauri Romanzi is Visiting Associate Professor of Ob/Gyn at Yale University School of Medicine, and Clinical Associate Professor of Urology and Ob/Gyn at NYU Langone Medical Center. Lauri co-chairs the Ghana Project of the International Urogynecologic Association that functions in an on-site advisory capacity to Africa's first Urogynecology Fellowship Program founded by Prof Anyatei Lassey of the Ghana College of Physicians and Surgeons. Lauri has also served with Harvard Humanitarian Initiative, Fistula Foundation, EngenderHealth, USAID, Mercy Ships, UNFPA and other international humanitarian organizations as project consultant and in-country conduct of local and regional needs assessments, capacity building and training programs for fistula, incontinence, pelvic organ prolapse and complications of female circumcision in Niger, Democratic Republic of Congo, Senegal, Somaliland, Togo, Guinea, Nepal, Rwanda, Afghanistan and Pakistan.

Sarah Rominski, University of Michigan, USA
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Sarah Rominski, MPH, is a senior research associate at Global REACH, the international initiative at the University of Michigan Medical School. Since receiving her Master's in Public Health in 2007, she has been working on global health projects in Ghana, Ethiopia and Liberia. Her research focuses on medical education, human resources for health, emergency medicine, maternal health, family planning and child survival. Ms. Rominski is currently a doctoral candidate in the School of Public Health at the University of Michigan and her dissertation research is focusing on access to safe abortion services in Kumasi, Ghana.

Stephen Rulisa, University of Rwanda, School of Medicine, Rwanda
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Dr. Stephen Rulisa is a Senior lecturer at University of Rwanda, School

of Medicine and Head of Department of Obstetrics & Gynecology which involves, among others, teaching, clinical care and running undergraduate and residency programs. Dr. Rulisa also heads the Clinical Research Department at University Teaching Hospital of Kigali, the biggest Hospital in the country, which involves research policy, training and management. He is the Secretary General, Rwanda Society of Obstetrics & Gynecology (RSOG). He was the former President of Rwanda Medical Association (2009-2011). He is a member of university research council and other committees on education and training. His research interest is in reproductive health with special focus on improving pregnancy outcome.

Hamid Rushwan, International Federation of Gynecology and Obstetrics (FIGO), Sudan
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Dr. Rushwan is currently the Chief Executive of FIGO. He obtained his medical degree and degree of Doctor of Medicine in Obstetrics and Gynecology from University of Khartoum, Sudan. He was a UK Postgraduate scholar, Fellow of UK's Royal College of Obstetricians and Gynecologists, and Honorary Fellow of the American College of Obstetricians and Gynecologists (ACOG). In Sudan, Dr. Rushwan contributed significantly to promotion of undergraduate and postgraduate education in Obstetrics and Gynecology. He was the previous Chairman of International Council on Management of Population Programmes (ICOMP) and International Federation of Family Health (IFFH). He was also the founding member of the International Association for Maternal and Neonatal Health (IAMANEH). Dr. Rushwan has also been a significant contributor towards women's health globally as adviser to WHO and UNFPA.

John J. Sciarra, Northwestern University, USA
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John J. Sciarra, MD, PhD is Professor and Chair Emeritus of the Department of Obstetrics and Gynecology at Northwestern University Medical School. In relation to international activities, Dr. Sciarra served as the president of the International Federation of Gynecology and Obstetrics (FIGO) and is editor emeritus of the International Journal of Gynecology and Obstetrics. At the World Health Organization (WHO), he served as Chair of the scientific and ethical review committee of the special program for research, education and research training in human reproduction. Dr. Sciarra is the Editor-in-Chief of the *Global Library of*

Women's Medicine, that provides open-access educational information for physicians in over 170 countries.

Joseph Seffah, University of Ghana Medical School, Ghana
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Dr. Seffah is a Lecturer at the University of Ghana Medical School, a position he has held since 1997, and is the Secretary OBGYN for WACS. He completed his medical education at the University of Ghana Medical School, his postgraduate training at the Korle Bu Teaching Hospital, and a 1999 Certificate course in Reproductive Medicine and Reproductive Biology at the University of Geneva. His previous foreign attachments include time at the Galilee International Management Course in 2012, the University of Michigan in 2012, the OBGYN Department at the Johns Hopkins University in 1993, and at Glostrup Hospital in Denmark. His special interests in medicine include maternal fetal medicine, OBGYN ultrasonography, women's health, and general gynecology.

Kofi Seffah, Korle-Bu Teaching Hospital, Ghana
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Kofi Seffah is an intern at the Korle-Bu Teaching Hospital and completed his medical education in December 2012. He has spent two years at the University of Michigan as part of an exchange program between the University of Ghana and the University of Michigan, where he learned numerous state of the art medical advancements. His primary interests are in post-natal depression and psychosis and in mental health issues concerning women in general.

Marla Small, Duke University, USA
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Kate Somers, The Bill and Melinda Gates Foundation, USA
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Kate Somers is a Program Officer with the Maternal, Neonatal and Child Health team at the Bill & Melinda Gates Foundation. Kate started her career in public health more than 20 years ago as a Peace Corps Volunteer in Paraguay, South America. After leaving Paraguay, she earned her Master in Public Health in Health Policy and Administration from the University of North Carolina at Chapel Hill. As part of her MPH program, Kate took on another Peace Corps assignment for the Ministry of Health on the island nation Dominica

in the Eastern Caribbean. While in Dominica, Kate worked on dengue fever campaigns as well as HIV and AIDS education. After completing her MPH in 1997, Kate joined the campaigns as well as HIV and AIDS education. After completing her MPH in 1997, Kate joined the Centers for Disease Control and Prevention where she was a Project Officer in HIV and AIDS with a focus on adolescents and youth. In 2000, Kate worked for The California Endowment and soon after earned her law degree. She returned to her native North Carolina in 2004 and worked as a lawyer for a year before joining IntraHealth International where she worked in program design and development for five years. Kate has worked for the Bill & Melinda Gates Foundation since 2010 and her portfolio includes grants that focus on health policy, measurement, and service delivery. In her free time, Kate enjoys fundraising to build schools overseas, playing softball, and building LEGOs with her son Teo.

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Samrawit Tassew, Ministry of Health, Ethiopia
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Bellington Vwalika, University of Zambia, Zambia
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Dr. Vwalika is a Zambian obstetrician-gynecologist and epidemiologist with vast professional development and diversity. He is also an administrator, researcher, external consultant, seasoned course instructor, and examiner. He heads, plans, directs, and coordinates obstetric and gynecological services at a tertiary hospital in Lusaka, Zambia and University of Zambia. He has done curriculum development for undergraduate and postgraduate obstetrics and gynecology students at this University. He is an external examiner for medical institutions and does external consultancy works. He is a national training emergency obstetrics and newborn care (EMONC) for Zambia. He previously effectively supervised the Zambia National Health Accounts and participated in the creation of a basic healthcare package for the Zambia Health Systems. He conducted a human resources productivity improvement study with Health Systems 20/20 in collaboration with the Health Services and Systems Program (HSSP) and the Zambian Ministry of Health (MoH). Therefore, he implemented a demonstration project that assessed the effectiveness of a

participatory productivity improvement process in Zambia. He is a member of the University of Zambia Research and Ethics Committee, a Chairperson of the Undergraduate Research and Ethics Committee, and is actively involved in the review research protocols to be conducted in Zambia. He has been running the medical licentiate program for clinical officers at Chainama College of Health Sciences, Lusaka since 2001. This training has enabled task shifting of the duties of district medical officers to clinical officers in Zambia.

Lewis Wall, Washington University, USA
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Sierra Washington, Albert Einstein College of Medicine, USA
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Dr. Sierra Washington is an Assistant Professor of OBGYN at Albert Einstein College of Medicine. She graduated from Harvard Medical School. She then obtained a Masters of Science in Public Health for Developing Countries from The London School of Hygiene and Tropical Medicine. She completed her residency in Obstetrics and Gynecology and Women's Health at the University of San Francisco. Dr. Washington began working in Africa in 2001. She has extensive experience working in HIV and Reproductive Health in Zambia, Cameroon, and Kenya. In 2009 she joined Indiana University School of Medicine as the Director of International Programs for the department of OBGYN. She held a joint appointment with AMPATH-USAID Kenya at the O-Field Director for Reproductive Health. While in Kenya, she developed and directed the Global health Track for OBGYN residents in Indiana, and Co-Directed programs in Prevention of Mother to Child Transmission of HIV, Cervical Cancer Screening, and Family Planning. Dr. Washington joined Montefiore and the Albert Einstein College of Medicine in the Department of OBGYN in the division of Family Planning and Global Health in 2012. Most recently Dr. Washington has been working on behalf of Albert Einstein for the Rwandan Human Resources for Health (HRH) program as a specialist in Obstetrics and Gynecology. While in Rwanda, Dr. Washington has focused her teaching efforts on Family Planning and Gynecologic Surgical Technique.

Alan Waxman, University of New Mexico, USA
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Dr. Waxman is a Professor of Obstetrics and Gynecology at the University of New Mexico School of Medicine. He joined the faculty

of UNM in 2000 after completing a 24-year career in the U.S. Public Health Service. Dr. Waxman's principle area of interest since 1991 has been cervical cancer screening and prevention. He is the immediate past president of the American Society for Colposcopy and Cervical Pathology (ASCCP). He is nationally recognized as a teacher of colposcopy. He has lectured nationally and internationally on cervical cancer screening and human papillomavirus and colposcopy. He has served on national and regional medical advisory boards of the National Breast and Cervical Cancer Early Detection Program. He has been course director and/or on the faculty of postgraduate courses on colposcopy and cervical cancer screening produced by the American College of Obstetricians and Gynecologists (ACOG) and the American Society for Colposcopy and Cervical Pathology (ASCCP). He continues to direct the U.S. Indian Health Service's Colposcopy Training Program. He has served on the board of directors of ASCCP intermittently since 1996 and was the Society's president 2012-2013. He helped establish the Society's curriculum for colposcopy education and helped develop its Colposcopy Mentorship Program for advanced practice nurses and physicians. He co-chairs ASCCP's Committee on International Education and Humanitarian Outreach and in that capacity has directed colposcopy education programs in numerous developing countries with high rates of cervical cancer. He has authored numerous articles and book chapters on colposcopy, cervical cancer screening, colposcopy education, and related subjects.

Jeff Wilkinson, University of North Carolina, USA
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Jeff Wilkinson is an uro-gynecologist from the University of North Carolina Chapel Hill who has lived in Malawi since 2011. He graduated from the Johns Hopkins School of Medicine in 1993 and completed residency and fellowship at the University of North Carolina in 1997 and 1999 respectively. He is the medical and surgical director of the Freedom from Fistula Foundation Fistula Care Center in Lilongwe. Other interests include training in EmONC and novel use of quadcopters in surveillance of maternity construction in Malawi. He's looking forward to catching up with some really great colleagues at the 1000+ ObGyn meeting.

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Zenebe Wolde, Hawassa College of Medicine, Ethiopia
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Diana Wolfe, Albert Einstein College of Medicine, USA
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Dr. Diana S Wolfe is an Assistant Professor in the Department of Obstetrics & Gynecology and Women's Health, Division of Maternal Fetal Medicine. Dr. Wolfe's work in global health began locally when she volunteered as a bilingual pregnancy counselor in Escondido, California. She then started working in Africa in 1998 where she served as a Peace Corps Volunteer in Mali, West Africa. She was part of the national Maternal and Child Health Program. She worked as health educator in a remote village, Karangasso, located in the Sikasso region, with a birth assistant to develop health education for 7 local villages on subjects such as infant nutrition, prenatal care, family planning, and developing community health committees for each village. She also initiated a birth assistant training program with the head nurse of the nearest local health center that included training subjects such as management of postpartum hemorrhage, contraception, and first steps in obstetric emergencies. During medical school, Dr. Wolfe worked on "The Assessment of the Knowledge of Women's Health," a project that initiated with the Bedoin community of Israel. She implemented the same pre and post-training test to the 7 Malian villages where she served in the Peace Corps as well as to several villages in the Peruvian Amazon. Her most recent work in Africa was in Butare (Huye), Rwanda, serving as MFM subspecialist in the Human Resources for Health (HRH) program, directed by the Clinton Health Access Initiative (CHAI) and the Ministry of Health (MOH) of Rwanda. Dr. Wolfe was the first MFM subspecialist and faculty member from Einstein to commence HRH at CHUB, Butare, Rwanda.

Blair Wylie, Harvard University/Massachusetts General Hospital, USA
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Blair Wylie, MD MPH, is part of the maternal-fetal medicine faculty of the Vincent Department of Obstetrics and Gynecology at Mass General Hospital where she co-directs the Program in Global Health. She is an Assistant Professor of Obstetrics and Gynecology at Harvard Medical School and a Visiting Scientist at the Harvard School of Public Health. She currently chairs the Global Health Committee of the Society for Maternal-Fetal Medicine. She combines her clinical work

with research that focuses upon the dangers of smoke emitted from cooking fires upon pregnant women and their babies.

Gabriel Yao-Kumah Ganyagio, Ghana College of Physicians and Surgeons, Ghana
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Dr. Ganyagio is the charter fellow of Ghana College of Physicians & Surgeons Female Pelvic Medicine and Reconstructive Surgery (FPMRS) training program, the first FPMRS training program in Africa. Gabriel graduated from the University of Ghana Medical School, in addition to certification in health management and public administration from the Ghana Institute of Management and Public Administration. Research interests include maternal death audit, infectious diseases in pregnancy and female pelvic floor disorders epidemiology, evaluation and management optimization in low resource settings. A national breastfeeding advocate, Dr. Ganyagio also serves as volunteer surgeon for fistula and general gynecologic care in the Korle Bu Hospital medical and surgical outreach system that operates in healthcare-deprived areas of Ghana. Dr. Ganyagio also serves as assistant medical director of Christian Missions Resources Foundation (CMRF) Ghana.

Megan Zsemlye, University of New Mexico, USA
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Megan Zsemlye is an Associate Professor and Residency Program Director at the University of New Mexico. She has worked internationally for Medicins Sans Frontieres (Doctors Without Borders), the International Medical Corps and several other organizations. Her areas of interest include cervical cancer screening and prevention, medical education and complementary and alternative health care.

Partnership Worksheets

Certification Worksheet Responses

- A. Group Reporting on Country Proposals and Next Steps
- B. Final Thoughts from Teams
- C. Breakout Sessions: Thematic Group Comparison of Plans
 - a. African OBGYNs
 - b. American OBGYNs
 - c. Professional Societies
- D. Conclusion and Next Steps
 - a. Appendices
 - b. Conference Presentations
 - c. Participant Reaction Worksheets
 - d. Critical Components from Country Worksheets

Section 1: Authentic Partnerships

- A. Given the issues described in the plenary presentations, the discussion, and the Elmina Declaration, what are the key aspects of your partnership that need to be discussed?
 - Challenge / Need to develop more faculty; important to many, not only for clinical work, but also for training the next generation of OBGYNs.
 - o Need to improve incentives and infrastructure to draw people to the field
 - o Also need to further develop mentorship & research processes
 - Developing & Standardizing curricula (both w/in and between countries)
 - o Medical education
 - o Residency
 - o Fellowships
 - o Subspecialty development
 - Developing & Evaluating the current state of the partnership
 - o One country noted the equilibrium of residency exchange program with Michigan has shifted with more Michigan residents coming than domestic residents going.
 - Transparency of processes
 - Funding
 - o Equipment

Critical Components in Building Capacity

- Residency programs
 - Research
 - Others
 - Supply of equipment
 - Other issues
 - Increasing access to healthcare
 - Increasing political support for OBGYN
- B. How will decisions be made in the partnership?
Many responses emphasized that decisions should be made by consensus, according to MOU, but noted the different levels of decisions to be considered (i.e., policy, clinical, etc.) and differentiated between these.
- C. What major opportunities are there?
- Improving maternal health outcomes
 - Improving healthcare infrastructure in general & other related systems
 - Further development of OBGYN field
 - Developing more OBGYNs
 - Developing research infrastructure
 - Bilateral exchange that serves both organizations
 - Fistula repair experience for American OBGYNs
 - Use OBGYN partnership to develop a model for other training programs in country
 - Developing partnerships between African training institutions
- D. What major barriers for both partners will make working together difficult?
- Funding
 - IT Capabilities
 - Curriculum Development
 - Communication
 - Language, Time Zones
 - Lack of central coordination
 - Differing institutional protocols for research, faculty & resident expectations
 - Differing standards of care
 - Potential inequitable exchange between partners
 - Need for transparency

- E. Describe what you will do to communicate effectively. How will you avoid the typical problems of communication between partners?
- Promise to respond quickly
 - Keeping people in the loop - “liberal use of the cc function”
 - Designated leader
 - Regular in-person visits and meetings
 - Setting written guidelines about communications
 - Transparency is important
 - Scheduled regular communications on certain topics
- F. Effective partnerships require clear understandings of the roles to be played by each partner. Keeping in mind that roles also need to be flexible, describe the role of:
- The American partner:
- To identify faculty willing to participate
 - To identify funding sources
 - Curriculum Development
 - Research support
 - Help with equipment acquisition
 - Provide hosted visits for partnership colleagues
 - Promote collaboration
 - Technical Support
 - o Support with simulation activities and instruction
 - o Help develop teams to maintain equipment
 - o Online access (library materials, journals, etc.)
 - Opportunities for adjunct appointment of African partners
 - Provide expertise in policymaking
- The African Partner:
- Coordinate collaboration between countries & institutions
 - Coordinate funding and resources
 - Identify specific needs of departments
 - Ensuring plans/projects aligns with local and national needs
 - Communicating with leadership in the university
 - Curriculum development
 - Create space for training
 - Establish guidelines for educational and clinical responsibilities
 - Data collection for clinical data

- G. Describe a process that would enable both inter-country (American-African) and in-country partnerships (for example, Ministries-Universities) to train and deploy new OBGYNs and translate knowledge into practice at the hospital, district, and community levels.

Responses to this varied, but most emphasized the need to deploy OBGYNs in rural areas through either mandated service or improving incentives.

Section 2: Partner Roles and Contributions

- A. What are the expected inputs from the American partner? How much faculty time can be committed to the partnership, both funded and unfunded?
- Visiting faculty time & shared expertise; reciprocal visits
 - Skills transfer
 - Access to online materials
 - IT infrastructure
 - Research contribution & exchange between partners
 - Some other issues also mentioned that have been raised elsewhere in the document.

- B. Has an MoU been developed and/or signed? What are the next steps for your partnership in terms of an MoU or MoA?

Responses to these varied as MOUs/MOAs were in various stages of development/signing/implementation. As such, responses were mostly unique to the country, particularly for the next steps.

- C. What are the expected inputs from the African partner? The university? The department? The government?
- Faculty appointments
 - Faculty commitment & engagement
 - Medical students & residents
 - Teaching & Research opportunities
 - Funding
- D. What are the sustainability issues for the university-based OBGYN training program? Describe the issues and suggest how they may be overcome.
- Funding
 - Government support

- Developing faculty and instructors
- Retention
- Clear roles by partners
- Transparency
- Research infrastructure

Section 3: Infrastructure

- A. Given the needs assessment results and the discussions from the infrastructure plenary session, what additional information did you learn about the basic infrastructure needs to create/expand an obstetrics and gynecology department at the African institutions? List/describe all essential components.

The common themes that arose from this section include:

- IT Issues: IT infrastructure, quality internet connection, and online access to things like academic journals and current textbooks, including subspecialty textbooks.
- Physical infrastructure: New buildings or improvements to existing buildings. Specific examples include libraries, PHC hospitals, housing for trainees, and satellite care centers.
- Technological infrastructure: Many listed the need for more ultrasound machines, hysteroscopy, colposcopy, and things of this nature, as well as the training necessary to use these. At least one country noted telemedicine infrastructure as well.
- Basic supplies: Things like OR & ER supplies were mentioned a few times, as were teaching supplies, medical records and data collection.

