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MDG 4: REDUCE CHILD MORTALITY



Shirley Chen, Lynette Thames, Kathryn Marten

THE GOAL

Target 5: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate

Indicators:

13. Under-five mortality rate

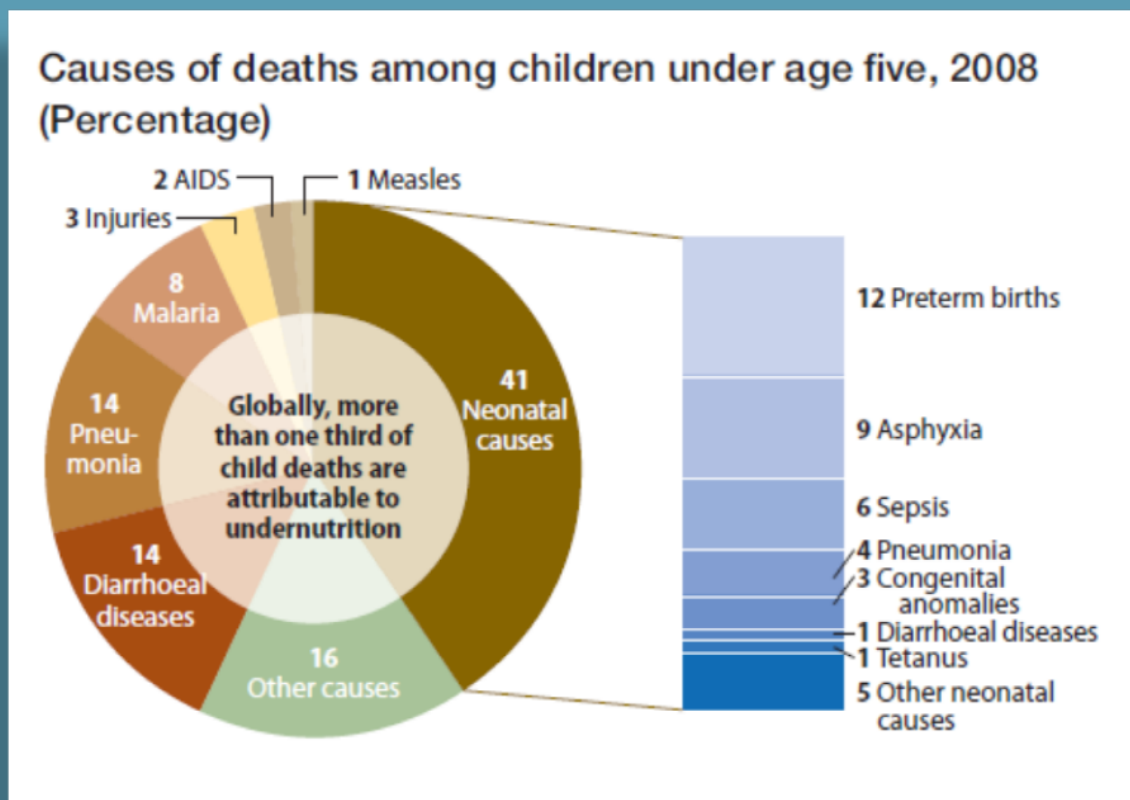
14. Infant mortality rate

15. Proportion of 1 yr-old children immunized against measles



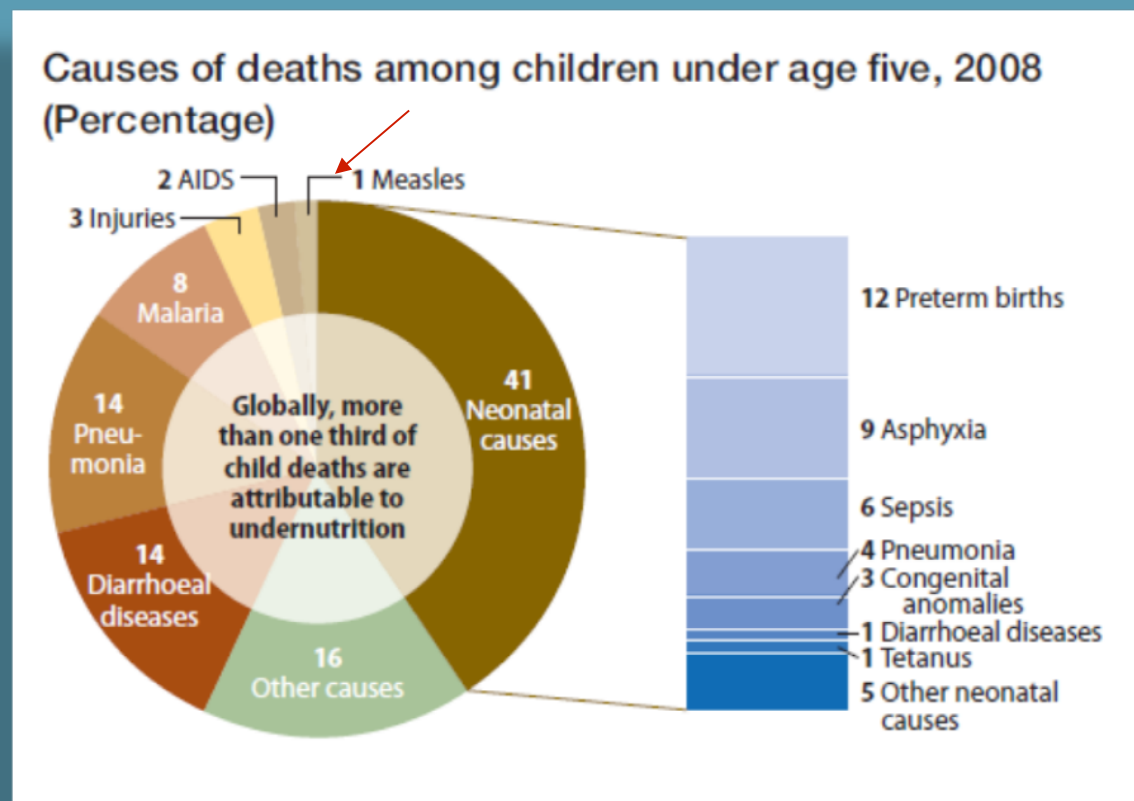
WHO via The global health
nonprofit PATH, flickr

WHAT CAUSES CHILD MORTALITY?



In 1993, the number of under-five deaths attributable to malnutrition: 54%

SO WHY IS THE MEASLES VACCINE INCLUDED?



THE MEASLES VACCINE IS INCLUDED BECAUSE...

- 2008: 164,000 measles deaths
- It costs less than \$1 dollar to vaccinate a child against measles
- Most common in children in parts of Asia sub-Saharan Africa where child mortality is highest
 - HIV/AIDS, Vit A deficiency, conflict zone co-morbidity
 - WHO Africa region (10% world's population) accounted for 58% of measles deaths in 2000.
- Access to measles vaccine varies across socio-economic, education, rural location and birth order demographics

WHAT ISN'T INCLUDED?

- Advent of medical advances since 1990
 - Rotavirus vaccine improvement to prevent major cause of diarrheal illness
- Addressing root causes of childhood illness/death
 - Malnutrition
 - Access to healthcare services
 - Sanitation: ACCESS TO CLEAN DRINKING WATER
 - Example: Cholera outbreak in Haiti
 - Homelessness led to “open defecation”
 - No place in temporary camps to purify water
 - ORT

WHERE ARE WE NOW?

Progress in MDG 4					
	1990	1995	2000	2005	2008
Mortality rate, under-5 (per 1,000)					
Mortality rate, infant (per 1,000 live births)					
Immunization, measles (% of children ages 12-23 months)					

The average rate of decline from 2000 to 2008 is 2.3%, compared to a 1.4% average decline from 1990 to 2000.

WHERE ARE WE NOW?

