We have reviewed this material in accordance with U.S. Copyright Law and have tried to maximize your ability to use, share, and adapt it. These lectures have been modified in the process of making a publicly shareable version. The citation key on the following slide provides information about how you may share and adapt this material.

Copyright holders of content included in this material should contact open.michigan@umich.edu with any questions, corrections, or clarification regarding the use of content.

For more information about how to cite these materials visit http://open.umich.edu/privacy-and-terms-use.

Any medical information in this material is intended to inform and educate and is not a tool for self-diagnosis or a replacement for medical evaluation, advice, diagnosis or treatment by a healthcare professional. Please speak to your physician if you have questions about your medical condition.

Viewer discretion is advised: Some medical content is graphic and may not be suitable for all viewers.
Use + Share + Adapt

{ Content the copyright holder, author, or law permits you to use, share and adapt. }

- **Public Domain – Government**: Works that are produced by the U.S. Government. (17 USC § 105)
- **Public Domain – Expired**: Works that are no longer protected due to an expired copyright term.
- **Public Domain – Self Dedicated**: Works that a copyright holder has dedicated to the public domain.
- **Creative Commons – Zero Waiver**
- **Creative Commons – Attribution License**
- **Creative Commons – Attribution Share Alike License**
- **Creative Commons – Attribution Noncommercial License**
- **Creative Commons – Attribution Noncommercial Share Alike License**
- **GNU – Free Documentation License**

Make Your Own Assessment

{ Content Open.Michigan believes can be used, shared, and adapted because it is ineligible for copyright. }

- **Public Domain – Ineligible**: Works that are ineligible for copyright protection in the U.S. (17 USC § 102(b)) *laws in your jurisdiction may differ

{ Content Open.Michigan has used under a Fair Use determination. }

- **Fair Use**: Use of works that is determined to be Fair consistent with the U.S. Copyright Act. (17 USC § 107) *laws in your jurisdiction may differ

Our determination DOES NOT mean that all uses of this 3rd-party content are Fair Uses and we DO NOT guarantee that your use of the content is Fair.

To use this content you should **do your own independent analysis** to determine whether or not your use will be Fair.
Open Educational Resources

Ghana Emergency Medicine Collaborative
University of Michigan Department of Emergency Medicine
Ghana Emergency Medicine Collaborative

- Established in 2008
- Aims to improve the delivery of emergency medical care in Ghana through sustainable physician, nursing and medical student training programs
- Supported by NIH grant
Ghana Emergency Medicine Collaborative

- Kwame Nkrumah University of Science and Technology (KNUST)
- Komfo Anokye Teaching Hospital (KATH)
- Ghana College of Physicians and Surgeons
- Ghana Ministry of Health
- University of Michigan Department of Emergency Medicine and School of Nursing
Open Educational Resources

• “Teaching, learning and research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions.”

-UNESCO
Open Educational Resources

• Using the ACGME requirements for Emergency Medicine Residency, we developed a list of approximately 150 lectures that Ghanaian Emergency Medicine Residents should receive during their training.

• Emergency Nursing and Medical Student lectures are also being developed.
Open Educational Resources

• Lectures are being donated from the University of Michigan/St. Joseph Mercy Hospital EM residency faculty, as well as faculty from other EM residencies in the United States.

• Visiting faculty and nurses are writing lectures to present while in Kumasi, Ghana.
open.michigan is editing lectures
  • ensure legal compliance
  • maximize other's ability to use, adapt, and further share the resources
open.michigan is publishing Emergency Medicine courses in OER format:
  • Advanced Emergency Trauma
  • Ghana Emergency Medicine Collaborative
• http://open.umich.edu/education/med/em
Department of Emergency Medicine

The Department of Emergency Medicine has nationally recognized clinical expertise in trauma, chest pain, toxicology, brain injuries and pediatric emergency medicine. The Department is a full service Level I adult and pediatric trauma center staffed and equipped to deal with all urgent and emergency problems. It is a major access point to the services and facilities of the University of Michigan Health System and is a provider of emergency care 24-hours a day, 7-days a week. Faculty are board-certified physicians in Emergency Medicine and/or Pediatric Emergency Medicine. The Department of Emergency Medicine offers a four-year residency training program, leading to board certification in the specialty of Emergency Medicine, and a Pediatric Emergency Medicine Fellowship program, accepting qualified candidates from Pediatric and Emergency Medicine residency programs.