- B. Given the information in the infrastructure plenary session, what is required from an American institution that seeks to partner with an African OBGYN department? Brainstorm and record. What could be provided, given current resources, that would require new resources?

Though these responses were more unique per country than the first question, there was still noticeable overlap between the responses to the two questions. These include:

- Basic supplies: Potential connections w/US supplies for donated or reduced price disposable goods.
- Collaboration / IT: A few countries noted the commitment of US institutions through funding, faculty interest & time. More specifically, lending expertise through teleconferencing/

Critical Components in Building Capacity

teleconsultation, facilitating research collaboration, and grant writing.

- Technological infrastructure: Equipment to be used for training purposes.
- Educational: Conferences & training, subspecialty training, assistance w/ technological & skills transfer.

- C. What agencies of the African government/university would be involved in infrastructure building and what would be their role? What governmental resources are available to build OBGYN departments, and what would external support provide?

The countries responded almost universally with two agencies (though others were included to varying degrees) – the Ministry of Health and the Ministry of Education. Other agencies listed frequently included universities and medical organizations (either general physicians or OBGYN associations). Some further organizations included the Ministry of Finance as well as some less obvious choices – such as environmental agencies or the International Atomic Agency that provided funding to the cancer hospital.

The responses to the role of these agencies and the second question were less consistent and appeared to be much more country specific.

- D. What (non-clinical) technologies are needed at your institution to either establish or strengthen the African OBGYN department?

These responses overlapped with the first two questions of this section again. Themes include:

- IT Issues: High speed internet & access to associated things like video conferencing, journal/textbook access, etc. Additionally, electronic medical records were brought up by numerous respondents.
- Training equipment, including simulation centers.
- While not as common, more basic supplies such as running water, electricity, and OR lights were also raised.

- E. Describe the current clinical capacity at the African hospitals in terms of the number of OBGYNs, nurse midwives, clinical spaces and clinical equipment and anything else. Describe capacity/needs in Obstetrics–

General, and High Risk Obstetrics, Gynecology, Gynecological Oncology, Reproductive Endocrinology, Family Planning, Other.

The number of OBGYNs was consistently noted to be low overall, often substantially lower than the estimated need. Midwives were also noted to be lower than needed, and a few countries also highlighted substandard numbers of other positions like community health workers and trained birth attendants. Regarding specialty care, that was commonly noted to be low though it had less emphasis than the overall number of OBGYNs (the slightly lower emphasis on the lack of specialists and subspecialists may have been due to the assumed lack of these, given the lack of general OBGYNs). The most common specialty need appears to be Gyn ONC.

Clinic space was also noted to be far below the necessary capacity. Some noted the potential for renovation of existing facilities, but more common was a basic need for clinical facilities as the existing (or not) are not sufficient to the population's needs.

- F. From the American partner, what resources are you are to share at the department level, medical school level, university level, and other levels (faculty time, electronic resources, CME, Grand Rounds)?

These responses raised similar topics to earlier questions, particularly IT/educational issues such as e-journals, online grand rounds, and other educational tools for CME.

- G. What is the proposed personnel infrastructure for this department, both faculty and staff? Describe the ideal department. How can you fill the gaps now and how can you fill them in the future?

The responses to this question were largely unique, as the respondents took different approaches to answering the question. These included very specific responses of their department's number of doctors for each type of specialty/subspecialty, breaking down the administration branch and including faculty as one general component of that, or more general responses that included relative sizes of different roles to each other.

- H. What can the American partner contribute (funded or unfunded) in terms of faculty time, internet resources, and sharing other electronic or printed resources?

Many responded to this question by either referring to previous responses or leaving it blank entirely.

Section 4: Curriculum Development

- A. What are the current OBGYN curriculum needs at your institution?

These responses varied significantly by country, displaying a significant range including that there was not currently a curriculum in the country, that funding is needed to revise the current curriculum, or that a country has minimal need for its OBGYN curriculum. Additionally, multiple countries noted that their curricula had different needs according to region. Those countries that listed specific needs included training on such things as ectopic pregnancy, tubal ligations, fistula, and fibroids.

- B. How many months is your current residency or specialist curriculum? How much time must be spent in each rotation?

The most common of length appeared to be ~4 years for residency, with most variability being between 3-5 years overall, though at least one country lacked a residency program.

Rotation length varied between countries but also within them. Most rotations appeared to fall within a window of two to four months, with some as short as one month and others as long as six months. A few also noted the amount of vacation time residents had per year, though many left this component out.

- C. What rotations are included? What rotations would be useful/expected?

These responses varied substantially, with a couple countries providing very detailed listings of their rotations, some providing much smaller lists, and some not listing any, and the same can be applied to useful/expected rotations. That being said, the potentially useful rotations listed included: GYN ONC, OBGYN research, tropical obstetrics, and community/rural medicine.

- D. What is the resident training schedule? What are the requirements for graduation?

The responses to these questions approached from a few different perspectives that make it difficult to draw any themes from them, such as hours/week, total years, number and timing of new classes, or curriculum contents. Graduation requirements were fairly general including written/oral exams being most commonly listed, and research work being frequently listed as well.

- E. How are residents assessed?

These responses largely focused on the annual assessment of residents, which almost universally included written exams, written evaluations by faculty, and review of resident logbooks. A couple countries had more frequent evaluations (six months or quarterly) or included more details of what's involved in the evaluation.

- F. Describe the amount of contact time between residents and faculty.

Lecture time per week ranged from 2-20 hours, with most of those likely in the lower half of that. Many others responded that they had daily lectures, but didn't specify the amount of time spent in daily lectures.

Rounding time varied. Approximately one-third said about two sessions per week, one-third said daily, and another third did not specify. One respondent noted unstructured rounding time that had room for improvement.

Mentorship time varied most, with few reporting specific time spent on this. Many noted the ways mentorship occurs on a daily basis through routine interaction, though a couple also noted designated time with mentors specifically for that purpose.

- G. What is needed in terms of contact time between residents and faculty?

There appear to be two primary themes to this question. One is a need to increase the number of faculty. The second is to have dedicated time for mentoring.

- H. Is there an accreditation board for this residency?

Nearly all the respondents stated there was an accreditation board for the residency, with WACS having a plurality. Others included were Ministries of Education, Ministries of Health, and others.

- I. Is there a role for regular program inspections?

These answers varied. A few countries have regular inspections now, a few did not have any but aimed to in the future, and others either didn't have any or didn't answer.

- J. What inputs and information could come from your American partner to help solve these problems?

The most common response to this centered on the role of an external partner that could force institutions to upgrade their standards, specifically noting the role of externalization of inspection, external accreditation, and external examiners.

Section 5: Faculty Development

- A. What are the African faculty needs in terms of clinical education and how could a partnership help fill the gaps? What could be the role of the professional organizations and international organizations?

These responses emphasize some of the points made in previous sections. Electronic resources were commonly noted, including things such as access to up-to-date clinical resources. Membership in professional organizations was viewed as important for other career development opportunities such as attending conferences, technical supervision, research mentorship, and adapting curricula for local needs, among others.

- B. What are the faculty needs in terms of research mentoring?

Many noted the need to further develop specific research skills that could occur through mentorship, partnership, co-authorship, or other means. The main skills listed were research design, statistics, ethics, and writing (applied to both grants and research papers). One or two respondents noted their lack of support on these (such as having dedicated statisticians) and it appeared they hoped to develop this. Related to this was obtaining funding for research. IRBs were mentioned by at least two respondents, specifically noting the need to develop or to improve the IRB. More generally,

developing research as a career interest in young OBGYNs was noted to be important, with some suggestions including journal club, workshops, and recognition (beyond publications).

C. What are the faculty needs in terms of teaching and evaluation?

Teaching:

APGO was noted to have valuable resources by a number of respondents, specifically noting their different methods of teaching techniques. Some noted the challenge of different teaching styles from different countries being confusing to students and residents. Therefore, it may be useful to develop common values and/or a common style for instructors early in their teaching career. Increasing the number of faculty and having more resources (such as textbooks) were also noted.

Evaluation:

There were a variety of responses to the evaluation half. There didn't seem to be any particular common theme to these.

D. What is needed to ensure African and American faculty can reach their academic and promotion goals? What is the role of the government in this? What is the role of the university?

Grants and research publications were mentioned frequently in these responses, though these were not as commonly listed when respondents were referring to other career pathways such as the Ministry of Health or teaching.

E. What is the role of the government in this? What is the role of the university?

Government:

A predominant theme for the role of government centers on enabling research through providing funding, guidance on key research topics, helping faculty reach academic and promotion goals.

University:

Universities can provide financial support for faculty, but also can establish and maintain tenure tracks and determine tenure. On a related note, they can establish transparent guidelines for promotion and incentives to remain in academics (such as recognition for teaching and grant-protected time for research).

Section 6: District/Community Hospital Outreach

Each country appears to have received a different question (and numerous did not discuss this issue), so there weren't any opportunities for common themes between different respondents.

Section 7: Work with Ministry of Health and Ministry of Education

- A. What is the current commitment by the African governmental agencies in terms of OBGYN deployment?

The primary theme that seemed to come up in these responses was the geographic distribution of OBGYNs, specifically to underserved rural areas. A few respondents noted that the current distribution was a problem. Most responded that the government controls deployment to some degree or another (often for a certain amount of time post-residency) and it appears OBGYN's are frequently sent to underserved areas.

- B. What is the Ministry of Health's goal for the deployment of OBGYN's throughout the country? (i.e., one to two OBGYN's per each district hospital?) What are the opportunities and barriers to making this happen?

Goals:

All but one respondent listed goals for deployment. These were expressed in different terms, so comparisons are difficult. Here's the basic info by respondent:

- Three to four OBGYNs/major health center
- 800 OBGYNs in country
- Four OBGYNs / 200,000 population ; Two OBGYNs / district hospital
- Two OBGYNs / county ; Four to five OBGYN's / regional hospital
- Three chiefs, Five principal OBGYNs at each Central Hospital. After those numbers are achieved, they will be deployed to the District Hospitals.
- To OBGYNs per regional referral hospital; One OBGYN per district referral hospital.

Opportunities:

Responses varied for opportunities, but included the idea that

OBGYN's accept their deployments, as well as the possibility for expanding training or building new medical schools that could expand the number of OBGYN's in country.

Barriers:

Political will was noted to be a problem, specifically by the MoH to train OBGYN's, and so the challenge as noted by one participant is that, "You can't deploy people that you don't have." Other problems noted including the pass rate for entry exams and that many districts (notably rural) are unattractive to OBGYN's.

- C. What is needed to increase the deployment of OBGYN's, i.e., if sufficient numbers existed could they be deployed across the country?

Every respondent explicitly mentioned incentives as the primary method to increase deployment, typically referring directly to financial incentives. These sometimes took different forms (salaries, support for their children's education, and housing allowance), but responses also included non-financial incentives: things like improved rural infrastructure, internet access, and career opportunities also were viewed as ways to lure or retain doctors in rural areas.

- D. Describe the role an academic OBGYN department could play in shaping maternal care policy.

A few potential pathways by which academic OBGYN departments could shape maternal care policy came up in these responses.

They can directly participate in policy-making meetings, whether these are through Ministry of Health or other policy-making organizations. They can provide the research that identifies the epidemiological burden and data on best practices to better inform policy or to advocate specific policy solutions. The academic department can draft, edit, and implement treatment protocols and policies. They may also fulfill this role by providing information on lessons learned from prior successful and unsuccessful maternal care policies. These apply to both domestic and foreign policy discussions. Similarly, they can improve communications between the ministry and the professional association. Finally, it is also important to influence the operation of the hospitals to ensure that optimal care will be provided.

Section 8: Improving Clinical Outcomes

Each country appears to have received a different question (and numerous did not discuss this issue), so there weren't any opportunities for common themes between different respondents.

Section 9: Monitoring and Evaluation

A. What are the current indicators for maternal health being reported by the hospitals to the Ministry of Health or other?

- Maternal death
- Neonatal death
- Case fatality rates
- Stillbirth rate
- Caesarean section rate
- Near miss mortality rate
- Total delivery rate
- Antenatal care statistics
- Perinatal
- Near miss mortality rate
- Bed occupancy
- Pregnancy complications
- Preeclampsia/Eclampsia
- Postpartum hemorrhage
- Abortions
- HIV Status
- Skilled attendance
- FP / Contraceptive use

This isn't an exhaustive list, nor is it in order of how common they are, but the list essentially consists of the items that at least three countries noted. The exact means of reporting may also vary (for example: maternal mortality, maternal mortality ratio, and maternal deaths were all listed).

B. What other indicators would you like to track? What is the numerator what is the denominator of the indicator and how can it be measured?

This had a bit more variability than the list of indicators that are collected. A few countries listed maternal mortality. Near misses

were listed in quite a few of these responses. The rest were essentially listed once each.

- C. Where are most data recorded? Are data available from a hand written register? Computerized systems? Other?

Data appears to be universally available in written records, with scarce availability of computerized records. The few computer records mentioned appeared to be available only at isolated hospitals, and in those cases often after a delay for translating the data from the written records into the computer program (such as Excel).

- D. Describe a health information system and the personnel and equipment that would allow you to accurately track maternal deaths and the case fatality rates – stratified by referral status, cases of severe post partum hemorrhage, ectopic pregnancy, hypertensive disease of pregnancy, eclampsia, preeclampsia and the case fatality rate for referrals in and those who were booked. Additional data would include Apgar scores, neonatal intensive care admission, early neonatal death/survival, and still births. What other indicators would be helpful to measure?

Responses varied for this question.

- E. What are the important clinical/public health research questions?

These broke down into a few predictable themes. One was the causes of maternal morbidity and mortality – what are the most common and how prevalent are they? Methods of preventing these outcomes were included, specifically researching whether or not they are effective. Similarly, health behaviors were mentioned (both how prevalent were they and how effective are they). A few respondents specifically raised the Millennium Development Goals as points to research. Finally, many included other issues not directly associated with pregnancy, such as cervical cancer, leiomyoma, and others.

- F. Does the Ministry of Education or other government agency or private group provide the OBGYN professor time for teaching and provide time/resources/facilities and expertise for research? What could be changed to make this better?

Many respondents listed that they got some time for research – somewhere around one half to one day per week, it appeared. However, a few also said there was not protected time for research. Dedicated time for research also appears to be flexible depending on the institution. One suggestion for making this better is to capitalize on the prestige the hospital gets from publications, to use this to convey the culture to outsiders and use that to get more protected time.

- G. Describe what would be needed to create a supportive environment for research. What could the American partner offer to help build this?

Common suggestions here included statistical support and assistance with grant writing, as well as other funding assistance. Additionally, many suggestions raised previously (increasing number of faculty, dedicated research time, online journal access) were raised again here.

- H. How can academic programs promote working and research environments that are more likely sustain the staff?

Only one respondent answered this question. Their response is as follows: Engaging at the highest level to make working environments most favorable. Creating an enabling environment is key. Skill mix is essential beyond just clinical skills: research skill, teaching skill, presentation skill, advocacy, communication, leadership skill, negotiation skill, and time management. Cultivate more technical experts among faculty and trainees. Some residency programs will output critical leaders, which creates national opportunity at the highest level to impact policy and quality of education and service delivery.

Appendix IV

Country Summary Profiles

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MALAWI

Partnership Information

- University of Malawi, Dr. Ron Mataya, rmataya@llu.edu
- University of North Carolina, Dr. Jeff Wilkinson, Jeffreywilkinson@gmail.com

- Summarize the goals of your partnership:
 - Teach and train registrars in Obstetrics and Gynecology, provide quality care and treatment, and conduct relevant research to enhance the health and welfare of the women of Malawi.
 - Support and leadership at MOH facilities and influence national RMNH policy.

- How many New OBGYNs could you train in 10 years given your current capacity.
 - 6-8 per year x 10 years = 30-40 new OB/Gyns.
 -

- How many New OBGYNs could you train with enhanced capacity?
 - With two Central Hospitals as our main training sites, we could really accommodate 10 residents/location/year if we were able to enhance our capacity (i.e. funding, more teaching faculty, additional resources, more teaching facilities, employment locations, etc.). This would give us 20 per year x 10 years = 100 new OB/GYNs.
 -

National Data (from 2012)

- National maternal mortality ratio (per 100,000 live births): 460
- National infant mortality ratio (per 100,000 live births): 65.8
- Percentage who receive antenatal care from a trained health care professional: 97.5%
- Roughly how many OBGYN professionals are in the country: 9
-

Institutional/Departmental Information (from 2012)

- Current number of obgyn trainees per incoming class: 0 (faculty members currently in training in S. Africa).
- Size of incoming class you hope to admit in:
 - 2014: 6
 - 2019: 8
 - 2024: 8

- Current funding sources for residents:
Government funded, NGO funded, salaried residents.
Training is obtained outside Malawi. Potential candidates make their own training arrangements with institutions of their choice. However, these institutions must be recognized by Malawi Medical Council. OBGYNs trained at institutions not recognized by the council are assessed at Malawi's major hospitals by obstetricians at those institutions.
- Number of deliveries your institution handles annually: 3,500
- Current operating room capacity: 1,000
- Current clinical capacity: 10
- Number of current teaching faculty: 6
- Number of teaching faculty needed, including those you currently have (self-report): 10
- Physical infrastructure: HAS office space (NO library/journal collection, education coord., finance coord., data coord., transport).
2014 Information:
- Obgyns trained in 10 years:
 - At current capacity: 30-40
 - At enhanced capacity: 100
- Source of Certification for obgyns: MMed from University of Malawi
- Professional societies: Association of Obstetricians and Gynecologists in Malawi.
- Do residents in your program have high-bandwidth access to the internet? Sometimes
- Research training and important research questions: pre-eclampsia
- Deployment: MOH goal is 3 chiefs, 5 principle OBGYNs at each Central Hospital. After those numbers achieved; deployment to district hospitals.

RWANDA

Partnership Information

- University of Rwanda, School of Medicine, Dr. Stephen Rulisa, s.rulisa@gmail.com
- University of North Carolina, Dr. Irwin Merkatz, Albert Einstein, chairobgyn@aol.com
- Description of current partnership goals:
 - Albert Einstein to provide: ACOG/SMFM support, institutional support, faculty expertise and will not engage in clinical activities without an African counterpart. MOU has been signed between the partners.
- Summarize the goals of your partnership (2014):
 - Training of OBGYNs in accordance with Rwandan MOH, RSOG and UR standards.
- How many New OBGYNs could you train in 10 years given your current capacity?
 - At current rate of training 10 OBGYNs per year, 100 OBGYNs will be trained in 10 years.
- How many New OBGYNs could you train with enhanced capacity?
 - Medical school class size will double in 2015 so, increased teaching faculty in the OBGYN the amount of residents could be doubled nationwide.

National Data (from 2012)

- National maternal mortality ratio (per 100,000 live births): 340
- National infant mortality ratio (per 100,000 live births): 49.8
- Percentage who receive antenatal care from a trained health care professional: 68.9
- Roughly how many OBGYN professionals are in the country: 30

Institutional/Departmental Information (from 2012):

- Current number of obgyn trainees per incoming class: 10
- Size of incoming class you hope to admit in:
 - 2014: Not reported
 - 2019: Not reported
 - 2024: Not reported
- Current funding sources for residents: Government funded
- Number of deliveries your institution handles annually: NR.

Eliminating Preventable Maternal and Neonatal Morbidity and Mortality

- Current operating room capacity: 2 OR's in Maternity, 1 day per week OR for FPMRS in main OR.
- Current clinical capacity: 60 beds for OB/GYN in maternity. L&D 4 labor beds 4 delivery beds Recovery room 4 beds OT 2 rooms OPD dedicated 1 room for OB/GYN.
- Number of current teaching faculty: CHUK Faculty 3, HRH 6+.
- Number of teaching faculty needed, including those you currently have (self-report): NR.
- Physical infrastructure: Need: running water, electricity, sterilization equipment, OR lights, internet, operating rooms, surgical equipment, medication, emergency OB kits, cell phones, teaching supplies, projector for the meeting room.