Under-5 mortality rate, 2008

	<u>Value</u>	<u>Rank</u>
Afghanistan	257	1
Angola	220	2
Chad	209	3
Somalia	200	4
Dem. Republic of the Congo	199	5
Guinea-Bissau	195	6
Mali	194	7
Sierra Leone	194	7
Nigeria	186	9
Central African Republic	173	10
Montenegro	8	149
Slovakia	8	149
United Arab Emirates	8	149
United States	8	149
Finland	3	188
Iceland	3	188
Luxembourg	3	188
Singapore	3	188
Sweden	3	188
Liechtenstein	2	193
San Marino	2	193

- U.S. is lagging in child mortality reduction
 - Ranked 42nd (6.7 deaths/1,000 children) compared to 29th in 1990
- 7.7 million child deaths in 2010, down from 11.9 million deaths in 1990
 - Across 21 regions of the world, rates of neonatal, postneonatal, and childhood mortality are declining

Source: Rajaratnam JK, Marcus JR, Flaxman AD, et al. Neonatal, postneonatal, childhood, and under-5 mortality for 187 countries, 1970–2010. Lancet 2010; 375: 1988–2008

OVERALL PROGRESS BUT...

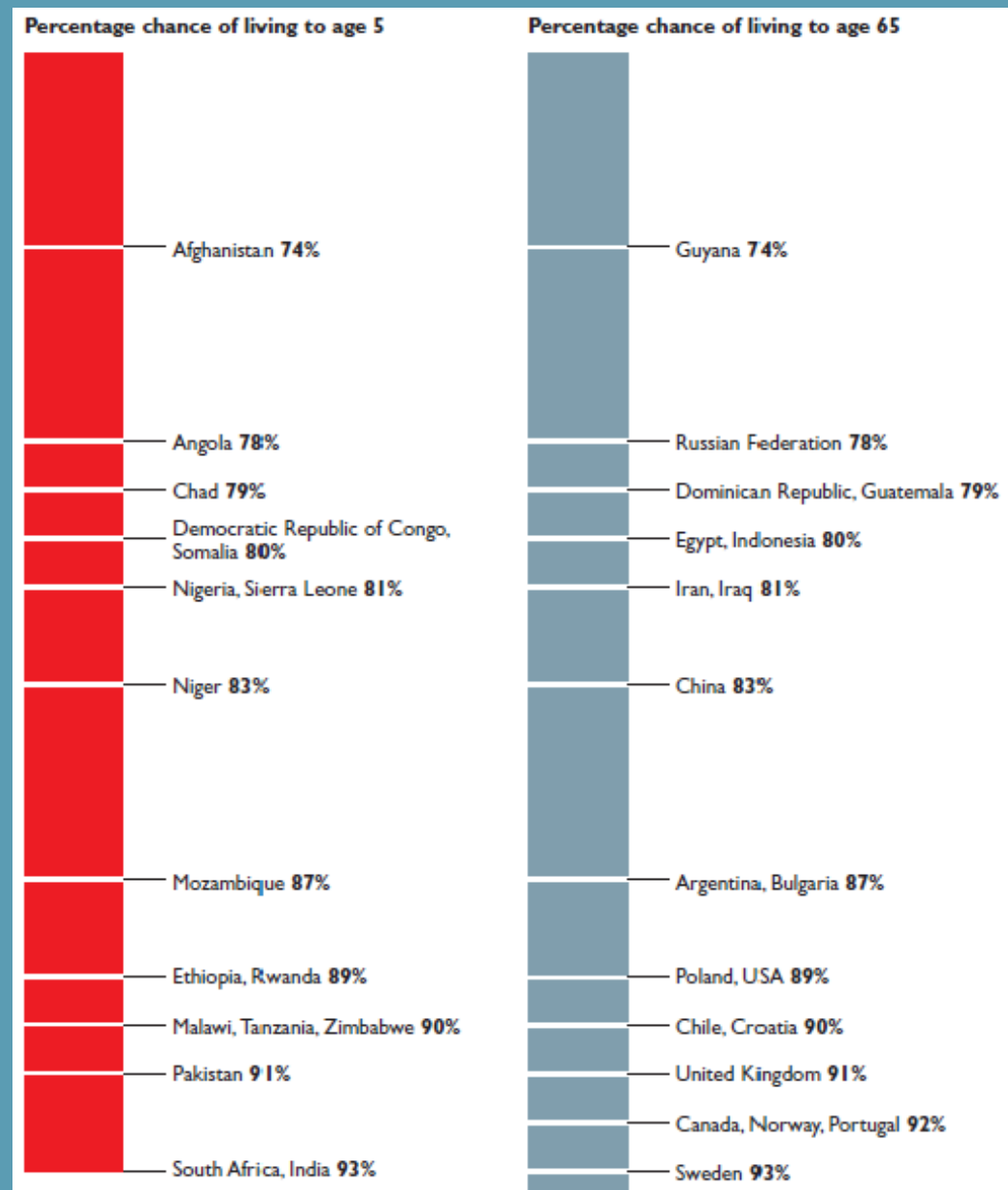
- Globally, child mortality has only fallen by 28% since 1990
 - Not yet 1/3 of the way to meeting our target in 2015
 - Out of the 64 countries with highest child mortality rates, **only 9 are on track to meet MDG 4.**
- 99% of child deaths take place in developing countries
- The highest rates of child mortality rates are found in sub-Saharan Africa, which accounts for half all deaths
 - Increased mortality in Chad, Congo, Kenya, South Africa