Course(s)
- Advanced Emergency Trauma
- Ghana Emergency Medicine Collaborative

Image courtesy of University of Michigan under a Creative Commons license BY-NC
Ghana Emergency Medicine Collaborative

Current emergency care in Ghana is sub-optimal with significant delays to definitive care and high morbidity and mortality. The Ghanaian government has recently invested in physical infrastructure for emergency care at major teaching hospitals, but the human resources to provide care are inadequate. To address this need, the Ghana Emergency Medicine Collaborative has proposed an innovative training program focused on medical students, nurses, and residents with the formation of a new faculty for sustainable training. This program will train emergency medicine personnel in injury and acute medical illness management, expose trainees to research methodology, administrative, and leadership aspects of emergency medicine.

The Ghana Emergency Medicine Collaborative is a joint project between Kramo Nkrumah University of Science and Technology, Komfo Anokye Teaching Hospital, University of Michigan Medical School and School of Nursing, Ghana Ministry of Health, Ghana College of Physicians and Surgeons, and Ghana Ambulance Service. The program receives funding from the Medical Education Partnership Initiative (MEPI).

Course Coordinators: Rockefeller Oteng, Richard Redman, Sue Anne Bell, Nathan Brouwer

dScribes: Anudeep Mukamala, Matthew Simpson, Trisha Paul, Jade Cheng

Viewer discretion is advised: The educational content contained herein may include medical images that non-health professionals may find disturbing.

This resource is in progress. New lectures are added every month. Check back for new materials.

Keywords: emergency medicine, trauma, trauma care, trauma management

Syllabus:
The Ghana Emergency Medicine Collaborative includes intensive team training for medical students, nurses, and residents.

The medical student training is facilitated as a clinical rotation to prepare physicians for emergency care they may need to provide in their service at district hospitals.

The nursing program is a one-year module-based curriculum and offers a diploma in Emergency Medicine upon completion.

The residency curriculum lasts three years and includes the following:

- Core Lectures
  - Cardiovascular
  - Dermatology
  - Emergency Medical Services
  - Endocrine/Metabolic
<table>
<thead>
<tr>
<th>Medical Student: Trauma: 03: Shock</th>
<th>Patrick Carter</th>
<th>30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Student: Trauma: 04: Toxology Basics</td>
<td>Patrick Carter</td>
<td>30</td>
</tr>
<tr>
<td>Medical Student: Trauma: 05: Environmental Emergencies</td>
<td>Patrick Carter</td>
<td>30</td>
</tr>
<tr>
<td>Nursing: Abdominal Emergencies</td>
<td>Elizabeth Tann</td>
<td>30</td>
</tr>
<tr>
<td>Nursing: Acute Coronary Syndrome</td>
<td>Kristen Sarna</td>
<td>30</td>
</tr>
<tr>
<td>Nursing: Assessment and Resuscitation</td>
<td>Antoinette Bradshaw</td>
<td>30</td>
</tr>
<tr>
<td>Nursing: Burn Emergencies</td>
<td>Heather Hartney</td>
<td>30</td>
</tr>
<tr>
<td>Nursing: Cardiovascular Emergencies</td>
<td>Sue Anna Bell</td>
<td>30</td>
</tr>
<tr>
<td>Nursing: Communicable and Infectious Disease Emergencies</td>
<td>Katherine A Perry</td>
<td>30</td>
</tr>
<tr>
<td>Nursing: Fluid and Electrolyte Imbalances in Emergency Nursing</td>
<td>Chantel Henry</td>
<td>30</td>
</tr>
<tr>
<td>Nursing: Genitourinary Emergencies</td>
<td>Karl Lapata</td>
<td>30</td>
</tr>
<tr>
<td>Nursing: Hepatitis</td>
<td>Katherine A Perry</td>
<td>30</td>
</tr>
<tr>
<td>Nursing: Herpes/Vaccinia/Shingles</td>
<td>Katherine A Perry</td>
<td>30</td>
</tr>
<tr>
<td>Nursing: HIV/AIDS</td>
<td>Katherine A Perry</td>
<td>30</td>
</tr>
<tr>
<td>Nursing: Infectious Disease Overview</td>
<td>Katherine A Perry</td>
<td>30</td>
</tr>
<tr>
<td>Nursing: Measles/Mumps/Rubella</td>
<td>Katherine A Perry</td>
<td>30</td>
</tr>
<tr>
<td>Nursing: Musculoskeletal Emergencies and the Nursing Process</td>
<td>Barbara Demman</td>
<td>30</td>
</tr>
<tr>
<td>Nursing: Nursing Research</td>
<td>Sue Anna Bell</td>
<td>30</td>
</tr>
<tr>
<td>Nursing: Pain Management</td>
<td>Sue Anna Bell</td>
<td>30</td>
</tr>
<tr>
<td>Nursing: Parasitic Infections</td>
<td>Katherine A Perry</td>
<td>30</td>
</tr>
<tr>
<td>Nursing: Shock and Initial Resuscitation</td>
<td>Kristen Sarna</td>
<td>30</td>
</tr>
<tr>
<td>Nursing: Skin Infections</td>
<td>Katherine A Perry</td>
<td>30</td>
</tr>
<tr>
<td>Nursing: Trauma</td>
<td>Tim Maxim</td>
<td>30</td>
</tr>
<tr>
<td>Nursing: Triage</td>
<td>Antoinette Bradshaw</td>
<td>30</td>
</tr>
<tr>
<td>Nursing: Typhoid Fever/Infectious Disease/Diphtheria/Pertussis</td>
<td>Katherine A Perry</td>
<td>30</td>
</tr>
<tr>
<td>Resident: Cardiovascular – Achy Breaky Heart Cardiogenic Shock</td>
<td>Carol Choe</td>
<td>30</td>
</tr>
<tr>
<td>Resident: Cardiovascular – ACLS Overview of Pulseless Arrest</td>
<td>Rockettler Ogeng</td>
<td>30</td>
</tr>
<tr>
<td>Resident: Cardiovascular – Acute Aortic Emergencies</td>
<td>Carol Choe</td>
<td>30</td>
</tr>
<tr>
<td>Resident: Cardiovascular – Acute Congestive Heart Failure</td>
<td>Rashmi Kothari</td>
<td>30</td>
</tr>
<tr>
<td>Resident: Cardiovascular – Advanced Cardiac Life Support</td>
<td>Rockettler Ogeng</td>
<td>30</td>
</tr>
<tr>
<td>Resident: Cardiovascular – Approach to Acute Chest Pain</td>
<td>Rockettler Ogeng</td>
<td>30</td>
</tr>
</tbody>
</table>
Open Educational Resources

- These lectures are currently being used and adapted for Emergency Medicine education in West Africa and throughout the world.
Open Educational Resources

- Please contact us if you are interested in learning more about our experiences in OER, or if you are interested in donating or developing lectures that can be used in the Ghana Emergency Medicine Collaborative.
Open Educational Resources

- Nathan Brouwer, Rockefeller Oteng, Sue Anne Bell, Kathleen Ludewig
- Contact: nbrouwer@med.umich.edu
- open.umich.edu/education/med/em/gemc