2014 Information:

- Obgyns trained in 10 years:
 - At current capacity: 100
 - At enhanced capacity: 200
- Source of Certification for obgyns: National body.
- Professional societies: Medical Council of Rwanda, Rwanda Society of Obstetrics and Gynecology.
- Do residents in your program have high-bandwidth access to the internet? Sometimes.
- Research training and important research questions: Trainees dedicate 1 day per week for research with faculty coaching. Research questions:
 - Prevalence of major OBGYN morbidities and mortalities
 - Barriers to fistula care
 - Validity of current hospital data
 - Impact on maternal mortality of OBGYN placement in district hospitals
- Deployment: MOH plan for deployment is constrained by lack of available OBGYNS. To increase deployment, expand training and create retention incentives.

LIBERIA

Partnership Information

- Liberian College of Physicians and Surgeons, Dr. John Mulbah, jmpolyclinic@yahoo.com
- Icahn School of Medicine, Mt. Sinai, Dr. Lise Rehwaldt, lise.rehwaldt@gmail.com

- Description of current partnership goals:
 - Build a robust residency training program that is sustainable.
 - Provide meaningful mentorship to all residents.
 - Meet the unmet OB/GYN physician needs of Liberia, including provision of OB/GYN at the regional, county and rural areas.
 - Develop or enhance monitoring and evaluation tools currently used for various aspects of the residency program training.
 - Produce Liberian OB/GYN who will serve as leaders and innovators in decreasing maternal morbidity and mortality.
 - Influence maternal health policy at the national, sub-regional and international levels.

- How many New OBGYNs could you train in 10 years given your current capacity.
 - 40 OB/GYN in 10 years

- How many New OBGYNs could you train with enhanced capacity?
 - 80 OB/GYN in 10 years

National Data (from 2012)

- National maternal mortality ratio (per 100,000 live births): 770
- National infant mortality ratio (per 100,000 live births): 72.6
- Percentage who receive antenatal care from a trained health care professional: 79.3
- Roughly how many OBGYN professionals are in the country: 7

Institutional/Departmental Information (from 2012):

- Current number of obgyn trainees per incoming class:
- Size of incoming class you hope to admit in:
 - 2014: 5
 - 2019: 5
 - 2024: 5

- Current funding sources for residents: Government.
- Number of deliveries your institution handles annually: 10,000.
- Current operating room capacity: at 65%.
- Current clinical capacity: 14,5000.
- Number of current teaching faculty: 2.
- Number of teaching faculty needed, including those you currently have (self-report): 10.
- Physical infrastructure: Has: Office space, Library and/or journal collection via internet , Personnel: Education Coordinator. Need: Research Coordinator/ Data Coordinator/ Administrative support/IT Support/Office equipment,Fax, Scanner, Computer. Want to improve technology at each site, including: introducing EMR at academic sites, telemedicine equipment and curriculum.

2014 Information:

- Obgyns trained in 10 years:
 - At current capacity: 40
 - At enhanced capacity: 80
- Source of Certification for obgyns: Liberian College of Physicians and Surgeons.
- Professional societies: LMDA-CME (advocacy roles for practitioners), WACS-Liberia, Liberian Public Health Association, WAPS-CME.
- Do residents in your program have high-bandwidth access to the internet?
- Research training and important research questions:
- Deployment: Residents currently required to spend 2 years working under the MOH upon graduation. MOH plans to assign graduates to various referral and county hospitals throughout the country.

SIERRA LEONE

Partnership Information

- University of Sierra Leone, Princess Christian maternity Hospital in Freetown, Dr. A.P. Koroma, apkoroma2@yahoo.co.uk
- Johns Hopkins, Dr. Jean Anderson, janders@jhmi.edu
- Description of current partnership goals:

Timeline / Action plan:

	Sierra Leone	Hopkins
All term:	Political involvement / Political will	Funding
	Sustainability planning	
Short term:	Study visit / site assessment	Hopkins visit by Dr. Koroma (GR: Fistula's?)
(2014-2016)	Faculty development	Basic research collaborations / resources
	Detailed look at indicators	Make a GYN PIPES
	Database exploration	Research collaboration / resources
	Curriculum review and discussion with MOH&S for 3 year program and possible development of a Sierra Leonean College of OBGYN	Curriculum review and comparison with CREOG
	Protocol sharing	Residency book exchange

Eliminating Preventable Maternal and Neonatal Morbidity and Mortality

	Sierra Leone	Hopkins
	Medteams International	Simulation training
	Essential drug list	Equipment sending
Medium term:	Faculty member support	Global division
(2015-2017)	US faculty member presence	US faculty in Sierra Leone
	Regular Faculty / Resident Exchange	Regular Resident Exchange
	Development of Residency book	Development of Global Health pages in Residency book // Chapter in the Johns Hopkins OBGYN Manual
	Infrastructure and Equipment	Database
	OpenEMR (Electronic Medical Record)	
Long term:	Establishment of Resident programs	Involvement of Other departments: SPH, School of Nursing, School of Medicine
2017-	Development of the GYN program component	Increase care: for example MTX, leep, operative hysteroscopy.
	International OBGYN resident handbook	International OBGYN resident handbook
	Decrease identified gaps in Human Resources	
	Sustainability	

** Currently available: hydralazine, STI, Malaria, Eclampsia

- * How many New OBGYNs could you train in 10 years given your current capacity. And how many New OBGYNs could you train with enhanced capacity?
 - In terms of the training capacity of OBGYN's, currently only one fully trained and qualified obstetrician is available. Discussions were held about options to increase this capacity with possible inclusion of Ghanaian trained OBGYN's to invite to Sierra Leone for a longer time (for example 6 months) to be part of faculty to increase the teaching capacity for the residents.
 - 10 – towards 20 OBGYN's in different stages of their training. Based on the following WHO statistics:
 - 1 : 10 000 midwife to population
 - 1 : 500 000 EMONC facility = OBGYN
 - 12 : 6 Million = Total OBGYN for Sierra Leone

National Data (from 2012)

- National maternal mortality ratio (per 100,000 live births): NR
- National infant mortality ratio (per 100,000 live births): NR
- % Who receive antenatal care from a trained health care professional: NR
- Roughly how many OBGYN professionals are in the country: 1

Institutional/Departmental Information (from 2012):

- Current number of obgyn trainees per incoming class: NR
- Obgyns trained in 10 years:
 - At current capacity: NR
 - At enhanced capacity: NR
- Size of incoming class you hope to admit in:
 - 2014: NR
 - 2019: NR
 - 2024: NR
- Current funding sources for residents: NR
- Number of deliveries your institution handles annually: NR
- Current operating room capacity: NR
- Current clinical capacity: NR
- Number of current teaching faculty: 1
- Number of teaching faculty needed, including those you currently have (self-report): NR

2014 Information:

- Physical infrastructure: 1 ultrasound currently available, no colposcope, rectoscope, cystoscopy or radiotherapy. Only one autoclave available. 1 labor ward, 7 beds and 1 OR.
- Source of Certification for obgyns: WACS
- Professional societies: WACS, FIGO
- Do residents in your program have high-bandwidth access to the internet? Working on glass fiber connection.
- Research training and important research questions: To be explored.
- Deployment: Need to strengthen training before deployment.

UGANDA

Partnership Information

- Makerere University, Dr. Josaphat Byamugisha, byamugisha2001@yahoo.com
 - University of California, San Francisco, Dr. Meg Autry, autrym@obgyn.ucsf.edu
- Mbarara University, Dr. Joseph Ngonzi, jngonzi@gmail.com
 - Harvard MGH, Dr. Blair Wylie, bwylie@partners.org

- Summarize the goals of your partnership:
To decrease maternal mortality by:
 - Developing a country-wide vision for training OB/GYN that involves the different medical schools training post-graduates: (MUST and Makerere).
 - Create a strategic and business plan to implement this vision and present this plan to the government and funding agencies.
 - Improve collaboration between MUST and Makerere and to increase collaboration between regional institutions.How many New OBGYNs could you train in 10 years given your current capacity?
 - Makerere: 150-200 residents
 - Mbarara: 80 residentsHow many New OBGYNs could you train with enhanced capacity?
 - Makerere: With 10 more senior faculty could train an additional 30 residents/year
 - Mbarara: With 5 more senior faculty could train an additional 7 residents/year

National Data (from 2012)

- National maternal mortality ratio (per 100,000 live births): 310
- National infant mortality ratio (per 100,000 live births): 71.1
- Percentage who receive antenatal care from a trained health care professional: 94.1
- Roughly how many OBGYN professionals are in the country: About 500

Institutional/Departmental Information (from 2012 – Mbarara):

- Current number of obgyn trainees per incoming class: NR
- Obgyns trained in 10 years (Mbarara) :
 - At current capacity: 18
 - At enhanced capacity: 100

- Size of incoming class you hope to admit in:
 - 2014: 9
 - 2019: 10
 - 2024: 15
- Current funding sources for residents: Student funded (tuition)
- Number of deliveries your institution handles annually: 10,000
- Current operating room capacity: We have 4 operating rooms in total. Two of these are dedicated to obstetrics and gynecological surgery. We have an average of 15 gynecological operations per week.
- Current clinical capacity: We have 4 operating rooms in total. Two of these are dedicated to obstetrics and gynecological surgery. We have an average of 15 gynecological operations per week.
- Number of current teaching faculty: 9
- Number of teaching faculty needed, including those you currently have (self-report): 25
- Physical infrastructure: Has office space, needs:
 - 1. Library
 - 2. Personnel: Office secretary
 - 3. Research coordination office
 - 4. Dedicated high bandwidth internet

Timeline / Action plan:

	Makerere	Mbarara
Educational coordinator:	<ul style="list-style-type: none"> • Program director as part of faculty, no supplemental funds for this • Residency administration chief exists • No administration coordinator 	<ul style="list-style-type: none"> • Program director as part of faculty, no supplemental funds for • Developing the idea for a 3rd year leader/chief residency but currently not formalized • No administration coordinator
Data coordinator:	None	None
Library	<ul style="list-style-type: none"> • Small library with old journals • Access to e-journals through Makerere 	<ul style="list-style-type: none"> • Limited access through MUST library
Office Space:	Insufficient office space for faculty	One small office for 10 faculty members

2014 Information:

- Source of Certification for obgyns: MMED
- Professional societies: The Association of Obstetricians and Gynecologists of Ugandas
- Do residents in your program have high-bandwidth access to the internet? Often
- Research training and important research questions: NR
- Deployment:
MOH goal: 2 OB/GYNs per regional referral hospital, 1 OB/GYN per district referral hospital. Barriers: Funding support for position, recruitment to neighboring countries (e.g South Sudan).

ZAMBIA

Partnership Information

- University of Zambia, Dr. Bellington Vwalika, vwalikab@gmail.com
- University of North Carolina, Dr. Ben Chi, benjamin_chi@med.unc.edu

- Summarize the goals of your partnership:
 - Short-term:
 - o Develop a framework describing strategic needs of the Department of Ob-Gyn, focused on a phased and sustainable approach to improving capacity to train and retain talented specialists
 - o Create an MOU that provides the framework for this collaboration
 - o Engage relevant stakeholders to form steering and advisory committees
 - Medium term
 - o Create annual work plans that move us towards the goals outlined by framework above.
 - o Continue to secure funding for component parts across a variety of different mechanisms, including donors, private-public partnerships, and government.
 - o Establish low-cost ways to continue building the partnership, including faculty and student exchanges and remote / teleconferencing fora.
 - o Incorporate other partners as needed to reach the overarching goals.
 - Long-term:
 - o Develop a Centre of Excellence / Women's Hospital at UTH that can house this collaboration
- How many New OBGYNs could you train in 10 years given your current capacity? 50 completed in 10 years
- How many New OBGYNs could you train with enhanced capacity? 150

National Data (from 2012)

- National maternal mortality ratio (per 100,000 live births): 440
- National infant mortality ratio (per 100,000 live births): 70.4
- Percentage who receive antenatal care from a trained health care professional:
- Roughly how many OBGYN professionals are in the country: 50

Institutional/Departmental Information (from 2012):

- Current number of obgyn trainees per incoming class: 5
- Obgyns trained in 10 years:
 - At current capacity: 26
 - At enhanced capacity: 100
- Size of incoming class you hope to admit in:
 - 2014: 10
 - 2019: 15
 - 2024: 20
- Current funding sources for residents: Government
- Number of deliveries your institution handles annually: 17,000
- Current operating room capacity: 3 operating rooms
- Current clinical capacity: daily morning ANC seeing an average of 30-40 patients
- Number of current teaching faculty: 11
- Number of teaching faculty needed, including those you currently have (self-report): 18
- Physical infrastructure: Has office space, Library and/or journal collection via internet. Needs:
 - Satellite centers for care – expanded clinical teaching facilities.
 - Designated interests for specialty – concentrated knowledge and resources in the unit.
 - Classroom space.
 - Dedicated women's Hospital – expanded labor ward, operating theatres, specialty clinics, dedicated office space.

2014 Information:

- Source of Certification for obgyns: University Senate provides certificate for graduates (Copperbelt and UNZA) HPCZ – medical license
- Professional societies: ZAGO and ZMA – tasked to advise government reproductive health matters
- Do residents in your program have high-bandwidth access to the internet? Sometimes
- Research training and important research questions:
 - Evaluating program strategies to see if they are effective in reducing maternal mortality
 - Beliefs, myths, practices around reproductive health influencing access and outcomes
 - Developing new interventions to reduce mortality and morbidity

- Deployment:
 - Deployment only at provincial hospital level, 21 general hospitals and 3 tertiary hospitals.
 - Many unfilled positions.
 - Establishment – 2 per general hospital + 10-12 per tertiary hospital.
 - As many as 16 per tertiary ideally.
 - Aspiration – every district hospital has at least 1 trained Ob-Gyn (81 district hospitals).
 - Establishment has provincial hospitals going up.

THE GAMBIA

Partnership Information

- University of The Gambia, Dr. Patrick Idoko, patidoko@gmail.com
 - Drexel University, Dr. Owen Montgomery, owen.montgomery@drexelmed.edu
 - University of New Mexico, Alan Waxman, awaxman@salud.unm.edu

- Summarize the goals of your partnership:
Facilitate the establishment of an ob/gyn residency in The Gambia
 - Medium term goal, 3 year residency.
 - Develop faculty, train residents, ultimately reduce maternal mortality in 5 yrs.

- Next steps:
 - Patrick Idoko to approach the MOH and MOE with vision to get their support for concept of PG Residency education. He has contacts with MOH.
 - Short document and long documentation outlining his vision for ob/gyn residency.
 - Within next two weeks He will have first draft to submit to US partners for comments.

- Arrange meeting with MOH and MOE.
 - Once he has ministry support, will talk to other potential partners: UNFP, EU, others.
 - Push agenda to complete training of other 2 ob/gyns to get fellowship in WACS and GCPS.

- How many New OBGYNs could you train in 10 years given your current capacity? 0

- How many New OBGYNs could you train with enhanced capacity? 20

National Data (from 2012)

- National maternal mortality ratio (per 100,000 live births): 360
- National infant mortality ratio (per 100,000 live births): NR
- Percentage who receive antenatal care from a trained health care professional: nr
- Roughly how many OBGYN professionals are in the country: 9: 2 part time faculty and 7 in practice

Institutional/Departmental Information (from 2012):

- Current number of obgyn trainees per incoming class: 0
- Obgyns trained in 10 years:
 - At current capacity: 0
 - At enhanced capacity: 27
- Size of incoming class you hope to admit in:
 - 2014: NR
 - 2019: NR
 - 2024: NR
- Current funding sources for residents: No program currently
- Number of deliveries your institution handles annually: 6,000
- Current operating room capacity: Twin theatre with capacity to do 2 surgeries concurrently
- Current clinical capacity: Clinic Space for 4 Doctors each seeing 15 - 20 cases daily
- Number of current teaching faculty: 3
- Number of teaching faculty needed, including those you currently have (self-report): 6

2014 Information:

- Physical infrastructure: Currently has office space.
Needs:
 - Ultimately need major construction, currently have office space, seminar room, ORs wards and clinics currently functional. Need clinical skills lab, currently in planning by university.
 - Univ. just built 3 story building for undergraduate program. Could use it also for residency. Has library. Need to build digital library of women's health.
 - Ob-specific simulation equipment for simulation lab. Laparoscopic trainer.
- Source of Certification for obgyns: NR
- Professional societies: NR
- Do residents in your program have high-bandwidth access to the internet? Sometimes
- Research training and important research questions: MOH values Millennium Development Goals. Tracking the appropriate parameters very useful. Presidential decree that all prenatal care and childhood care free to age 5. Resources didn't follow the decree. Tracking the parameters vital.

Critical Components in Building Capacity

- Deployment: Govt. wants to deploy all forms of specialists. Deployed three people trained in ob/gyn locally; as a result they're not available to serve as faculty at the teaching hospital. Deployments at the direction of the President.

BOTSWANA

Partnership Information

- University of Botswana, School of Medicine, Dr. Doreen Ramogola-Masire, doreen.masire@gmail.com
- University of Pennsylvania, Dr. Jack Ludmir, jaludm@uphs.upenn.edu

National Data (from 2012)

- National maternal mortality ratio (per 100,000 live births): NR
- National infant mortality ratio (per 100,000 live births): NR
- Percentage who receive antenatal care from a trained health care professional: NR
- Roughly how many OBGYN professionals are in the country: NR

Institutional/Departmental Information (from 2012):

- Current number of obgyn trainees per incoming class: none
- Obgyns trained in 10 years:
 - At current capacity: 0
 - At enhanced capacity: 5-10
- Size of incoming class you hope to admit in:
 - 2014: 0
 - 2019: 2-4
 - 2024: 4
- Current funding sources for residents: Government
- Number of deliveries your institution handles annually: The main tertiary hospital in Gaborone, Princess Marina Hospital has 6000-6500 deliveries a year.
- Current operating room capacity: 2 operating rooms shared between obstetrics and gynecology
- Current clinical capacity: Daily morning ANC seeing an average of 30-40 patients
- Number of current teaching faculty: 3
- Number of teaching faculty needed, including those you currently have (self-report): 6
- Physical infrastructure: Needs
 - Administrative space in Hospital for faculty and trainees
 - Appropriate meeting rooms
 - On call and ablution facilities
 - Appropriate equipment including: ultrasound, fetal maternal monitoring, minimally invasive surgical equipment

Critical Components in Building Capacity

- Computers and reliable internet connectivity in Hospital to UB library facilities and external partner
- Research infrastructure at UB

2014 Information:

- Source of Certification for obgyns: Currently to be certified by the South African Colleges of Medicine and to receive MMED qualification from UB.
- Professional societies: Currently there is existence of a General Medical Association for all doctors. No professional ObGyn society yet.
- Do residents in your program have high-bandwidth access to the internet? Often.
- Research training and important research questions:
 - Reliable maternal extreme morbidity and mortality data to determine trends in causes and health policies to remediate.
 - Causes for high rate of prematurity and possible prevention measures.
 - Optimal management of prematurity.
 - What are the rates of HIV seroconversion in pregnancy?
- Deployment
 - Goal:
 - Two ObGyns per district hospital (10 district hospitals)
 - Six ObGyns per tertiary hospital (2 tertiary hospitals)
 - Opportunities:
 - Unmet needs in the public sector.
 - Creation of new medical school (2009) with opportunity for post graduate training in ObGyn to be able to satisfy clinical service needs.
 - Barriers:
 - Commitment to fund the positions established by goals.
 - Willingness of physicians to serve in rural areas.
 - Medical School unable to recruit Chair to lead department and start training program.