Source: Save the Children. (2010). A Fair Chance at Life: Why Equity Matters for Child Mortality. Report for the 2010 Summit on the Millennium Development Goals. Retrieved from <http://www.savethechildren.net/alliance/media/newsdesk/2010-09-07.html>
<http://www.un.org/millenniumgoals/2008highlevel/pdf/newsroom/Goal%204%20FINAL.pdf>

WHO and UNICEF *Countdown to 2015 Decade Report (2000–2010): Taking stock of maternal, newborn and child survival*, 2010

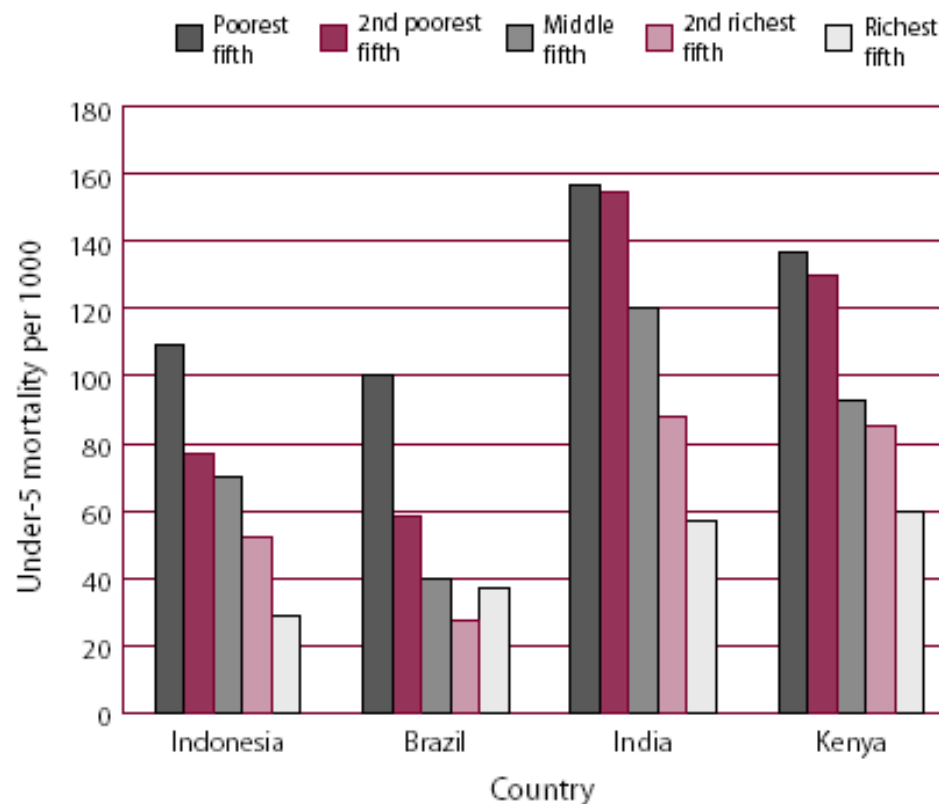
DISPARITIES BETWEEN COUNTRIES

- Gap mirrors economic development between countries but there is no obvious correlation between changes in GDP and child mortality
 - South Africa
 - Egypt
- Policy choices
- Distribution of wealth and health resources