KENYA

Partnership Information

- Moi University School of Medicine, Dr. Hilary Mabeya, mabeya4@gmail.com
- University of Indiana, Dr. Lee Learman, llearman@iupui.edu

- Summarize the goals of your partnership:
 1. Capacity building in education, research, programs, ToT,
 2. Sustainability through ownership
 3. Research and promotions
- How many New OBGYNs could you train in 10 years given your current capacity.
 - 80-100 trainees
- How many New OBGYNs could you train with enhanced capacity?
 1. Trainees
 2. Build up capacity with partnership with county facilities
- NB: Next steps
 1. Formation of 1000+ team in Kenya composed of Deputy Director Clinical Services MTRH, County Cabinet Secretary, MOE and MOH, Chair RH Moi.
 2. Use county health facilities to train new OBGYNs.
 3. MOH to increase sponsorship for trainees.
 4. Part of free maternity fee to be used to pay for trainers/staff.
 5. Get a medical Education administrator to form the secretariat.

National Data (from 2012)

- National maternal mortality ratio (per 100,000 live births): 360
- National infant mortality ratio (per 100,000 live births): 51.7
- % Who receive antenatal care from a trained health care professional: 91.7
- Roughly how many OBGYN professionals are in the country: 400 (roughly 70% in Nairobi)

Institutional/Departmental Information (from 2012):

- Current number of obgyn trainees per incoming class: 6
- Obgyns trained in 10 years: 50-60
 - At current capacity: 20
 - At enhanced capacity: 50-60
- Size of incoming class you hope to admit in:
 - 2014: 6-7

- 2019: 8-9
- 2024: 9-10
- Current funding sources for residents: Student Funded (Tuition), Government Funded, NGO Funded, Salaried Residents, hospital
- Number of deliveries your institution handles annually: 10-12,000
- Current operating room capacity: 2-3 rooms
- Current clinical capacity: 4 rooms
- Number of current teaching faculty: 7
- Number of teaching faculty needed, including those you currently have (self-report): 14

2014 Information:

- Physical infrastructure: Need:
 - Space to expand the no of trainees
 - Employ more faculty
 - Internet for E-learning
 - M –Health
 - Simulation Centres
 - Equipment for newborns, incubators, US machines
- Source of Certification for obgyns: University Certification and KMPDB
- Professional societies: KOGS, ESCAOGS role in coordination, education and advocacy and research
- Do residents in your program have high-bandwidth access to the internet? Often
- Research training and important research questions:
 - Health seeking behavior during delivery, is distance the cause? What are barriers to hospital delivery?
 - FP uptake - why low?
 - Questions of cervical cancer, fistula, preoperative assessment before C/S and outcome - Does it improve outcome
 - ANC attendance and facility delivery in hospital that have an operating theatre.
 - Is training of TBAs increasing hospital delivery
- Deployment:
Current government commitment: More extraneous allowance and related hardship allowances committed for implementation, more opportunities for subspecialty training.

GHANA

Partnership Information

- Kwame Nkrumah University of Science and Technology, Dr. Kwabena Danso, kadanso1443@yahoo.com
 - University of Michigan, Dr. Frank Anderson, fwja@med.umich.edu
- Korle Bu Teaching Hospital, Dr. Samuel Obed, obedamenyi@yahoo.com
 - University of Michigan, Dr. Frank Anderson, fwja@med.umich.edu
- NEW (2015): Ghana College of Physicians and Surgeons, Dr. David Ofori, dofori4950@gmail.com
 - Albert Einstein, Dr. Irwin Merkatz, chairobgyn@aol.com
- Summarize the goals of your partnership:
 1. RE ESTABLISH THE JOINT GOALS (Review of Elmina declaration)
 2. MORE SPECIFIC mutually agreed OBJECTIVES eg research capacity building faculties
 3. Discuss funding from both sides
 4. Look into clinical faculty visits eg maternal fetal medicine, gynaecology
 5. Equipment for sub-specialty training (especially gynae-oncology)
- How many New OBGYNs could you train in 10 years given your current capacity? 300
- How many New OBGYNs could you train in 10 years with enhanced capacity? 400

National Data (from 2012)

- National maternal mortality ratio (per 100,000 live births): 350
- National infant mortality ratio (per 100,000 live births): 50.3
- % Who receive antenatal care from a trained health care professional: 95.4
- Roughly how many OBGYN professionals are in the country: 141

Institutional/Departmental Information: (KNUST) (from 2012):

- Current number of obgyn trainees per incoming class: 10
- Obgyns trained in 10 years:
 - At current capacity: 50
 - At enhanced capacity: 100
- Size of incoming class you hope to admit in:

Critical Components in Building Capacity

- 2014: 12
- 2019: 15
- 2024: 20
- Current funding sources for residents: Student Funded (Tuition), Government Funded, Salaried Residents
- Number of deliveries your institution handles annually: 10,000
- Current operating room capacity: 3 operating rooms
- Current clinical capacity: 8 consulting rooms
- Number of current teaching faculty: 13
- Number of teaching faculty needed, including those you currently have (self-report): 20

Institutional/Departmental Information: (Korle Bu) (from 2012):

- Current number of obgyn trainees per incoming class: 10
- Obgyns trained in 10 years:
 - At current capacity: NR
 - At enhanced capacity: 150
- Size of incoming class you hope to admit in:
 - 2014: 15
 - 2019: 15
 - 2024: 14
- Current funding sources for residents: Government funded
- Number of deliveries your institution handles annually:
- Current operating room capacity:
- Current clinical capacity:
- Number of current teaching faculty:
- Number of teaching faculty needed, including those you currently have (self-report):
- Physical Infrastructure: Has: Office space, Library and/or journal collection via internet, Education Coordinator, Data Coordinator. Needs: Computers, equipment for minimally invasive gynecological surgery, equipment for Urogynecology, establishment of Assisted Reproductive Unit, establishment of Maternal-Fetal Unit.

2014 Information:

- Source of Certification for obgyns: Supernational body.
- Professional societies: Ghana College of Physicians and Surgeons, West African College of Surgeons.
- Do residents in your program have high-bandwidth access to the internet? Sometimes
- Research training and important research questions:
 - Determinants of severe maternal morbidity and mortality.

- What are the major contributors of our maternal mortality.
- Auditing process.
- Research into effectiveness of supervision or outreach services.
- Investigate the effectiveness of clinical interventions/ family planning modules.
- Investigate the causes of unmet needs for family planning.
- Deployment:
 - Goal:

4 obstetricians per population of 200 000 OR a minimum of 2 obstetricians per district hospital (216 districts in Ghana) with an average of 15 000 per district. Minimum of 6 obstetricians per regional hospital. Requirements for a teaching hospital?
 - Opportunities

Expanding intake into existing training programs to churn out more obgyns. Currently Intake for the colleges currently is 15 per center (KBTH & KATH) leading to about 30 obgyns are produced per year.
Tamale and Cape Coast medical schools to be supported to train obgyns
Internal and external support for Tamale and Cape Coast.
 - Barriers

Pass rate for basic sciences entry exams, no expansion of infrastructure for training faculty for subspecialty training, districts are unattractive to the obgyn, poor infrastructure, lack of motivation/incentives for rural postings.

ETHIOPIA

Partnership Information

- St. Paul Hospital Millennium Medical College, Dr. Balkachew Nigatu, balkewnega@gmail.com
 - University of Michigan, Dr. Senati Fisseha, sfisseha@med.umich.edu
 - Hawassa Univeristy, Dr. Zenebe Wolde, zenejjo@gmail.com
 - University of Wisconsin, Dr. Cynthia Anderson, ckanderson@wisc.edu
 - Mekelle University, Dr. Sampson Mulugeta, samson.mulu@yahoo.com
 - Oregon Health Sciences University, Dr. Rahel Nardos, nardosr@ohsu.edu
 - Mekelle University, Dr. Sampson Mulugeta, samson.mulu@yahoo.com
 - Northwestern University, Dr. Gelila Goba, gelila-goba@fsm.northwestern.edu
 - Mekelle University, Dr. Sampson Mulugeta, samson.mulu@yahoo.com
 - Washington University, Dr. Lewis Wall, walll@wustl.edu
 - Summarize the goals of your partnership:
 - Reduce maternal and perinatal morbidity and mortality through university partnerships that provide in-country training for highly qualified OBGYN physicians who are positioned to address the leadership, teaching, and clinical care needs of the country for generations to come.
 - There are three university partnerships represented at this meeting and some partnerships include more than bilateral, but may include three or more institutions.
- As a collective:
- Establish a consortium of Universities coordinated and in collaboration with ESOG that can facilitate sharing of expertise, deployment of resources, prevention of duplication of efforts, ensure communication hub that is sustainable
 - Create a joint document signed by all relevant parties to guide our overall work. Use Ghana/UM CHARTER as a guide and use the “Institutional Commitments” 15 points as a guide for adaptation to local context and needs with strong government support
 - Work together to create sustainable, high quality OB/GYN residency training programs at various sites across Ethiopia. The context will include strategies to create an enabling environment that promotes retention of all cadres. Output will be resident

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graduates that are positioned to meet and address all of the following: clinical care for the population, leadership inside and outside academic institutions to guide health policy and curriculum development, production of high quality research in maternal health, graduates that have the appropriate skill mix that goes beyond technical skills to include advocacy, time management, communication, leadership training, research, mentoring, negotiation, effective presentations.

How many New OBGYNs could you train in 10 years given your current capacity.

Current national output this year will be 30 new graduates (AAU and Jimma)

National goal is to have 800 practicing in country by 2020

How many New OBGYNs could you train with enhanced capacity?

There is a national plan for expansion of residency training which is well articulated. The current capacity will not remain the same given the national plan and the initiation of new residency programs that have already launched at SPHMMC, Gondar, Mekele, Bahir Dar. In process of launching two new programs this year are Hawassa and Adama.

National Data (from 2012)

- National maternal mortality ratio (per 100,000 live births): 350
- National infant mortality ratio (per 100,000 live births): 59.2
- % Who receive antenatal care from a trained health care professional: 42.6
- Roughly how many OBGYN professionals are in the country: 235

Institutional/Departmental Information (St. Paul Hospital Millennium Medical College) (from 2012):

- Current number of obgyn trainees per incoming class: 7
- Obgyns trained in 10 years:
 - At current capacity: 21
 - At enhanced capacity: 160
- Size of incoming class you hope to admit in:
 - 2014: 15
 - 2019: 25
 - 2024: 30
- Current funding sources for residents: Salaried residents
- Number of deliveries your institution handles annually: 4500
- Current operating room capacity: CS room with capacity to perform 8 per day. Separate Gyn. OR

Critical Components in Building Capacity

- Current clinical capacity: 60-80 cold cases a day
- Number of current teaching faculty: 7
- Number of teaching faculty needed, including those you already have (self-report): 20
- Physical infrastructure: Have office space, Education Coordinator. Need "We need a learning resource center with both online materials and hard copies, lecture room with the necessary teaching aids.

Institutional/Departmental Information (Hawassa) (from 2012):

- Current number of obgyn trainees per incoming class: 0
- Obgyns trained in 10 years:
 - At current capacity: 5
 - At enhanced capacity: 60
- Size of incoming class you hope to admit in:
 - 2014: 5
 - 2019: 10
 - 2024: 20
- Current funding sources for residents: Government funded
- Number of deliveries your institution handles annually:
- Current operating room capacity:
- Current clinical capacity:
- Number of current teaching faculty: 7
- Number of teaching faculty needed, including those you currently have (self-report): 14
- Physical infrastructure: Currently have: Library and/or journal collection via internet, Personnel: Education Coordinator. Need: To strengthen our OB/GYN clinics and available services in terms of training the faculty in areas of subspecialty, availing some equipment so that the residents would get better knowledge and skill.

Institutional/Departmental Information (Mekelle) (from 2012):

- Current number of obgyn trainees per incoming class: NR
- Obgyns trained in 10 years:
 - At current capacity: 20
 - At enhanced capacity: 160
- Size of incoming class you hope to admit in:
 - 2014: 12
 - 2019: 20
 - 2024: 20
- Current funding sources for residents: Government funded
- Number of deliveries your institution handles annually: 4,500

- Current operating room capacity: At Ayder hospital, we have 2 designated ORs for OB/GYN out of which one is always kept open for ob emergency. 24 hr in house anesthesia and OR team on call. We have 3 OR days for elective gynecology cases. At Mekelle referral hospital, we have 2 OR days for elective gynecology, 24 hr anesthesia and OR team on call. We perform about 720 elective major gynecology procedures per year
- Current clinical capacity: We have resident run clinics 5 days per week, with patient load of about 20 per day. Patients requiring surgery or admission will be referred to consultant attending clinic that is 3 days in a week with average patient load of 10 patients per day.
- Number of current teaching faculty: 6
- Number of teaching faculty needed, including those you currently have (self-report): 12
- Physical infrastructure: Has: Office space, Library and/or journal collection via internet, Personnel: Education Coordinator, data coordinator, finance coordinator and transport is pooled under the medical school dean's office.

2014 Information:

- Source of Certification for obgyns: The University itself with recognition from Ministries of education and health.
- Professional societies: ESOG, EMA, AFGO, consideration for development of a certifying body like ECOG that would have the legal ability to set standards and license specialists who have completed required training
- Do residents in your program have high-bandwidth access to the internet? Often
- Research training and important research questions: Establishing a health information system and the personnel and equipment that would allow you to accurately track maternal deaths and the case fatality rates-stratified by referral status-, cases of severe post partum hemorrhage, ectopic pregnancy, hypertensive disease of pregnancy, eclampsia, preeclampsia and the case fatality rate for referrals in and those who were booked. Additional data would include apgar scores, neonatal intensive care admission, early neonatal death/survival, and still births.
- Deployment: Goal is to have 800 OBGYNs practicing in the nation by 2020. The variation in numbers of OBGYNs across sites needs to be looked at critically. The health sector and educational sector development plans will guide deployment, which is currently not balanced.

DEMOCRATIC REPUBLIC OF CONGO

Partnership Information

- Universite Evangelique d'Afrique, Dr. Gustave Mushagalusa, machigera@yahoo.fr
- Partner, TBD

- Summarize the goals of your partnership:
 1. Increase the # of ob/gyns in their area of Congo and subsequently in the rural area/province.
 2. Increase the # of faculty
 3. Increase the # residents
 4. Exchange of curricula, teaching ideas, research training, mentorship
- How many New OBGYNs could you train in 10 years given your current capacity. 25
- How many New OBGYNs could you train with enhanced capacity?
 - If they manage to have 10 faculty in the department, then they could train 50 in 10 years.
- Final plans:
 1. Select a UM faculty to champion this collaboration (Diana and Frank will meet w/TJ when we return)
 2. Write up a MOU or declaration on Partnership with guidance from Dr. Johnson
 3. Regular phone/Skype/e-mail communication(s) between the parties (TJ, Diana, Frank, UM champion (to be named) and Gustave and Olivier.

National Data (from 2012)

- National maternal mortality ratio (per 100,000 live births): NR
- National infant mortality ratio (per 100,000 live births): NR
- % Who receive antenatal care from a trained health care professional: NR
- Roughly how many OBGYN professionals are in the country: NR

Institutional/Departmental Information (from 2012):

- Current number of obgyn trainees per incoming class: 3
- Obgyns trained in 10 years:
 - At current capacity: NR
 - At enhanced capacity: 14

- Size of incoming class you hope to admit in:
 - 2014: 5
 - 2019: 8
 - 2024: 10
- Current funding sources for residents: Student tuition, NGO funded
- Number of deliveries your institution handles annually: 3,600
- Current operating room capacity: 3 operating rooms with 6 tables
- Current clinical capacity: 175 beds
- Number of current teaching faculty: 4 professors and 3 assistants
- Number of teaching faculty needed, including those you currently have (self-report): 10
- Physical infrastructure: Need:
 - Ultrasound machines, techs and training
 - Hysteroscopy, training
 - Electrocautery, training, LEEP
 - Colposcope
 - Medical records
 - Data gathering
 - Bakkri balloons
 - Emergency transport (no ambulances, especially for pregnant mothers)
 - Better MVA's
 - Housing for some of the trainees
 - Library/computers/IT-need for current ob and gyn textbooks, including subspecialty books (gyn onc, REI, pediatric and adolescent gyn)

2014 Information:

- Source of Certification for obgyns: National body
- Professional societies:
 - National Board of Physicians, with provincial offices.
 - Congolese Society of Ob/Gyn-advocate for maternal health in Congo, advocate for salaries, equipment, training, deployment of obgyn's to rural areas.
- Do residents in your program have high-bandwidth access to the internet? Often
- Research training and important research questions:
 - Which cancers are the most common and how can we prevent them? Especially with regard to gyn cancers?
 - Different causes of maternal mortality and methods to prevent
 - Leiomyoma and fibroma frequency per age (often very young in Congolese women (15-22yrs) have these and this effects their

Critical Components in Building Capacity

- fertility; why are some young women's estrogen receptors in their uteri and breasts more responsive than others.
- Mapping of the system of maternal care in Congo would help improve care (religious influences are important in this).
- Deployment: No known plan. There is a need for increased rural deployment of obgyn's.

CAMEROON

Partnership Information

- University of Buea, Dr. Thomas Egbe, obinchemti@yahoo.com
- University of Arizona, Dr. Mike Brady robert.brady@dignityhealth.org

- Summarize the goals of your partnership:
 1. CURRICULUM DEVELOPMENT – Obtain the WACS curriculum from this meeting and see how we can adapt this
 2. OBTAIN FUNDING
 - a. U of AZ – creating a fund with the U of AZ Foundation to make tax-deductible contributions
 - b. Partner with NGOs – equipment and pharmaceutical supplies to regional and district hospitals. There may be interest in identifying countries with which to partner.
 - c. Work with international Cameroonian community (USA and UK) re: donating equipment (U/S unit)
 - d. Business stakeholders who are invested in Cameroon and could sponsor program in some capacity – GUINNESS, SENORA,
 3. Honorary Visiting Professorship for U of AZ faculty
 - a. Will this meet the Univ. requirements for starting this program in 2015?
 4. Obtain Buy-in from the University of Buea and the Government. We are seeing the Vice Chancellor and the MOH. We should have a timeline for the end of Feb/March to have work with the secretary general of the MOH.
 - a. Consider the Univ. of Buea initiative as a pilot for the entire country
 5. We need conclusions from this document. Within a month, the document will be ready and we can circulate it for comments, within one month (March 2014). Circulate it among the team for comments.
 - a. Write a ‘white’ paper making our case of need on the importance of our partnership for publication
 6. Complete Signature of the MOU – between the U of Buea and the U of AZ within 1 month. We need the vice chancellor to sign, send us the 2 hard copies, and we will have the President of the U of AZ sign them and send you back one copy.
 7. Residency to start in 2015 with 2 residents. We aim to train and graduate 24 residents in 10 years (assuming no attrition). Start with 2 residents, 4 residents in 2nd year, 3rd year 6 residents, and maintain

6 thereafter through 10 years.

8. Ultimate goal is to train OB/GYN specialists in Cameroon who will practice in Cameroon and make progress on MDG 4/5 to reduce the maternal and child morbidity and mortality in Cameroon.
 - a. Model for other specialties – PEDs, INT MED, SURGERY, etc

SHORT-TERM GOALS to upgrade our hospitals:

1. Work with central hospital in Douala Trainees would spend 3 months in Douala.
2. RCOG (Konje) has contacts with the Nigerian requirements. The WACS requirements are not as stringent.

National Data (from 2012)

- National maternal mortality ratio (per 100,000 live births): 690
- National infant mortality ratio (per 100,000 live births): 74.1
- Percentage who receive antenatal care from a trained health care professional: 83.4
- Roughly how many OBGYN professionals are in the country: About 200- most of them in Yaounde and Douala.

Institutional/Departmental Information (from 2012):

- Current number of obgyn trainees per incoming class: 0
- Obgyns trained in 10 years:
 - At current capacity: 0
 - At enhanced capacity: 20
- Size of incoming class you hope to admit in:
 - 2014: 0
 - 2019: 5
 - 2024: 5-10
- Current funding sources for residents: No current funding
- Number of deliveries your institution handles annually: Three sites (Douala, Buea, Limbe) total appx 2800 deliveries annually (Approximations: Douala - 1000, Buea- 900, Limbe-900). We believe that all the patient volumes can be significantly increased with the presence of a post-graduate (residency) training program.
- Current operating room capacity: 2-3 operating rooms at each of the three sites.
- Current clinical capacity: Large clinic capable of seeing 100+ patients per day in Doula. Buea and Limbe have smaller clinics.

- Number of current teaching faculty: 6
- Number of teaching faculty needed, including those you currently have (self-report): 6
- Physical infrastructure: currently none, as our intended start date is 2016. Need:
 - More computers with reliable high speed internet connections.
 - Administrative support person (like a program coordinator)

2014 Information:

- Source of Certification for obgyns: None
- Professional societies: The WACS will endorse the program to make sure it fits with what is offered in Ghana and other countries.
- Do residents in your program have high-bandwidth access to the internet? Sometimes
- Research training and important research questions: Research questions around the MDGs. Documenting rates of complications, OB outcomes, etc, and then track our trajectory and develop interventions to address the concerns.
- Deployment: We need at least 18 – 20 OB/GYNS (to serve the 12 district hospitals, and the regional hospitals) as a bare minimum.

1000+ OBGYN Meeting
February 2014 – Accra, Ghana

Presentation Abstracts

Introduction

The following abstracts were submitted by representatives from participating institutions in the 1000+ OBGYN meeting. These abstracts give context to the variety of needs and progress of the programs working to train OBGYNs in Sub-Saharan Africa. The goal of this collection is to illustrate what has been done and what needs to be done within the next decade to train 1000+ OBGYNs. It also aims to orient the various participants with the needs, specialties, and goals of each country partnership. Partnership teams were asked to submit 250 word abstracts in the following areas:

1. Physical infrastructure
2. Curriculum development in academic OBGYN departments
3. Faculty development
4. Partnership development
5. Research, monitoring, and evaluation,
6. Certification and the role of professional societies, and
7. Deployment of OBGYNs and policy

Note: Not all participating countries submitted abstracts, but are welcome to do so at any time. This is a working document that will be updated periodically.

Botswana

Partnership Program: Botswana-Penn Partnership

Partnership development in Botswana for Training

Authors:

- Doreen Ramogola-Masire,
- Jack Ludmir

Botswana has an estimated 0.4 doctors per 1,000 people, the majority of whom being foreign nationals. A total of 733 Botswana medical students graduated between 2004 and 2010 from around the world at a cost of \$250 million (USD), with only a handful returning to the country. The University of Botswana School of Medicine (UBSoM) received its first class of medical students in August 2009, and internal medicine and pediatric residency program started January 2010.

Botswana-UPenn Partnership (BUP), a collaboration between Botswana Ministry of Health, and the universities of Botswana and Pennsylvania began in 2001 to assist the country with the rollout of the anti-retroviral program. The partnership focuses on building capacity in clinical care, education, and research and offers opportunities in global health for Penn trainees and faculty. Even in the absence of an OBGYN residency program at UBSoM, an average of two 3rd year OBGYN Penn residents spend a month each at the main public teaching hospital, Princess Marina Hospital (PMH), and participate in medical student tutorials and bedside teaching.

BUP fulltime in-country faculty members trained in various specialties fill important gaps in the UBSoM teaching program, as well as provide research mentorship for students, residents and faculty. BUP in collaboration with UBSoM implemented e-learning programs to enhance trainee access to medical literature and to train medical students and residents at sites far removed from the main university campus.

By focusing on collaboration with clinician-educators and researchers living in-country, we have found a model that is better adapted to capacity building than brief teaching engagements in country or sending trainees abroad.

Democratic Republic of Congo

Partnership: Universite Evangelique en Afrique-Panzi Hospital

Curriculum Development in the academic OBGYN: A case study of UEA-Panzi Hospital

Authors:

- Gustave Mushagalusa,
- Olivier Nyakio Ngeleza

The OBGYN training at UEA-Panzi Hospital started in 2011 as a pilot project. A workshop was organized in 2010 to assess the existing national curriculum and to compare it to the regional curriculum such as that of Rwanda and of Burundi.

A “learning-by-doing” model was adopted. In this model, senior residents take care of junior ones. A logbook and a daily checklist for students were developed. Each day, resident students have to make presentations at the morning staff meeting. One presentation is scheduled at each occasion. Parallel to this, each students has to perform two ‘guard’ duties weekly.

Professors provide seminars on specific topics, themes are chosen by students and usually selected from clinical cases encountered in the hospital. Lectures during the first two years are more focused on basic sciences such as anatomy, anatomopathology, and physiology. After this stage, the resident has to pass successfully an exam to receive a certificate that ascertains his/her OBGYN skills. The last three years are more clinical with a one-year training in a rural hospital setting and a thesis writing and presentation.

Faculty development at UEA-Panzi OBGYN department

Authors:

- Gustave Mushagalusa,
- Olivier Nyakio Ngeleza

For the capacity building, we are developing faculty training by doing the research within the hospital. The specialists in OBGYN are trained in research methods, statistics, writing, and oral communication skills. Because of the low number of professors, supervisors are recruited from partner universities. The thesis will be written as a compound of four to five articles. We aim to train fifteen professors until 2024.

UEA-Panzi Hospital: Partnership Development

Authors:

- Gustave Mushagalusa,
- Olivier Nyakio Ngeleza

For a new program, partnership is a key point for success. Within our program we are developing a South-South and South-North partnership. To achieve our goals, we have to look for excellence by sending our students to sister hospitals where they can acquire some skills in specific areas where are not competitive. In Africa we have a partnership with Hill Africa Hospital in North Kivu, and at present we are discussing possibilities with King Faisal Hospital in Kigali. In Europe, we are in collaboration with the CHU Geneves, the Laparoscopic in Belgium and the CHU of ANGERS. We would like to collaborate with sisters' OBGYN program with a long experience as we can learn from them. In the South-North partnership, we are facing many challenges in terms of roles and policies. In some cases, students are not in touch with patients, they are limited to observation.

Ethiopia

Partnership Program: St. Paul Hospital Millennium Medical College –
University of Michigan

The St. Paul Hospital-University of Michigan Partnership and Development of OBGYN Residency Training Program

Author: Senait Fisseha, MD< JD, Lia Tadesse, MD, Balkachew Nigatu,
MD

With support from the CDC/Twinning Center and an anonymous foundation, Dr. Senait Fisseha, MD, JD, in the U-M OBGYN department started a program in the spring of 2012 to strengthen medical education, maternal child health, and family planning in Ethiopia. In order to achieve the UN Millennium Development Goals which aim to reduce the number of maternal death by three quarters and the number of child deaths by two thirds in low and middle income countries, an OBGYN residency training program at St. Paul Hospital Millennium Medical College (SPHMMC) in Addis Ababa, Ethiopia was launched on July 1, 2012. For the last two years there have been a total of 21 residents enrolled into the program. In August 2012, family planning training was also integrated into medical education at SPHMMC for midwives, general medical practitioners, and OBGYN residents. In partnership with the Federal Ethiopian Ministry of Health (MOH), the program has greatly expanded to include a variety of departments and schools. In January 2014, the internal medicine residency program at SPHMMC was launched in addition to a maternal fetal medicine fellowship. Our presentation will highlight the steps to initiating the UM-SPHMMC partnership, challenges and barriers, and the infrastructure developed to lead the program to success and sustainability.

Ethiopia

Partnership Program: Hawassa University, College of Medicine and Health Sciences, Department of Gynecology and Obstetrics – University of Wisconsin.

Author: Zenebe Wolde, MD Obstetrician and Gynecologist

Introduction

Hawassa town is the regional capital of SNNP Region that is 275 KM away from the capital Addis Ababa. Hawassa University is one of the higher institutions in the country which encompasses variety of faculties and disciplines among which is the college of medicine and health sciences. The college is separate from the main campus, which has three schools (School of Medicine, School of Public Health and Environmental Sciences, and School of Nursing and Midwifery) and one department (Medical Laboratory Sciences). The College has got one referral teaching hospital, which is the only referral hospital in the region serving around 12 million populations. Hawassa University Referral Hospital is currently providing clinical services and it is also serving as a research and training center. There are both major and minor clinical departments and specialty services which includes Internal Medicine, Gynecology and Obstetrics, Surgery, Pediatrics, Ophthalmology, ENT, Dermatology, Radiology, Dentistry among others in the referral hospital.

Physical Infrastructure

The department of Obstetrics and Gynecology has got around 60 beds for inpatient management of cases with gynecologic and obstetric problems and it has also separate postpartum ward, separate corner for safe abortion and post-abortion care. The department has also established a separate model clinic for care of survivors of gender-based violence which is one of the three model clinics in the country. The department has also facilities to provide screening and managing of cases with pre-cancerous cervical lesions (VIA, Cryotherapy, and LEEP), and for VSC (bilateral tubal ligation and vasectomy). Currently, the department has seven general gynecologists and obstetricians, and four general practitioners who are already committed to join their post-graduate study in OBGYN. There are fourteen midwife and twenty clinical nurses assigned in the department. We have major operation room for elective gynecologic surgeries and some obstetric and gynecologic emergency operations and there is also a separate operation room primarily for emergency and elective C/S. We provide both

diagnostic and therapeutic gynecologic procedures at the outpatient department including MVA, E and C, Cryotherapy, LEEP, and ultrasound scanning.

Curriculum Development

The school has gone through the initial steps to start post-graduate program in all four clinical specialties (Gynecology/Obstetrics, Surgery, Internal Medicine, and Pediatrics) and currently the candidates are applying for the program. All the four departments have developed curriculum based on the existing situation in the country. The curriculum was developed after detailed review on both local and international curricula was made, after finalizing the write up it underwent internal review and it was also commented by partners from the US (University of Wisconsin). Finally, comments were analyzed and modifications were made in the final draft. The curriculum is yet to undergo external review by experts outside the institution.

Faculty and Partnership Development

All of the seven obstetricians and gynecologists are general OBGYN specialists. As the number of cases who need advanced care, including gynecologic oncology, urogynecology, fetomaternal medicine, gynecologic endocrinology, and infertility, is increasing and the postgraduate program is opening, we would like to create sustainable links with other universities and build the capacity of the staff. Currently, our institution has established partnership with the University of Wisconsin and Ise University in Japan.

Significance of Partnership

Creating a sustainable partnership would have significant contribution as it:

- Maximizes the quality of patient care with improved subspecialty care,
- Increases motivation of the staff and would be one means of staff retention,
- Improves the academic atmosphere, and
- Creates an opportunity for research undertaking

Therefore, collaboration with other facilities would be very much important in improving the health of mothers, improving outcome of pregnancies, enhancing the skill of medical students, residents and specialists in the facility.

Ethiopia

Partnership Program: Mekelle University & Gondar Health Sciences University – Oregon Health Sciences University

Developing a Global Women's Health Partnership: Experience from our Ethiopia Collaborations

Authors:

- Rahel Nardos, MD, MCR, Oregon Health & Science University/Kaiser Permanente, Division of Pelvic Medicine and Reconstructive Pelvic Surger
- Karen Adams, MD, Oregon Health and Science University, Obstetrics and Gynecology

In this discussion, we would like to share our four-year experience developing a uterovaginal prolapse surgery project between the division of Pelvic Medicine and Reconstructive Pelvic Surgery at Oregon health & Science University and a rural referral hospital in Western Ethiopia (Gimbie Adventist Hospital). This project was developed in response to a request by our partners to recognize and respond to the silent epidemic of uterovaginal prolapse in rural Ethiopian women. These women are at high risk for pelvic floor muscle and nerve injuries as a result of multiple vaginal deliveries, prolonged obstructed labor, a lifetime of heavy lifting and poor nutrition. Trained pelvic floor surgeons are rare in Ethiopia. Besides, rural women are too poor to afford sugery for something that is not immediately life threatening.

We will discuss important aspects of partnership development including understanding the needs of our partners, acquiring institutional approval both at home and in host country, the importance of having champions, the challenges of finding time and money to support an ongoing global medical collaboration, special considerations around medical team building, ethical and safety considerations when serving vulnerable populations, and, the importance of capacity building and sustainability. We will also discuss our ongoing effort to expand our global work through a promising multi-institutional partnership in women's health between our institution, Washington Univeristy and Mekelle University. We will discuss our vision to use telemedicine technology to strengthen this joint academic mission involving capacity building in the area of research, education, and clinical care.

Ethiopia

Partnership Program: CREGO New Program Director's School, Oregon health Sciences University, University of Michigan, St. Paul Hospital Millennium Medical College

Faculty Development Proposal: Development of a Training Curriculum for African Residency Program Directors (Panel Discussion)

Authors:

- Karen Adams, MD, Associate Professor, Vice-Chair for Education and Residency Program Director, Oregon Health & Science University, Co-Director, CREOG New Program Director's School
- Balkachew Nigatu, MD, Residency Program Director, St. Paul Hospital, Addis Ababa, Ethiopia
- Diana Curran, MD, Residency Program Director, University of Michigan

Dr. Adams has served as co-Director of the CREOG New PD School since 2008. Drs. Balkachew and Curran are both recent participants in the school. For this panel they will present the current CREOG curriculum, highlighting the portions that would be most useful for African programs (new resident orientation, feedback and evaluation, remediation, professionalism, communication skills, motivating faculty to teach, root cause analysis, etc.) and indicating which portions would be less useful (the Match information, milestones, etc.). Dr. Balkachew will provide reflections on his experience as an African PD taking the school in the US. The panelists will then lead all conference participants in a discussion regarding creation of a PD curriculum that could be generalizable across the continent, focusing on identifying participant needs and available resources that could be shared.

Kenya

Partnership Program: Moi University School of Medicine – Indiana University School of Medicine

Development of Innovative Sub-Specialty Training in Gynecologic Oncology for Low-Income Countries

Author:

- Hillary Mabeya, MD, Moi University School of Medicine

Introduction

The burden of female genital tract malignancies in Kenya is very high. More women die from cervical cancer than any other cancer. The complexity required for the management of women with gynecological malignancies is beyond the skill set of current general obstetricians and gynecologists trained in Kenya. In response to this challenge, the Reproductive health (RH) Department of Moi University developed a curriculum (similar to a fellowship in North America) for training in Gynecologic Oncologists in Kenya. Methods: Following a needs assessment and a stakeholders meeting that included physicians and consumers, the RH department decided to initiate gynecologic oncology fellowship training in Kenya. Drawing on the success of Academic Model providing Access to healthcare (AMPATH), and its North American collaborations a two-year curriculum in gynecologic oncology was developed and approved at Moi University. Results: The program is a two-year Master of Science in Gynecologic Oncology and has enrolled two candidates. The components of the curriculum include in surgery, medical and radiation oncology, palliative care, and research. Six North American Gynecologic Oncologists travel to Kenya to provide training mentorship. When there is no visiting faculty in Kenya there is a weekly Skype call to review cases and to discuss relevant gynecologic oncology topics. Conclusion: It is possible to develop and implement a sub-specialist training in a low resource country without contributing to local brain drain in the process. This curriculum has strengthened the collaboration between partner institutions and has provided an opportunity to develop sustainable comprehensive gynecologic oncology care for women in Western Kenya.

Liberia

Partnership: Liberia College of Physicians and Surgeons – Mt. Sinai School of Medicine

Curriculum Development of OB/GYN: The Experience of the Post Graduate Residency Program in Liberia

Authors:

- Lise Rehwaldt, MD, FACOG, Visiting Faculty, OB/GYN, Liberia Post Graduate Residency Program, Liberia, Assistant Professor, Icahn School of Medicine at Mt. Sinai, NY, USA
- John Mulbah, MD, CES, FWACS, Faculty Chair, OB/GYN, Liberia Post Graduate Residency Program, Liberia College of Physicians & Surgeons (LCPS), Monrovia, Liberia
- Roseda E. Marshall, MD, MPH, MRCP, FAAP, FWACP, Council President, Liberia College of Physicians & Surgeons, Monrovia Liberia
- Stephen B. Kennedy, MD, MPH, Secretary General, Liberia College of Physicians & Surgeons (LCPS), Monrovia, Liberia
- Bernice T. Dahn, MD, MPH, Chief Medical Officer of the Republic of Liberia, Ministry of Health & Social Welfare, MoHSW), Monrovia, Liberia

The Liberian Curriculum was developed based on the Ghanaian Curriculum and then adapted to specifically fit the needs of Liberia. The proposed curriculum was then submitted and harmonized by the West African Health Organization (WAHO).

Creatively addressing the current challenges inherent with a limited number of faculty members, the formal curriculum is being supplemented by the development of Core Curriculum Modules. These modules are designed to be given over defined periods, in collaboration with “fulltime on the ground faculty” and visiting professors with subspecialty expertise from Academic Partnership/Consortium. The curriculum modules being developed include: Gyn Oncology; Obstetrical Emergencies; Ultrasound; Family planning; Critical Care/Anesthesia; Gynecological Surgeries; Urogyn-Fistula Prevention and Repair; Neonatal Resuscitation; Patient Safety/Communication; QA Model; Research Development, etc.

In the second phase of development, the plan is to take some of the curriculum modules on the road to counties throughout the country to utilize the “teach the teacher” model. A similar decentralized model is currently being utilized in fistula prevention/repair in Liberia under the

Critical Components in Building Capacity

leadership of Dr. John F. Mulbah. Fistula delegations travel to various district hospitals providing clinical service and training in fistula. In the future, the plan is to incorporate fistula training and cervical cancer screening program under the OB/GYN residency program. Travelling delegations of training teams will include residents. Travelling curriculum modules will focus on education in: Fistula; Emergency Obstetrics; Cervical Cancer Screening; Gynecological Surgical training; Family planning; Patient Safety, etc.

Teaching in this forum, on a local level, will reinforce the learning process for residents enrolled in the Liberian OB/GYN training Program and help to address some of the short term needs of the country with regards to providing current quality care at outer posts.

Liberia

The Fundamental Framework for the Establishment of a Post Graduate Residency Training Program in Liberia

Authors:

- Stephen B. Kennedy, MD, MPH, Secretary General, Liberia College of Physicians & Surgeons (LCPS), Monrovia, Liberia
- Roseda E. Marshall, MD, MPH, MRCP, FAAP, FWACP, Council President, Liberian College of Physicians and Surgeons, Monrovia, Liberia
- Bernice T. Dahn, MD, MPH, Chief Medical Officer of the Republic of Liberia, Ministry of Health & Social Welfare (MoHSW), Monrovia, Liberia
- John Mulbah, MD, CES, FWACS, Faculty Chair, OB/GYN, Liberia Post Graduate Residency Program, Liberia College of Physicians & Surgeons (LCPS), Monrovia, Liberia
- Moses B. F. Massaquoi, MD, MPH, co-Chair, Technical Working Group (TWG), Liberia Post Graduate Medical Program, Liberia College of Physicians & Surgeons (LCPS), Monrovia, Liberia

The Liberian health system was severely affected by the protracted civil conflict. For example, the conflict forced many qualified and professional Liberians to flee, thereby creating significant shortfalls in the country's human resource capacity. In 2012, Liberia has approximately two hundred and fifteen (215) registered and licensed physicians in the country; of which, one hundred and forty-four (144) were Liberian doctors and less than fifteen (15) specialized clinical physicians. Of those fifteen (15) specialized clinical physicians, about half (50%) are currently practicing Liberian specialist physicians. Presently, Liberia has no in-country pathologist, urologist, neurologist, endocrinologist, anesthesiologist and oncologist, among others. This severe shortage of specialist physicians prevents the Government of Liberia (GoL) from meeting its global human resources for health index as enshrined in the 10-Year National Health Policy & Plan for 2011-2021.