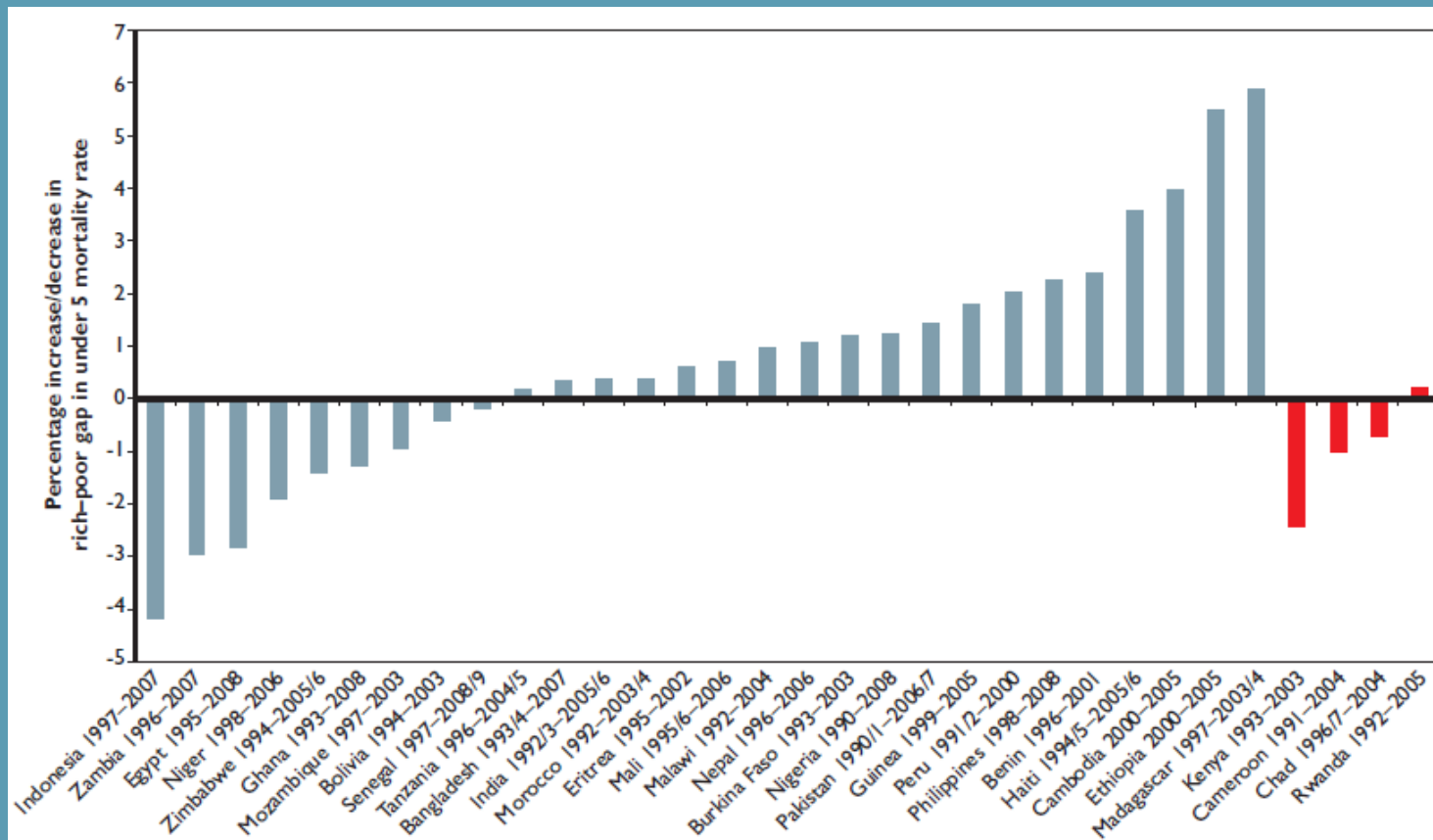
DISPARITIES WITHIN COUNTRIES

Figure 1.2 Under-5 mortality rates by socioeconomic quintile of the household for selected countries



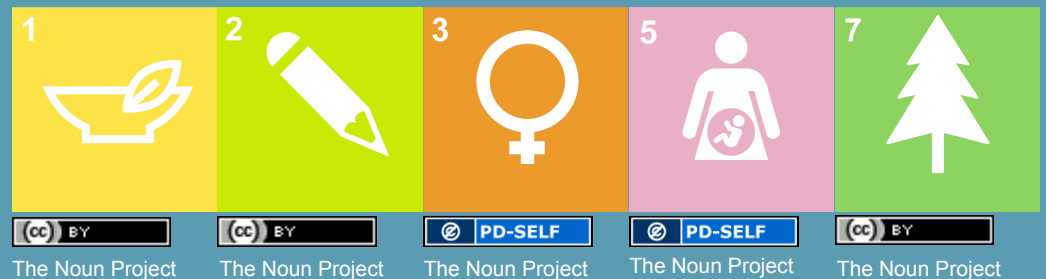
Source: Victora et al. Applying an equity lens to child health and mortality: more of the same is not enough. *Lancet*, 2003, 362:233–241.

GROWING RICH-POOR GAP



ADDRESSING INEQUITIES

- Human rights framework for child health
 - UN Convention on the Rights of the Child (1989)
- “Egalitarian approach”
 - Rate of reduction in each quintile matches that in the fastest improving quintile
 - “Equitable approach”?
- Universal access/delivery of essential services
- Comprehensive strategies to tackle wider determinants of child survival
 - Links to other MDGs



WHY AREN'T WE THERE?

- Lack of progress in maternal health (MDG 5)
 - 41% of under-five deaths are due to neonatal causes
 - Preventable
 - Antenatal care
 - Skilled birth attendants
 - Emergency obstetric care
 - Continuum of care