Since the end of the civil crisis, the GoL, in collaboration with international partners, continues to invest in the health care delivery system. This has created the need for the establishment of a post graduate training program. Initially, the program will train specialist doctors in seven recognized Teaching Hospital across the country, covering the following core areas: Surgery, Internal medicine, Pediatrics, and Obstetrics & Gynecology, respectively. Specialists trained in these four core areas will be

Critical Components in Building Capacity

professionally prepared to independently manage surgical and medical cases at the highest level of competence. Other programs to be included in the future include the Faculties of Anesthesiology, Community Medicine, Psychiatry, and Family Medicine.

The global expectations of the Liberia Post Graduate Medical Training Program of the Liberia College of Physicians & Surgeons include:

1. A graduate medical education program that is sustainable and capable of producing a high-quality health workforce to provide the citizens of Liberia with highly trained healthcare specialists.
2. A graduate medical education program to strengthen the health system, promote health care and improve quality health services across the country.
3. A graduate medical education program that is one (1) of the major deliverables of the GoL through the enshrined National Health Policy & Plan that is consistent with Vision 2030.
4. A graduate medical education program that would provide a sustainable, high-quality medical specialist workforce for Liberia by 2021 and beyond.

Liberia

Health System Strengthening: The Need for An OB/GYN Post Graduate Residency Training Program in Liberia

Authors:

- John Mulbah, MD, CES, FWACS, Faculty Chair, OB/GYN, Liberia Post Graduate Residency Program, Liberia College of Physicians & Surgeons (LCPS), Monrovia, Liberia
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- Roseda E. Marshall, MD, MPH, MRCP, FAAP, FWACP, Council President, Liberian College of Physicians and Surgeons, Monrovia, Liberia
- Bernice T. Dahn, MD, MPH, Chief Medical Officer of the Republic of Liberia, Ministry of health & Social Welfare (MoHSW), Monrovia, Liberia

There is no postgraduate training in Liberia. Training programs were outside the shores of Liberia and as such, medical graduates had to travel and stay in other countries for protracted periods ranging from four to six years. During this period, the services of these doctors were not available to Liberia. In addition, many of them never returned home after specialist training. Training manpower in foreign countries is also very expensive for the government.

Considering the constraints listed above, it was imperative to develop postgraduate training program in country to help produce specialist manpower. The advantages of this program include: Liberian graduate will be able to undergo post-graduate training in Liberia; they will be able to render services in Liberia during the training period, and the resources that are put in place ofr their training will remain in the country and will also be available to train others, and they will be more familiar to diseases that are more common and socio-cultural norms.

We expect that they will be more familiar with the environment and are more likely to stay in country, the program will provide manpower for undergraduate, post-graduate training, and the training of other health workers, and the products of this program will ensure the improvement and sustainability of quality health services in Liberia.

Liberia

OB/GYN Partnership Model for Liberia Post Graduate Residency Training Program

Authors:

- Lise Rehwaldt, MD, FACOG, Visiting Faculty, OB/GYN, Liberia Post Graduate Residency Program, Liberia, Assistant Professor, Icahn School of Medicine at Mt. Sinai, NY, USA
- Roseda E. Marshall, MD, MPH, MRCP, FAAP, FWACP, Council President, Liberian College of Physicians and Surgeons, Monrovia, Liberia
- John Mulbah, MD, CES, FWACS, Faculty Chair, OB/GYN, Liberia Post Graduate Residency Program, Liberia College of Physicians & Surgeons (LCPS), Monrovia, Liberia
- Stephen B. Kennedy, MD, MPH, Secretary General, Liberia College of Physicians & Surgeons (LCPS), Monrovia, Liberia
- Bernice T. Dahn, MD, MPH, Chief Medical Officer of the Republic of Liberia, Ministry of health & Social Welfare (MoHSW), Monrovia, Liberia

Relationships between institutions arise out of relationships with individuals, then expand to institutional partnership and subsequent development of much larger consortiums. Individual relationships are based on trust and respect that develops over time. Consistent faculty members from Mount Sinai have been coming to Liberia since 2008 when the program was initiated.

In 2010, the Mount Sinai OB/GYN Department incorporated a formal Global Health rotation in GY3 and since that time, Mount Sinai residents have rotated on a regular basis in Liberia with Attending Physicians. This opportunity has changed their relationship with the global world, allowing them to experience and learn about health care in a low resource setting where they must rely on their clinical acumen and awareness of the cultural community they are practicing in. Many residents have returned during GY4 and continue to participate after graduation.

Capacity Building has been the key focus of many of these missions. Prior to this year, there was no opportunity for formalized subspecialty training in OB/GYN in Liberia. Residents, after completing their one year internship, were required to participate in a 6-month intensive emergency obstetrical/surgical training program offered at 3 different sites, prior to being sent to assigned outposts where they function often independently.

Faculty that were involved in those early training sites from various institutions, are presently being recruited as faculties for the Liberian Post Graduate OB/GYN faculty, reiterating the point that individual relationships that developed over time are the basis for collaboration and consortium building.

Moving forward in the development of the Liberian OB/GYN Residency program, there will be significant exchange between residents in Liberia and their Academic partnership(s). Mount Sinai residents will continue to rotate in Liberia, with greater consistent presence and under the supervision of “full time on the ground Mount Sinai faculties”, Liberian faculties and rotating faculties. Senior residents and fellows are excellent educators and greater consistent presence will allow for more meaningful collaborative research opportunities with Liberian colleagues.

Senior residents from the Liberian program will also have the opportunity to rotate at Mount Sinai in PGY3 where they will gain exposure to things they may have not encountered at home and they will also be able to share their honed clinical experience with their Mount Sinai colleagues.

The potential for meaningful exchange in both directions becomes even more vibrant when one expands beyond our current institutional partnerships and begins to develop consortiums with other academic institutions, both locally and abroad. The global collaboration provides even broader opportunities ofr creative ways to educate our residents, clinically and culturally, both in the United States and Sub-Saharan Africa (SSA), respectively.

Malawi

Partnership Program: Malawi College of Medicine – University of North Carolina

Malawi Post-Graduate Masters in Medicine (MMED) Program

Author:

- Jeffrey Wilkinson, MD, MPH, University of North Carolina

The post-graduate Masters in Medicine (MMED) program in Obstetrics and Gynecology at the Malawi College of Medicine (COM) was inaugurated in October 2013. The COM had an approved curriculum for the program since 2006, but initiation was delayed due to lack of funding and sufficient numbers of faculty. Prompted by a commitment by two private donors with matched funds by the US Centers for Disease Control (CDC), the MMED program coalesced rapidly with the following dedicated partners committing to provide faculty, technical assistance and medical equipment: Malawi College of Medicine, The Norwegian government and medical colleges, University of North Carolina, Baylor College of Medicine, Loma Linda University, the US CDC via I-Tech (a health sector NGO) and the Bill and Melinda Gates Foundation.

The nature of the multi-institutional and multi-national collaborative effort in Malawi is a potential strength of this program as well as a potential weakness. The academic and clinical strengths of the contributing institutions will foster unparalleled exposure for the trainees. The multi-layered funding for the program may provide some flexibility if one or more partners is unable to contribute on a temporary or permanent basis. However, potential challenges arise with coordination of funding, management of institutional expectations, maintenance of relative parity between and within institutions and organization of learning opportunities for external trainees, to name a few. By strengthening the capacity of the COM faculty (currently led by Dr. Ron Mataya and Dr. Grace Chiudzu) and the national Association of Gynecology and Obstetrics, it is anticipated that these challenges can be met. We're hoping to learn from other collaborative post-graduate training programs at the meeting in Accra.

Other

Program: Elevate Health, UMC Utrecht

Online Pilot Course in the Management of Hypertensive Disorders During Pregnancy

Authors:

- Renee Filius, Elevate Health,
- Joyce L. Browne, Elevate Health

In collaboration with consortium members, Elevate Health creates a pilot course, which includes a pilot course evaluation with key consortium members. Topic of the pilot course will be hypertensive disorders in pregnancy (HDP), one of the four major causes of maternal mortality and morbidity. Name of this pilot course will be 'Hypertensive disorders in pregnancy'. Target audience will be OBGYN residents with clinical experience allowing for an advanced level course. The course will consist of an eight-hour specific course. The content will be consortium driven and established at the February meeting. The course will be further developed between Feb-June 2014.

Elevate would like to give a short presentation which includes topics such as:

- Curriculum Development in Academic OBGYN Departments
- Faculty Development
- Accreditation, Certification & Professional Societies

Our presentation(s) will include:

Part One: Demonstration

- Demonstration of the Virtual Learning Environment
- Demonstration of teaching tools, relevant examples
- Innovative clinical teaching models that could be used
- Collaboration between consortium members and Elevate Health

Part Two: Pilot Course and Curriculum

- Design of the pilot course
- Content and course material
- Development of the pilot course
- Recording of the lectures
- Planning of the pilot course development (who, what, when)
- Teaching the pilot course

- Evaluating the pilot course
- Accreditation and Certification
- Further Curriculum Development

If possible, we would like to split these parts into two presentations of each 15 minutes. The presentations contain information, which we think is necessary for the consortium members.

Program:

**Curriculum Development in Developing Nations:
Lessons Learned in Female Pelvic Medicine**

Author:

- Lauri J. Romanzi, MD

As academic medicine in developing nations strives to reflect and implement Ministry of health and Public Health goals, reproductive health morbidities, the “stuff” of Female Pelvic Medicine and Reconstructive Surgery (FPRMS), may or may not be at a stage of intensive focus, relative to reproductive health mortality reduction resource allocation.

As a result, silo funding of the most egregious morbidities, such as lack of family planning and genital tract fistula, has been the focus of WHO, UNPFA, and international NGO campaigns. Hyper-focused clinician training, often in intermittent “camp” settings, is to be congratulated for catalyzing many Ministry of Health efforts to address these morbidities, through the “recognition, resource allocation, general implementation” evolution that now has reached the academic training level.

One prime example is the evolution of programs devoted to obstetric fistula, an eradicable morbidity caused by obstructed labor, to include evaluation and management of other, non-eradicable, pelvic floor morbidities (prolapse, incontinence, etc.). This natural progression is wedded to promotion of obstetric skills competencies, academic training and community awareness that hastens the eradication of obstructed labor, and thereby obstetric fistula, as occurred in the late 1800’s in North American and Western Europe.

Models to be discussed include:

- Triumphs and flaws of the silo-funded model (Pakistan, DR Congo)

- Intermittent recurrent training in a residency program (Somaliland, DR Congo)
- Full time FPMRS curriculum development within established, government funded academic OBGYN programs (Nepal, Rwanda).
- Intermittent subspecialty professional organization (IUGA Ghana Project) mentoring of an established academic center Urogynecology Fellowship program (Ghana).

Program: **Jhpiego**

Authors:

- Jean Anderson, MD
- Ricky Lu, MD
- Blami Dao, MD
- Peter Johnson, CNM
- Harshad Singhvi, MD
- Johns Hopkins University
- Jhpiego

Jhpiego is an international affiliate of Johns Hopkins University working in women's health for over 40 years and currently working in more than 50 limited resource countries, primarily in sub-Saharan Africa and Asia. This presentation will describe Jhpiego approach and experience in training at the preservice level addressing issues including maternal and neonatal health (antenatal care, emergency obstetric care, malaria in pregnancy, preeclampsia, postpartum hemorrhage), HIV, and PMTCT, family planning and prevention of cervical cancer, and infection control and prevention. Basic principles include working through local leadership, engaging relevant stakeholders, comprehensive needs assessment, and development of quality assurance mechanisms. Successful activities in support of curriculum development and faculty support have involved the following:

- Identification, nurturing and supporting local champions for change,
- Strengthening teaching skills of OBGYN faculty using competency-based approaches and evidence-based guidelines,
- Strengthening curricula by review of existing materials and updating, incorporation of more interactive, team-based approaches and standardized pre- and post-test evaluations,
- Use of skills laboratories with simulation (e.g., IUD insertion, neonatal resuscitation),
- Interactive, multi-media clinical case study-based e-learning and support, and,
- Use of OSCE for learning and assessment/evaluation.

Rwanda

Program: Human Resources for Health – Albert Einstein College of Medicine

**Development of Einstein Partnerships in Obstetrics & Gynecology
and Women’s Health across Sub-Saharan African Countries
February 12-14, Accra, Ghana**

Authors:

- Irwin R. Merkatz, MD
- Diana Wolfe, MD, MPH

The institutional mission of the Albert Einstein College of Medicine’s (Einstein) Global Health Center is to “promote the ideal of health for all”. The Center’s goals and objectives include the domains of education, research, and service with the ultimate goal of reducing disparities in health and alleviating human suffering. Faculty from the Department of Obstetrics & Gynecology and Women’s Health, committed to reducing maternal mortality and morbidity and who previously worked in Haiti and Sub-Saharan Africa. Sites include the Democratic Republic of the Congo, Ethiopia, Ghana, Rwanda and Uganda. In 2012 the Department joined the Clinton Health Access Initiative with a 7-year commitment to the Human Resources for Health Program in Rwanda. The role of the faculty is to facilitate the training of residents primarily at the University Hospital at Butare as well as in Kigali. Departmental faculty members have been on site in Rwanda continuously for the past two years. Since 2007, Departmental faculty members have also voluntarily contributed to the training of local physicians and health workers in the rural environment of Kibogora, Rwanda, and have established an ongoing birthing center. Most recently, the World Bank selected the Department and its newest collaborating partner, “Saving Mothers Giving Life”, to receive a capacity building grant in Uganda testing a mobile phone application for improving access to emergency obstetric care.

The Department is one of the largest and most diverse in the United States (US), for the annual training of 46 residents and 23 sub-specialty fellows. Two Ghanaian Professors of maternal Fetal Medicine are actively involved in this educational responsibility. The community we serve is the Bronx, NY which in particular is the home to the majority of Ghanaians in the US. The 2011 US Census reported a total of 108,389 American of Ghanaian background.

Einstein's Chairman of Obstetrics & Gynecology and Women's Health, Dr. Irwin R. Merkatz, proposes to partner with Ghanaian physician educators in the training of Ghanaian OBGYN residents at a semi-urban district hospital site in the Akuapem Ridge. In keeping with the national goal of increasing OBGYN providers, the proposal is endorsed by the Ghana College of Physicians and Surgeons and will be housed at the Tetteh Quarshie Memorial Hospital. The clinical experiences and exchange of both culture and language gained through this partnership will benefit the mutual communities we serve in both Ghana and the Bronx populations.

Albert Einstein College of Medicine (Einstein) Teaching Program for OBGYN Residents in Rwanda

Authors:

- Irwin R. Merkatz, MD
- Sierra Washington, MD

The Albert Einstein College of Medicine (located in the Bronx, NY, USA), in partnership with the Human Resources for Health Program (HRH), has placed member of the full time faculty for the Department of Obstetrics & Gynecology and Women's Health at the Butare University Teaching Hospital (BUTH) in Rwanda. These faculty members have been charged with three main objectives:

1. Curriculum development and didactic teaching for postgraduate students in OBGYN,
2. Improving the quality of care for pregnant and non-pregnant women through promotion of evidence-based medicine, and,
3. Creating systems for internal monitoring and quality improvement.

Curriculum Development and Didactic Teaching

In collaboration with other HRH faculty, the Einstein faculty members have created a standardized two-year cycling lecture series that covers all topics outlined in the Rwandan OBGYN postgraduate training curriculum. These lectures are given concurrently at both main teaching hospitals in Rwanda in order to standardize the postgraduate learning experience. Basic surgical skills workshops and simulation labs are included in the lecture series. Competency-based evaluations of clinical skills, surgical skills, communication techniques, medical knowledge, and professionalism are implemented quarterly and annually for postgraduate evaluations.

Improving Quality of Care Through Evidence-Based Medicine

The Einstein faculty members have focused on improving the quality of

Critical Components in Building Capacity

care through evidence-based bedside teach and structured morning report. In the operating theatre, emphasis is placed on teaching sterile technique and development of new surgical skills.

Internal Monitoring and Quality Improvement

The Einstein faculty members have also assisted the BUTH Department of OBGYN in creating a system of ongoing maternal morbidity/mortality audits and monthly infection control reviews. Through these processes, we seek to assess areas for improvement and implementation of feasible solutions. The Einstein faculty members have also assisted in the responsibility to provide District Hospital supervision and tracking data to improve a base for quality improvement. Through these three interventions at BUTH, we aspire to train a new generation of OBGYNs in Rwanda who use evidence-based medicine, possess excellent surgical skills and have developed a practice of life-long learning.

Uganda

Program: Makerere University – University of California, San Francisco

OBGYN Post-graduate Training at Makerere University

Authors:

- Josephat Byamugisha, MD
- Meg Autry, MD

Although UCSF as a whole – particularly Infectious Disease – has had a very strong relationship with Mulago Hospital and Makerere University for twenty years, the Department of OBGYN has only had a loose relationship until approximately five years ago. At that time, an OBGYN faculty contingent traveled to Kampala and met with stakeholders and performed a needs assessment for a stronger affiliation. The needs assessment revealed surgical skills transfer for faculty and residents, faculty development, and research collaboration as key areas of interest. We have hired a global health faculty with 40% time availability on the ground. We were able to complete and publish a remote surgical skills study, introduce laparoscopy, and combine with Global Partners in Anesthesia and Surgery to sponsor a senior scholar. We are working hard with the oncology division to develop skills and improve diagnosis and treatment. We have made advances with radiation oncology in Mulago. We have established a resident rotation and have been able to bring one Ugandan contingency to UCSF and APGO. We are working on volunteer clinical faculty positions at UCSF for appropriate Ugandan faculty. One mid-level Ugandan faculty has applied for a Fogarty and we have made it to the Gates Grand Challenges finals. We have one R21 looking at fistula reintegration. Challenges include funding, needing more on-the-ground time for UCSF faculty, bilateral exchange, subspecialty training, and infrastructure issues. Funding can be further divided into UCSF faculty support, bilateral exchange, research seed money, and initiative funding.

Uganda

Program: Mbarara University of Science and Technology-Mass General Hospital Collaboration

Mbarara Surgical Services Quality Assurance Database (SQUAD)

Authors:

- Joseph Ngonzi, MD
- Blair Wylie, MD

Hospital leadership at the Mbarara Regional Referral Hospital (MRRH) in Uganda recognized that access to accurate data on clinical outcomes is central to any and all efforts to improve patient care. With technical and financial support from Massachusetts General Hospital, a prospective database was established in the Spring of 2013 at MRRH for quality improvement at the hospital. Data clerks dedicated to the project enter information onto SQUAD laptops on all surgical and obstetric admissions into a Microsoft Access database. Information is gathered from hospital records; missing or confusing information is clarified with the managing clinician in real time. Data recorded includes patient demographics, indications for surgery, time between decision for surgery and completion of procedures, details of anesthesia, use of antibiotics, equipment failures, missing supplies, and clinical outcomes. For obstetric admissions, additional information on labor/delivery complications, method of delivery, and neonatal and maternal outcome are captured.

Data entry began on August 1st, 2013. In the first four months, data from 547 gynecologic ward admissions and 3,016 obstetric ward admissions were abstracted. Current efforts include:

1. Verification of the accuracy of the collected data,
2. Monthly summary information feedback to the OBGYN department, and,
3. Improved linkage with the pediatrics department to increase the ability to track newborn outcomes. Data generated from the SQUAD project will be the foundation for clinical improvement and research projects in the obstetric/gynecology department at MRRH.

Establishing Partnership Goals In A New Collaboration

Authors:

- Joseph Ngonzi, MD
- Blair Wylie, MD

In response to an effort by Mass General Hospital's (MGH) Center for Global Health to expand and strengthen its relationship with the Mbarara University of Science and Technology across all hospital departments, faculty from MGH's Department of OBGYN travelled to Mbarara in 2011. During this exploratory trip collaboration goals were outlined that focused on three major areas (research, education, quality improvement). The list generated, abbreviated below, serves as a working template for the partnership around which efforts are measured and fundraising efforts targeted.

A. Research

- *Research mentorship of MRRH OBGYN residents:* Pair MRRH OBGYN residents with MGH faculty to serve as secondary research advisor. Seed funds for MRRH projects.
- *Research mentorship of MRRH OBGYN faculty:* Provide research mentorship to MRRH faculty – share grant opportunities, editorial advice for grants and manuscripts, study design input. Travel support for MRRH faculty to international meetings.
- *OBGYN Glocal Health Fellowship:* Establish fellowship for US OBGYN graduate to work in Mbarara
- *MGH CAMTech Institute field site:* Develop research capacity for MRRH to serve as field site for MGH technology innovations designed to improve maternal and newborn care.

B. Education

- *Resident rotations:* Create opportunities for MGH residents to rotate to Uganda and Ugandan residents to rotate to MGH.
- *Residency positions:* Fund MMed positions for Ugandan physicians.
- *Teleconference:* Establish case-based monthly teleconference between institutions.

C. Quality Improvement

- *QI Database:* Develop database for gynecologic surgeries and obstetric deliveries for quality improvement projects and foundation for research questions.
- *Supply requests:* Procurement of needed supplies/equipment (emergency C-section supply cabinet, colposcope).

1000+ OBGYN

PROJECT

A Plan to Deliver Critical Obstetric Care:
Training 1000+ Obstetricians/Gynecologists
in Sub-Saharan Africa in the Next 10 Years



*"Nearing the end of her fourth pregnancy she went to the health centre and was seen by a nurse. Yet when she went into labour there was no doctor, equipment or drugs to manage her complications. She died in front of her family and the nurse."
— Story of Bolumbu from the Democratic Republic of the Congo*

“Maternal mortality is people. It is women, women who have names, women who have faces, and we have seen these faces in the throes of agony, distress and despair. They are faces that continue to live in your memory and haunt your dreams. And this is not simply because these are women who die in the prime of their lives, at a time of great expectation and joy. And it is not simply because a maternal death is one of the most terrible ways to die ... it is because in almost each and every case, in retrospect, it is an event that could have been prevented.”

*Dr. Mabmoud Fathalla
Chair, Who Advisory Committee On Health Research
World Health Day, April 7, 1998*

THE CHALLENGE

Lack of Access to Critical OBGYN Care

A woman in Sub-Saharan Africa is almost 100 times more likely to die from pregnancy or childbirth-related complications than a woman in a developed country; a 1 in 39 lifetime risk compared to 1 in 3,800. While poverty, AIDS, Ebola, malaria, and violence in Africa have rightly captured the world's attention, the lack of access to critical obstetric care has quietly devastated Sub-Saharan communities in a direct and personal way. These deaths, as well as early neonatal deaths and complications such as fistula, are almost all preventable with skilled obstetric care.

Plan Narrative

A woman in Sub-Saharan (SSA) Africa is almost 100 times more likely to die from pregnancy or childbirth-related complications than a woman in a developed country; a 1 in 39 lifetime risk compared to 1 in 3,800. While poverty, AIDS, Ebola, malaria, and violence in Africa have rightly captured the world's attention, the lack of access to critical obstetric care has quietly devastated Sub-Saharan communities in a direct and personal way. These deaths, as well as early neonatal deaths and complications such as obstetric fistula, are almost all preventable with skilled obstetric care.

Putting an end to preventable maternal, perinatal and early neonatal mortality will only be realized when the most severe maternal complications can be comprehensively addressed with known obstetric interventions. Newborn lives can be saved when an at-risk fetus is identified and delivered before it is too late. To provide the high-impact interventions of modern obstetric care and to provide leadership in women's health, skilled professional obstetricians/gynecologists are required as part of the health care team. Currently, the ability to train this level of practitioner is severely lacking in most countries of SSA Africa. However, many universities and tertiary hospitals are potential training sites for physicians who wish to become OBGYN physicians. Our experience in Ghana has shown us that it can be done; that long-term partnerships can sustainably create new capacity, and that trained OBGYNs will stay in their country. The investment in training OBGYNs also reinforces institutions for certification and professionalism, building an engaged and global network of OBGYNs - ultimately strengthening the broader public health infrastructure.

The early activities of the 1000+ OBGYNs project have stimulated the imaginations of the leaders of professional organizations and university-based OBGYN departments globally to respond to this urgent need and mobilized OBGYN departments throughout SSA to begin or increase production of OBGYN specialists. Herein, we propose a replication of our Ghana-Michigan program to encompass the first 18 African OBGYN departmental partnerships with their "high-resource" partners, and the corresponding Ministries of Health and Education. We also propose the creation of a coordinating hub for educational activities, networking, and measuring the impact of expanding numbers of OBGYNs providing high-impact, obstetrical interventions.

History

The 1000+ OBGYN project started at a planned side meeting during the 2012 International Federation of Gynecology and Obstetrics (FIGO) congress in Rome, Italy. We invited obstetricians and gynecologists from high maternal mortality/low-resource, Anglophone Sub-Saharan African countries to discuss the current status of obstetrics and gynecology training in SSA. The reports from a broad range of African participants made it clear that the ability to deliver high-impact interventions to reduce maternal and neonatal mortality is severely limited by the undeveloped human and technical capacity in many places across the continent. There is a great need for university-based programs to train physicians to become obstetricians and for African-based certification systems that embed stature and community into such systems. Such stature and community are fundamental aspects of health force retention.

The Rome meeting was premised on the success of the Ghana-Michigan partnership, where efforts to build capacity have resulted in the training, certification and retention of over 142 trained OBGYNs who have great impact in both urban and rural settings. Our second, larger gathering and conversation took place in February 2014 in Accra, Ghana. This gathering confirmed the dire need as well as an institutional desire to strengthen OBGYN departments across SSA. A shared goal of creating OBGYN communities of practice and policy influence emerged. Over 120 people, representative of academic obstetrics and gynecology programs from the USA, Great Britain and Sub-Saharan Africa, and representatives from the Ministries of Health and Education of 14 Sub-Saharan African countries committed to a shared goal of training 1,000+ new OBGYNs in the next 10 years. This Accra conference initiated the networks and plans to make it happen.

These two gatherings have put into place a transformational process. Never before has a group of academic and clinical OBGYN physicians, their national and international professional and expert clinical organizations, and government representatives been so poised to respond to one of the greatest medical and public health needs of our time. Our plan is solidly based on a successful program in Ghana and its core commitments to collaboration, mutual respect and benefit, and long-term sustainability. Our plan also addresses the problem of preventable maternal and early neonatal mortality in a manner consistent with the current, global calls for capacity-building and health system strengthening - both crucial to achieve the Sustainable Development Goals, and to provide long term and complete solutions.

The Ghana Story

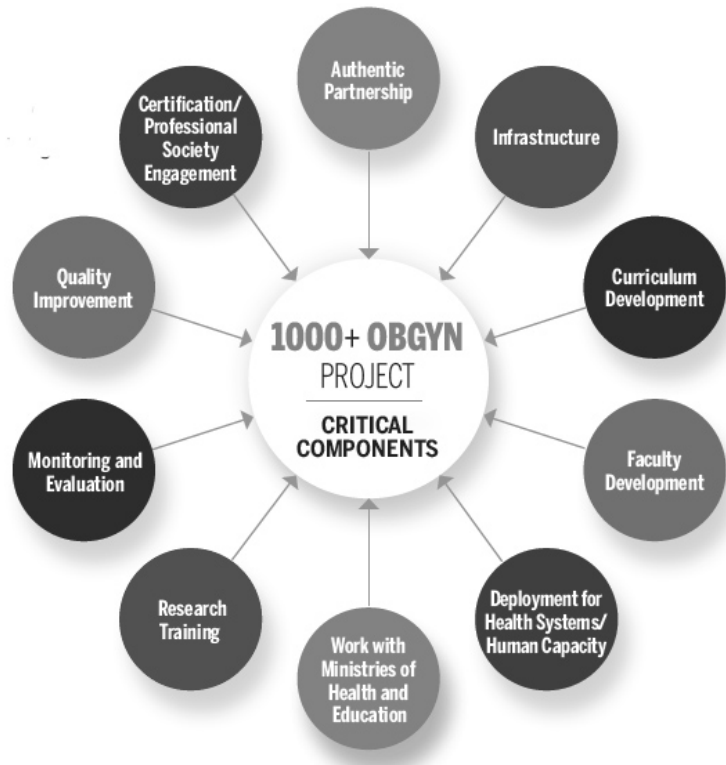
The Ghana postgraduate obstetrics and gynecology collaborative residency training program started in 1989 in response to the low repatriation rate of Ghanaian physicians sent to Great Britain for training. The Ghana Ministry of Health, the University of Ghana, the Kwame Nkrumah University of Science and Technology, ACOG and RCOG and university departments of Obstetrics and Gynecology in the U.S. and Great Britain teamed together to strengthen the Ghanaian university-based training programs in obstetrics and gynecology. Its inaugural years were funded by innovative support from the Carnegie Corporation. The 1000+ OBGYN Project has evolved to be deeply embedded within strong interpersonal and inter-institutional relationships. The postgraduate program was five years in length, utilizing a comprehensive curriculum that included a three month rotation in the U.S. or Great Britain, a six month rotation in a district medical facility, and a three month rotation in a business management program. As of November 2012, 141 physicians - very nearly all of those who participated - have been trained and certified as obstetricians and gynecologists and remain in-country. There, graduates practice in both urban and rural areas, and some graduates are now leading obstetrics and gynecology departments at the two new medical schools as the country's health infrastructure grows.

The program was made possible through academic and professional partnerships that built the context and expertise for training physicians to become OBGYN specialists. This program has a great impact as the obstetricians deliver high-impact interventions with better outcomes, more expert and standardized management, and more organized and efficient clinical case management. There were also notable increases in the number of other health care personnel in response to the presence of the obstetrician, improved teaching, and increased availability of technologies. Patients were found to have a higher confidence in the healthcare system, to report to the hospital earlier, and to feel confident about delivering at a hospital when an obstetrician is present. Each of these, in context, is a significant achievement. These achievements illustrate the impacts of what might start as relatively small investments in training cohorts of just a few additional OBGYNs. The Ghana story began the steady drumbeat of strong leadership, long-term participation, and geographic distribution of access to care at critical moments.

The Concept

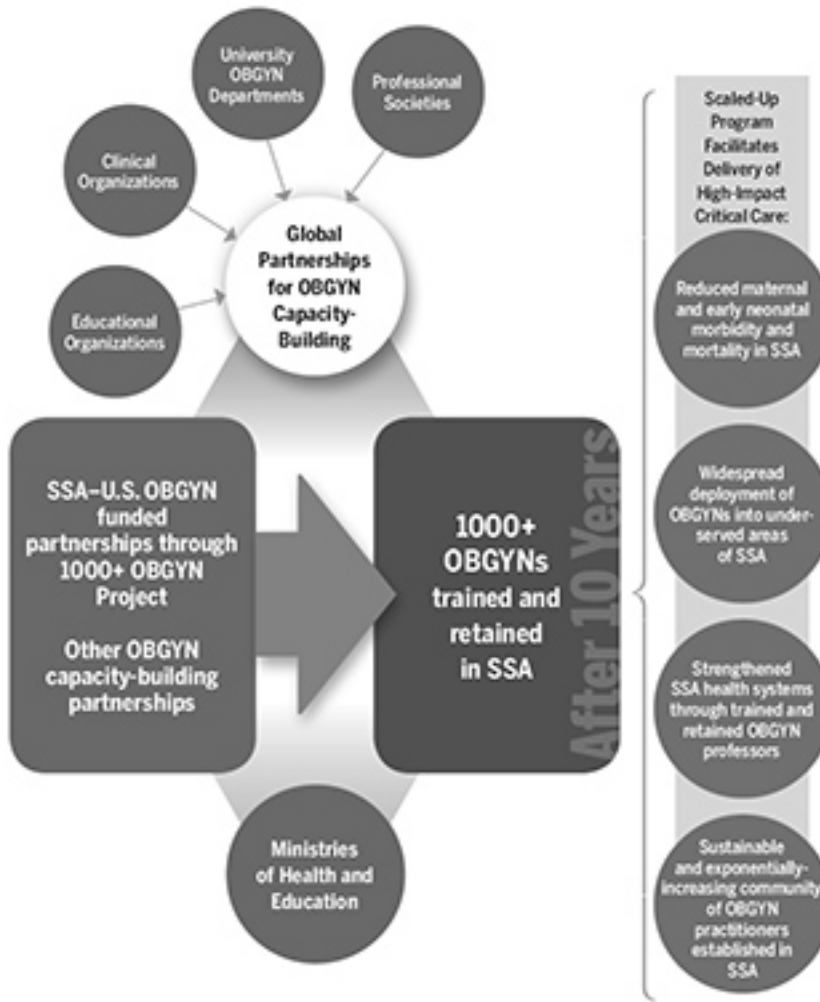
To train 1,000+ new OBGYNs to deliver the high-impact interventions proven to reduce maternal and neonatal mortality, African OBGYN departments must be supported in such a way that the trainee-physicians deliver high-impact care while participating in the three to five year OBGYN training and certification program. Our program will “re-invent” obstetrics for the African context and will connect African doctors, universities and hospitals to each other, and also to U.S., Canadian, European or other established-partner universities. It will also have positive impacts on district level and rural hospitals, improving treatment, referrals, and interventions.

The 1000+ OBGYN Project leadership and management team will lead the development of “guidelines for participation” for the original eighteen African OBGYN programs based on the ten Critical Components that emerged from prior meetings. Eighteen programs in fourteen SSA countries will be phased in over three years — six at a time. Eligible OBGYN departmental partnerships will create comprehensive plans that respond to guidelines, key criteria and commitments. New partnerships and institutions can enter as the program unfolds. The 1000+ OBGYN Project leadership team will organize the network of participating university-based OBGYN departments in both high and low-resource countries, with support of national and international professional organizations.



CRITICAL COMPONENTS of comprehensive OBGYN training, as identified during Rome (2010) and Accra (2014) meetings of the 1000+ OBGYN PROJECT partners.

1000+ OBGYN Project: **The Vision**



1000+ OBGYN Project: **Logic Model**



The Plan

The 1000+ OBGYN Project is designed to deliver care in fourteen countries across the African continent both in the present and for the foreseeable future. We will do so by replicating at universities across Sub-Saharan Africa (SSA) a unique, culturally sensitive and sustainable model, already proven successful in Ghana. This approach works, and the will to implement it is present. Partners on both sides of the Atlantic — universities, professional societies, and expert clinical organizations — have responded. All that's missing are the means to put this game-changer into action.

This project will train hundreds of OBGYNs each year who will deliver critical care in their communities from the day they begin their residencies. It will create a pipeline resulting in 1,000 certified OBGYNs over the projected status quo within a decade and at least 1,000 more every five years thereafter. Eighteen African medical schools will leverage the strengths and commitments of seventeen U.S. partners to infuse mutual respect, expertise, curricula, and mentoring into African OBGYN training programs. These training partnerships will respond to the unique needs of the African context, building the in-country capacity to lead high-impact OBGYN programs in SSA.

Increasing the number of OBGYNs enriches a health infrastructure that not only provides for essential medical treatment, but also for training and sustaining community health workers, midwives, doulas, and other health care workers. Such a range of expertise becomes the backbone of a system that dramatically changes health outcomes for mothers, children and families.

The leitmotif of the Accra conference was simple and striking: This is not pie in the sky; we can do this. We can launch programs that train and certify more than 1,000 OBGYNs in fourteen African countries within a decade. Those programs can become largely self-sustaining through engagement with Ministries of Health/Education and medical schools, insuring that more than 1,000 new OBGYNs will graduate the system every five years.

1000+ OBGYN Project: **Launch Partners**



University of Botswana School of Medicine, Botswana	University of Pennsylvania
University of Buea, Cameroon	University of Arizona
Universite Evangelique en Afrique, Democratic Republic of Congo	TBD
St. Paul's Hospital Millennium Medical College, Ethiopia	University of Michigan
Hawassa University, Ethiopia	University of Wisconsin
Mekelle University, Ethiopia	Northwestern University
Mekelle University, Ethiopia	Oregon Health & Science University
Mekelle University, Ethiopia	Washington University in St. Louis
University of The Gambia, The Gambia	Drexel University
University of The Gambia, The Gambia	University of New Mexico
Kwame Nkrumah University of Science and Technology, Ghana	University of Michigan
University of Ghana, Ghana	University of Michigan
Moi University School of Medicine, Kenya	Indiana University (as part of AMPATH)
Liberian College of Physicians and Surgeons, Liberia	Icahn School of Medicine, Mount Sinai
University of Malawi, Malawi	Baylor University
University of Malawi, Malawi	University of North Carolina
University of Rwanda School of Medicine, Rwanda	Albert Einstein, Yeshiva University
Universite Cheikh Anta Diop/Hopital Militaire de Ouakam, Senegal	Brigham and Women's Hospital, Harvard
University of Sierra Leone, Sierra Leone	The Johns Hopkins University
Makerere University, Uganda	University of California, San Francisco
Mbarara University of Science and Technology, Uganda	Massachusetts General Hospital, Harvard
University of Zambia, Zambia	University of North Carolina

Participants at 1000+ OBGYN Accra Conference, 2014

The Training

Each of the African OBGYN departments in the partnership is in one of three stages of development:

1. They have no current OBGYN training program and can build upon the experiences of other partnerships to grow their own
2. They have a nascent OBGYN training program that has the potential to expand significantly with support
3. They have an established OBGYN training program that has the potential to scale up to new sites

Phase One

The first phase of implementation will include six African OBGYN departments and their U.S. partners; two at each of the three stages of development. Ghana, for example, could be one of the first to engage in a scaling program, doubling capacity by adding twenty-five new OBGYN residents per year at new sites. Phase one will see the recruitment of six partnerships through an RFP and seed grant process in 2015.

To serve the planning needs of all eighteen partnerships during the first phase, the project will also launch the “Global Partnership for Capacity Building in Obstetrics and Gynecology in SSA.” Activities will include a curriculum support phase of work, including a focus on delivery of teaching and learning materials. Simultaneously, project partners will design processes for data collection, measurement, and evaluation. Project partners will also work to strengthen certification processes for SSA OBGYN departments, working with African-based/regional support systems. These are only the first two of ten “Critical Components for Comprehensive OBGYN Training in SSA” (see graphic page 4) that will be implemented during the course of the project. All partners will gather at FIGO’s biannual conference in Vancouver in October 2015 to finalize the 2016 plan for launch, when the first “classes” of OBGYN residents will begin training.

Phase One (con't)

No current OBGYN training programs	Nascent OBGYN training programs	Established OBGYN training programs
<ol style="list-style-type: none"> 1. University of Botswana 2. University of Buea, Cameroon 3. Université Évangélique en Afrique, Democratic Republic of Congo 4. University of The Gambia 5. University of Sierra Leone 	<ol style="list-style-type: none"> 1. St. Paul's Hospital Millennium Medical College, Ethiopia 2. Hawassa University, Ethiopia 3. Mekelle University, Ethiopia 4. Liberian College of Physicians and Surgeons 5. University of Malawi 6. University of Rwanda 7. Université Cheikh Anta Diop/ Hôpital Militaire de Ouakam, Senegal University of Zambia 	<ol style="list-style-type: none"> 1. Kwame Nkrumah University of Science and Technology, Ghana 2. University of Ghana, Ghana 3. Moi University, Kenya 4. Makerere University, Uganda 5. Mbarara University of Science and Technology, Uganda

Phase Two

One year to eighteen months after the launch of OBGYN training in six sites, the project will be implemented locally within six additional African OBGYN departments. This cohort also will include partners at each stage of development.

Curriculum adoption and certification process conversations will be well underway and should move more efficiently. All partners will gather on the African continent for a partnership meeting in 2017.