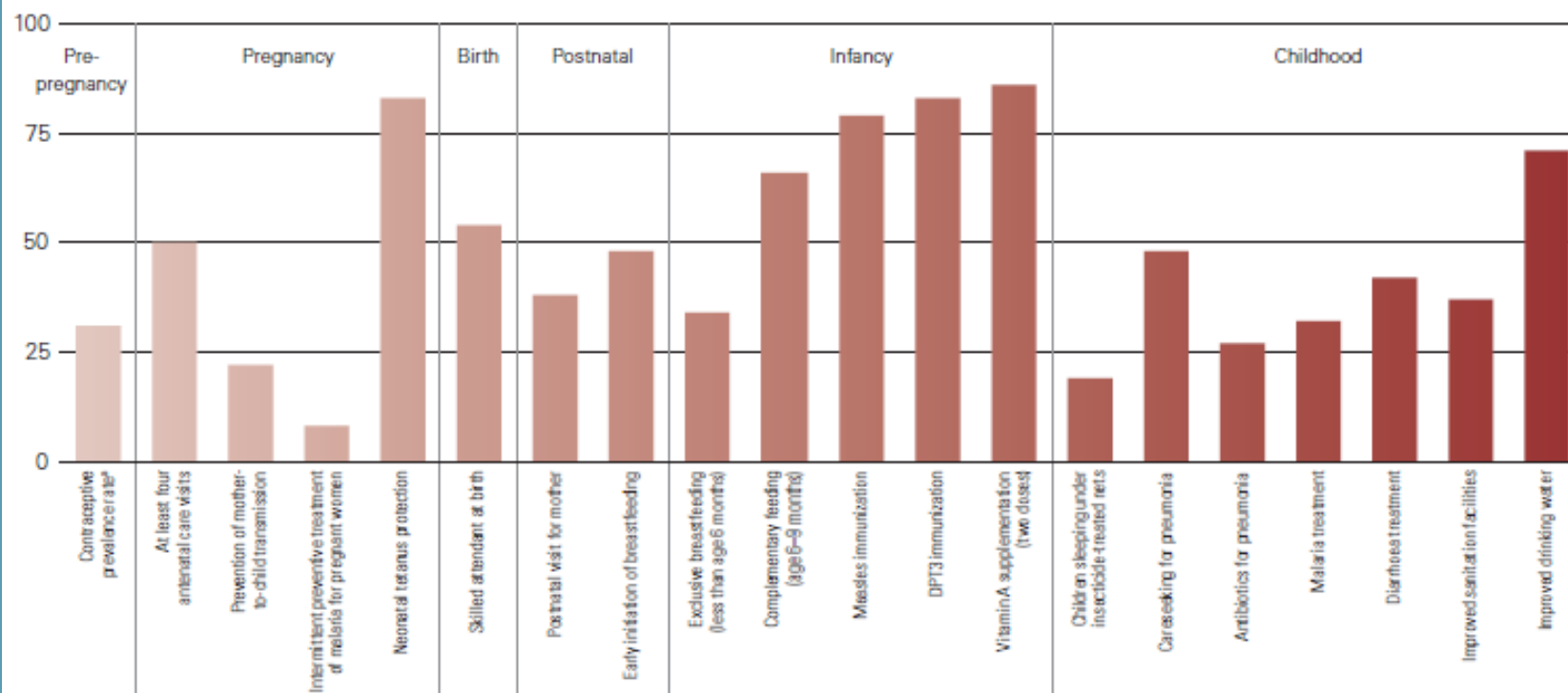


 Harbor Life, flickr

Source: Kiros, G., & Hogan, D. (2000). War, famine and excess child mortality in Africa: the role of parental education. *International Journal of Epidemiology*, 30 (3), 447-455.

Coverage of interventions varies across the continuum of care

Median national coverage of interventions across the continuum of care for 20 *Countdown* interventions and approaches in *Countdown* countries, most recent year since 2000 (%)



a. Target coverage value is not 100%.

Source: Prevention of mother-to-child transmission of HIV/AIDS, UNICEF, Joint United Nations Programme on HIV/AIDS (UNAIDS) and WHO; immunization rates, WHO and UNICEF; postnatal visit for mother, Saving Newborn Lives analysis of Demographic and Health Surveys; improved water and sanitation, WHO and UNICEF Joint Monitoring Programme 2010; all other indicators, UNICEF Global Databases, November 2009, based on Demographic and Health Surveys, Multiple Indicator Cluster Surveys and other national surveys.

WHY AREN'T WE THERE?

- Women's education
 - 1-3 years of maternal schooling could decrease child mortality by 15%
- Regional instability
 - Conflict zones make food production difficult
 - 44% of child deaths happen in countries considered fragile
 - Lack of sanitary food and water sources
 - Diarrhea and malnutrition

WHY AREN'T WE THERE?

- Lack of funding
 - 1.7 million measles-related deaths are predicted between 2010 and 2013
- Sub-standard funding/aid
 - Food aid



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WHAT IS WORKING?

- Enhancing immunization programs
 - Vietnam
 - Egypt
 - Bangladesh
- Encouraging breastfeeding in Cambodia
 - Cambodian Ministry of Health's "Baby Friendly Community Initiative"
- Offering mosquito nets in:
 - Congo
 - Democratic Republic of Congo
 - Gabon
 - Mali

WHAT IS WORKING?



PD-SELF

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PD-SELF

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- WHO and UNICEF contributions
 - GOBI= Growth monitoring, Oral rehydration therapy, Breastfeeding & Immunization
 - GOBI/FFF: World Bank added Family planning, Food production, and female education
 - Expanded Program on Immunization (EPI)
 - Integrated Management of Childhood Illness (IMCI)
- UN Accomplishments
 - Global Strategy for Women and Children's Health

Source: United Nations. (2010). Goal 4 Reduce Child Mortality. Retrieved from : http://www.un.org/millenniumgoals/pdf/MDG_FS_4_EN.pdf

Jacobsen, K.H. Introduction to Global Health. 2008



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