Phase Three

The final phase will embrace the remaining suite of partnerships from the initial pairings identified in the Project Launch Partners Diagram (page 2) as well as possibly integrating new partnerships formed during the first two phases.

We propose that it will take five to six years to fully realize the eighteen partnerships with their full cohorts of M.D.s training to be OBGYNs; some will ramp up more quickly than others. At a steady state, more than two hundred M.D.s will enter the pipeline to become OBGYNs each year, and more than two hundred M.D.s will graduate the OBGYN program each year. This does not include the addition of more partnerships in more countries, as might be expected to occur.

OBGYN training strengthening the health system

As highlighted in the landmark Every Newborn Action Plan (WHO, UNICEF, 2014), a combination of community-based interventions, trained health workers, and midwives is one important step in improving care for pregnant women and their infants. However, many complications cannot be effectively addressed unless they are referred up the chain of care in the health system to an available medical obstetrician/gynecologist immediately upon diagnosis. The current system fails so often because the expertise required to diagnose and then address serious or emergency cases is either unavailable or inaccessible. There are too few places to which health workers can refer critical cases for lifesaving care.

When obstetricians are placed in a health care facility, referrals into the facility increase and referrals out decrease because women and newborns are receiving the level of care they need right there. As an example, when obstetricians trained to employ fetal assessment techniques care for women with preeclampsia, perinatal mortality falls by 75%. This level of training is only available where academic departments of obstetrics and gynecology have the educational capacity to produce this caliber of health worker. The number of OBGYNs must be sufficient to cover rural districts, with committed support from Ministry of Health for maternal mortality reduction and neonatal survival.

The women of Sub-Saharan Africa, like women everywhere, deserve the best level of care available. This program will trigger the development of an ever-growing cadre of highly skilled OBGYNs to deliver it - even to those women with the most perilous pregnancies, and to their newborns.

The Implementation

The 1000+ OBGYN Project activities will be headed by Dr. Frank Anderson of the University of Michigan, along with a steering committee of OBGYN educators and public health specialists from both high-resource and SSA universities. Dr. Anderson is an Associate Professor of Obstetrics and Gynecology and Health Behavior/Health Education at the University of Michigan, as well as the OBGYN department's Director of Global Initiatives.

The University of Michigan is uniquely qualified to coordinate such a project, given its long history of international commitments in general and, more specifically, its track record in comparable endeavors in Ghana. The Ghanaian partnership has evolved into a deep collaboration and friendship.

The partners have developed a Charter for Collaboration that spells out the ethical and professional commitments necessary to a mutually respectful and long-term relationship (see Charter document in Appendix).

The 1000+ OBGYN Project will be supported by the Global Partnership for Capacity Building in Obstetrics and Gynecology in SSA. This group is comprised of OBGYNs within the 1000+ OBGYN Project, as well as members of a range of interested professional societies with expertise in OBGYN/medical training, education, and Sub-Saharan African health system innovation. Launching the Global Partnership will be one of the first steps to implementation.

The academic, professional society, and technical partners involved in the 1000+ OBGYN Project are dedicated to providing high-quality, efficient, and innovative support to OBGYN training programs in Sub-Saharan Africa. In short, virtually the entire specialty is poised and ready to respond.

Moreover, our emphasis on mutually beneficial partnerships between high-resource OBGYN departments and Sub-Saharan African OBGYN departments demonstrates our dedication to open knowledge and resource-sharing, another key component of the long-term protection of the health of women and newborns.

The Investment

Expanding OBGYN programs will seed an exponential and sustainable growth resulting in the output of OBGYNs across Sub-Saharan Africa. With the right investment, this process will replicate the success of the partnership in Ghana.

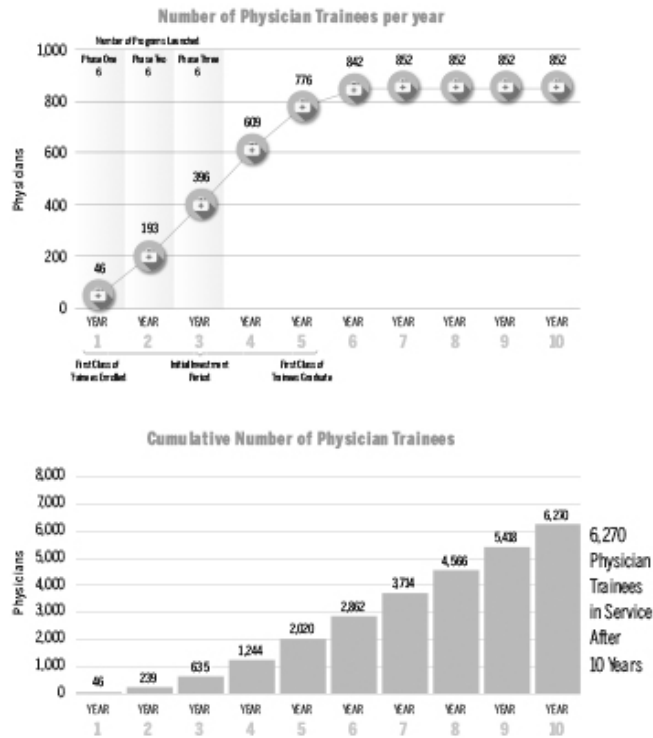
This plan calls for a significant investment to launch a dynamic system. The business case is simple: Investment in leadership and launch over the first five years and diminishing over the next five, will result in a largely self-sustaining system of OBGYN training programs that will decrease maternal and infant mortality. The presence of 1,000+ additional OBGYNs across the continent will also strengthen every midwife, health worker, and community health worker training program and, thus, the urban and rural clinics and hospitals they serve.

Ours is a vision of empowerment and critically important OBGYN care — a vision guided by a shared ethic of respect for the wisdom of people and practitioners on both sides of the Atlantic.

Critical Components in Building Capacity

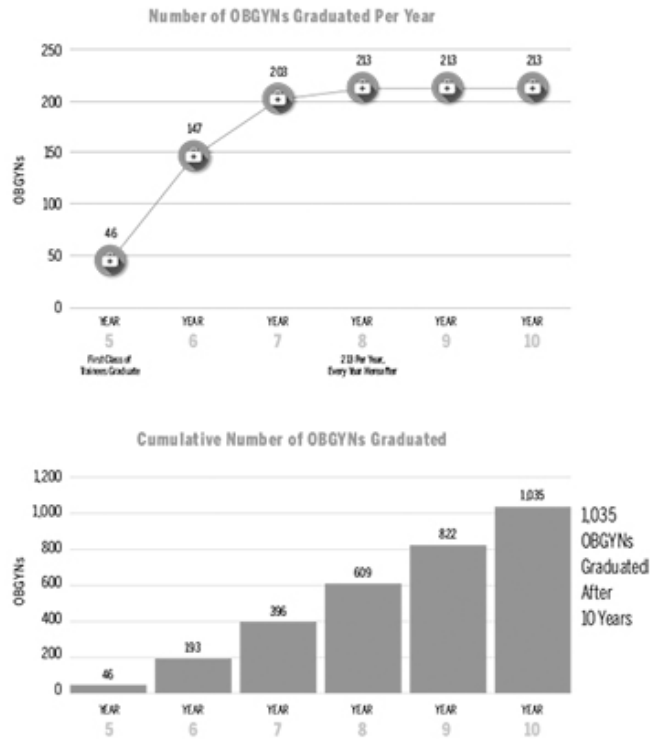
The phased implementation plan is based upon the eighteen partnerships that emerged in the course of the Rome and Accra meetings. Phase 1 will bring six partnerships online, Phase 2 includes six more, and Phase 3 will incorporate all eighteen of our current partnerships, plus potentially more partnerships that are developed in the interim.

Implementation Outcome: OBGYNs in Training/Providing Service



Data derived from reports developed during Accra Conference, 2014.

Implementation Outcome: OBGYNs Graduated



Data derived from reports developed during Accra Conference, 2014

Budget Components

Funding the 1000+ OBGYN project will require support in three major domains to create the framework to which other funding and programming can be attached.

The first domain is strengthening the coordinating, advisory and monitoring & evaluation efforts of the 1000+ OBGYN Project.

An international advisory board will be created to guide project activities. The project will develop the guidelines to ensure all ten critical components are addressed in project plans. This domain would manage the grants and RFA process based on the ten Critical Components. The project will develop and pilot a comprehensive monitoring/evaluation system for all partners to measure impact on maternal and newborn health. The network will be sustained through our webpage (www.1000obgyns.org) and the organization of a consortium-wide yearly meeting, alternating between the bi-annual FIGO conference and a meeting on the African continent. The budget includes consideration for a communications/marketing consultant for branding and internet presence.

The second domain is building a freely-accessible and sustainable resource center for global OBGYN teaching and learning materials. To do so, the project will coordinate a network of professional societies and organizations to support the consolidation of the global OBGYN knowledge base. This resource will make available state of the art, validated materials to all African OBGYN departments and will be implemented in conjunction through our close association with the International Federation of Obstetricians and Gynecologists, the American College of Obstetricians and Gynecologists, the Association of Professors of Obstetrics and Gynecology, the Global Library of Women's Medicine, and a number of other international professional organizations that have committed to this initiative.

The third domain is supporting the African/American OBGYN departmental partnerships, in their clinical, educational, rural outreach, and monitoring activities through a grants program administered by the 1000+ OBGYN Project. The initial eighteen partnerships will be developed and funded through a competitive process, six per cycle across three to five years of launch. Funding will be based on responses to an RFA process to be derived from our comprehensive analysis of the needs identified by all partners. Partners will be expected to secure commitments from Ministries of Health & Education and in-kind contributions from the local OBGYN departments as well. The coordinating center will also assist African

OBGYN departments with funding individually and regionally from Ministries of Health, bilateral and multilateral donors, and other governmental, program and foundation sources.

Each partnership would receive start-up grants through the 1000+ OBGYN Project to provide high-impact, OBGYN care mentored by experienced OBGYNs in the context of capacity-building for long-term sustainability. Budget items include faculty support (both African and U.S.) travel support for bilateral learning and leadership building activities, departmental staff on the ground in Africa to coordinate and monitor educational activities and clinical outcomes, and to coordinate networking, resources, and programs.

The Impact

The long-term goal is to serve maternal health across the continent, thus creating significant public health gains and eliminating preventable maternal and neonatal morbidity and mortality. It is important to note that the trainees themselves will also be providing care to the community in hospitals as they train; those gains will begin to be realized almost immediately. The project's success will be measured by whether this group of country-based partnerships can successfully increase access to maternal and infant health interventions and demonstrate measurable reduction in maternal and early neonatal morbidity and mortality.

Sustainability

Reducing maternal mortality is a key priority for many of these countries. Thus, engaging their Ministries of Health and Education is integral to supporting local OBGYN departments through long-term funding and policy for building capacity and improving health care delivery. Ministries have been and will be actively engaged as participants at each project site. Without their commitment, sustainability for the 1000+ OBGYN Project is impossible.

Creating a cadre of Sub-Saharan African OBGYN specialists creates an opportunity for advancement and distinction within their own countries' medical communities of practice, which helps to explain why doctors who receive advanced OBGYN training locally are more likely to remain in their communities. The OBGYNs that this program trains and supports will have the opportunity to engage with the global community of OBGYN faculty and practitioners, become leaders in their nations' health systems, advocates for women's health, and influential in the formation of local and national health policy. Most importantly, each class of OBGYNs will be a

source of faculty and mentors for the next class of OBGYNs, saving the lives of mothers and their children.

Across a decade, this partnership can build the skills needed to deal with crises in urban hospitals, as well as clinics in rural communities, and will develop to be self-sustaining. The engagement of U.S. and other high-resource country partners in each local SSA OBGYN department setting will help doctors stay in their own countries by building a global academic community for research, friendship, mentorship, and collaboration.

The University of Michigan and the 1000+ OBGYN Project seeks your support to make this vision a reality. Within a decade. **Starting now.**

For Further Information:

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The Elmina Declaration and Charter for Collaboration



Preamble: This document is a Charter for Collaboration which describes the partnership between groups working in Michigan, USA and Ghana to improve human resources for health funded by the Bill and Melinda Gates Foundation.

The Elmina Declaration on Partnerships to address Human Resources for Health From the Ghana-Michigan Collaborative Health Alliance Reshaping Training, Education & Research (CHARTER) Program
Initiated Elmina, Ghana 2-6 February, 2009
Adopted Ann Arbor, MI 8-13 November, 2009

We, the Ghana-Michigan CHARTER collaborators made up of partners from the Ghana Ministry of Health (MOH), the Kwame Nkrumah University of Science and Technology (KNUST), the University of Ghana (UG) (the three aforementioned heretofore referred to as “Ghana”) and the University of Michigan (U-M).

I. Recognize that

1. **Human Resources for Health (HRH)** includes doctors, nurses, dentists, pahrmacists, social workers, and other health professionals, both formal and informal, that are trained across the country by the Ministry of health, the Ministry of Education, and the private sector.
 - i. The burden of disease in Ghana requires a prioritization of HRH initiatives.
 - ii. The Ghana-Michigan CHARTER project is aprt of a larger HRH initiative in Ghana.
 - iii. There are inadequate numbers and an asymmetric distribution of human resources in Ghana due to low numbers trained, urban concentration, and low retention of workers.

- iv. There is potential for growth in human resources for health in Ghana as evidenced by the high percentage of qualified applicants not gaining acceptance into training institutions.
 - v. Technological infrastructure is inadequate to support human resources for health and health service delivery, especially in the rural areas.
 - vi. Traditional medicine is an important source of primary care for Ghanaians.
- 2. Opportunities abound in our global community for HRH development.**
- i. Technological advances have promise to improve access to information for health workers and health students in all parts of Ghana, especially in rural areas, to improve education, service delivery, and advance research.
 - ii. The private sector has many resources that could be harnessed to improve HRH.
 - iii. Millennium Development Goals serve as a guide for research for health and health-related issues.
 - iv. Prior experiences are a rich source of knowledge to explore, learn from, and share.
 - v. Out partnerships are dynamic and may change over time; gaining knowledge and moving frontiers.
 - vi. We have an active commitment on the part of all partners to work together.
- 3. Partnership and Collaboration are crucial** for the Universities' and Ministry's shared mission and common interest in improving health outcomes.
- i. The improvement of HRH requires "a new partnership" which calls for continuous planning, participation, assessment, and improvement.
 - ii. Previous partnerships between Ghana and the University of Michigan have been successful, have led to other partnerships, and will continue to have impact at the community level.
 - iii. Universities and the MOH have strategic plans that need to be considered, respected, and promoted.
 - iv. The MOH has made a conscious effort with development partners to reduce verticalization. The project represents one of many development partnerships, and Ghana will work with their partners in a coordinated manner to optimize development and health.

- v. Health teams include other allied health and health related professionals.

4. Barriers exist in the development of partnerships to improve HRH

- i. Past partnerships have too often not been fair, balanced, equitable, or sustainable and have led to power imbalances between the Southern institutions and those in the North
- ii. Barriers to growth of human resources exist, including: training opportunities, availability of housing, local teachers, infrastructure, other social structures
- iii. The resources for electronic communication are not equal among all partners
- iv. There are infrastructure barriers: faculty promotion, communication, reporting systems, organizational structures, and managerial systems. Competition and financial structures, including compensation and release time, impact how work is accomplished. Structures of coordination are lacking in many partners
- v. Individuals and institutions have histories and culture that bind them together but may keep them from breaking free to new ideas
- vi. Cultural heterogeneity exists between partners, and when there are failures, it can sometimes be attributed to these differences not being taken into account.
- vii. The historical, social, and political context informs how service delivery and research are conducted
- viii. Research data are limited and exchange of information between academia and the MOH is inconsistent
- ix. There is potential for conflict between and within partners
- x. Although we share a common language, operational definitions differ. Our common language creates the illusion of communication while misunderstandings still occur
- xi. Leadership structures can be challenging

II. Conscious of the need to

- 1. Share experiences in medical education, research, innovative technology, and leadership among all partners
- 2. Develop and share technological and other education resources efficiently and effectively
- 3. Develop resources to optimize and fully utilize education, training, and deployment of HRH

4. Improve the infrastructure for electronic communication, skills training, and clinical care
5. Expand the scope of research and translate research results into policy and educational initiatives
6. Recognize, identify, and involve appropriate HRH workers in the process
7. Expand and decentralize education and training into peripheral health facilities, district, public, and private
8. Develop a national government research infrastructure to fund national health research
9. Articulate principles that guide partnerships to lead to sustainable, mutually beneficial collaboration, namely:

Trust	Mutual Respect	Communication
Accountability	Transparency	Leadership
	Sustainability	

III. Institutional Commitments

In pursuit of our determination to help improve the health of all Ghanaians through our objectives of enhancing education and training, strengthening data for decision making, and increasing capacity for research.

We commit to:

1. Work together to create new knowledge and disseminate our findings through peer-reviewed literature and other means and use the results of our research to inform policy and decision making.
2. Providing resources, both human and monetary, for understanding and learning from the partnerships through the development of the Charter for Collaboration document.
3. Pursue funding for implementation of the findings from our projects with the overall goal of improving the health of all Ghanaians.
4. Pursue and promote the increased use of information and communication technology and develop a communication plan to ensure frequent and open communication for all parties between and within institutions to address the needs of the partnership and objectives, including regular meetings, an accessible website, electronic communication, reports and others.

5. Improve and facilitate communication: government to government, government to the academy (universities), academy to academy, and with the private sector, social leaders (churches, NGOs) and the community to maintain a balance in these partner relationships.
6. Identify and protect the interests and needs of all partners and work towards meeting these needs.
7. Create opportunities for personnel from the universities and Ministry of Health for career development.
8. Develop authorship guidelines to promote fair and equitable recognition of individual and group contributions.
9. Apply lessons learned from previous collaborations to inform current and future partnerships.
10. Be sensitive to issues of gender, ethnicity, religion, and geographic origin.
11. Organize and participate in a process to engage all partners currently working in the area of HRH to reduce verticalizations and promote lateralization.
12. Focus on early recognition of potential sources of conflict and develop a plan for identifying, recognizing, and managing conflicts.
13. Evaluate the process on a regular basis and make adjustments accordingly.
14. Establish metrics of successful collaboration by which to give feedback to our project.
15. Document case examples of collaborative strains and successes.

About The Editor

Frank Anderson, M.D., M.P.H.

Undergraduate:	Christian Brothers University - 1984
Medical School:	University of Tennessee College of Medicine - 1988
Residency:	University of Tennessee Department of Obstetrics and Gynecology – 1992
Masters Public Health:	Johns Hopkins Bloomberg School of Public Health - 1993

Frank Anderson, M.D., M.P.H. joined the faculty of the University of Michigan in 1999 and is currently an Associate Professor, with a joint appointment in the Health Behavior/Health Education department at the School of Public Health and the Medical School. Dr. Anderson is a generalist obstetrician/gynecologist and Director of Global Initiatives for the department of Obstetrics and Gynecology. Partnering with universities and programs in low income countries to decrease maternal and early neonatal morbidity and mortality is a major goal of the initiative. His clinical research focuses on both hospital and community-based interventions to improve maternal and neonatal health and decrease mortality. Applying concepts that encompass health research for development ensures that research programs answer local health problems and build local capacity while providing new knowledge that can be applied to other settings. His research in capacity building and academic partnership development identified principles of collaboration that lead to transformations in health care delivery. He now leads a global program to replicate academic partnerships that will train 1000+ new OBGYN physicians in Sub-Saharan Africa in the next ten years. He teaches the Fundamentals of Reproductive Health course at the School of Public Health, instructing over 500 students in the last ten years. He gives lectures across campus on issues related to maternal mortality, reproductive health and global health. His global work also incorporates and informs the understanding of maternal mortality in the state of Michigan. He sits on the Maternal Mortality Review Committee and the Michigan Maternal Accident Committee for the state of Michigan.

