

SUPPLEMENTAL TABLE 1

Curriculum for Short Course in Global Health at Williams College – January 2010

Global Health, Why We Should Care

Course Description:

From the Declaration of Alma-Ata to the Millennium Development Goals, there have been 30 years of good will but limited accomplishment in bringing health to all. Health is an essential human right, but much of the world's poor still do not have access to the most basic public health services. This deficiency is best illustrated in Africa where there is the double burden of poverty and communicable disease. The failure to provide equitable health and the emergence of new infectious diseases with pandemic potential also threaten world security. "Global Health: Why We Should Care" will explore what is meant by global health, how health is measured, and what are the major diseases that particularly affect the poor. It will take a biomedical approach focusing on communicable diseases, e.g., human immunodeficiency virus/acquired immunodeficiency syndrome, malaria and tuberculosis, but will also look at maternal and child health, the provision of humanitarian aid, and careers in global health. After defining the problems, we will explore strategies in the control of disease and achieving global health.

A variety of formats will be used to study global health issues including the current medical literature, popular writings, and film documentaries. We will look at the science of global health and the story of those most affected by health inequalities. Students are expected to read assigned material outside of class so that they will be prepared to discuss the topics. Short presentations on a focused area will also be expected.

Evaluation: Evaluation will be based on contributions to class discussions, informal presentations, and a 10-page paper that can analyze a global health issue, be a document defining a public health intervention, or a short story describing the impact of a disease or condition on a person, family, or community.

Contact Hours: 24

1. Theme: Overview of Global Health

Topics:

- Overview of Global Health
- Indicators of health
- Discussion of student goals for the course

Reading:

- Desowitz RS, 1993. *The Malaria Capers. Tales of Parasites and People*. Chapter 2, A child dies in a small village. WW Norton & Company, New York, pgs. 21–30.

Resources:

- Cohen J. The new world of global health. *Science* 311: 162–7, 2006.
- World Health Organization. *The Global Burden of Disease. 2004 Update*. WHO. Geneva, 2008
- World Health Organization. *Global Health Risks. Mortality and Burden of Disease Attributable to Selected Major Risks*. WHO. Geneva, 2009.
- World Health Organization. *World Health Statistics 2009*. WHO. Geneva, 2009

2. Theme: Health determinants; Smallpox: a success story in disease control

Topics:

- Social determinants of health
- Smallpox eradication, a model of disease control

Readings:

- International Conference on Primary Care. *Declaration of Alma-Ata*, 1978.
- Koplan JP, Bond TC, Merson MH, et al. Towards a common definition of global health. *Lancet* 373: 1993–5, 2009.
- Needham CA, Canning R, *Global Disease Eradication. The Race for the Last child*. Ch.: Smallpox, the right disease, the right time. ASM Press. Washington, 2003; pgs. 43–71.
- United Nations General Assembly. United Nations Millennium Declaration. A/55/2. 18 September 2000.

Resources:

- Commission on Social Determinants of Health, 2008. World Health Organization. *Closing the Gap in a Generation. Health equity through action on the social determinants of health*. WHO/IER/CSDH/08.1. WHO, Geneva: 2008.
- Deria A, Jezek Z, Markvart K, Carrasco P, Weisfeld J. The world's last endemic case of smallpox: surveillance and containment measures. *Bull World Health Organ* 58: 279–83, 1980.
- Fenner F, Henderson DA, Arita I, et al. Smallpox and its eradication. World Health Organization, 1988.
- United Nations, 2009. *The Millennium Development Goals Report*, 2009.

3. Theme: Maternal health

Topics:

- Maternal health: a continuum
- Maternal mortality

Readings:

- Desowitz RS, *The Malaria Capers. Tales of Parasites and People*. Chapter 8, In another village a mother dies. WW Norton & Company, New York, 1993. pgs. 107–122.
- Walt V, Death in birth. *Time*. 15 September 2008:40–44.
- Ronsmans C, Graham WJ. Maternal mortality: who, when, where, and why. *Lancet* 368: 1189–200, 2006
- Campbell OM, Graham WJ. Strategies for reducing maternal mortality: getting on with what works. *Lancet* 368: 1284–99, 2006.
- Koblinsky M, Matthews Z, Hussein J, et al. Going to scale with professional skilled care. *Lancet* 368: 1377–86, 2006.
- Borghi J, Ensor T, Somanathan A, Lissner C, Mills A. Mobilising financial resources for maternal health. *Lancet* 368: 1457–65, 2006.

4. Theme: Child and neonatal health

Topics:

- Child health: a continuum
- Child mortality
- Childhood nutrition and indicators of health
- An exercise in the integrated management of childhood illness

Readings:

- Black RE, Morris SS, Bryce J. Where and why are 10 million children dying every year? *Lancet* 361: 2226–34, 2003.
- Jones G, Steketee RW, Black RE, et al. How many child deaths can we prevent this year? *Lancet* 362: 65–71, 2003.
- You D, Wardlaw T, Salama P, Jones G. Levels and trends in under-5 mortality, 1990–2008. *Lancet* 375: 100–3, 2010.
- Executive summary of the Lancet neonatal survival series. The problem of newborn deaths. *Lancet* 265, 2005.

Video:

- WGBH Educational Foundation, Vulcan Productions, Inc. *Rx for Survival. A Global Health Challenge*. 2005.

Resources:

- Sommer A, Tarwotjo I, Djunaedi E, et al. Impact of vitamin A supplementation on childhood mortality. A randomised controlled community trial. *Lancet* 1: 1169–1173, 1986.
- World Health Organization, UNICEF, *Integrated Management of Childhood Illness*. 2008.

5. Theme: Vaccine-preventable disease

Topics:

- Vaccines and the control of communicable disease
- Examples of global vaccine programs: measles, polio
- Ethical considerations in vaccination programs; issues of personal liberties vs. public good.

Readings:

- Dugger CW, McNeil DG. Rumor, fear and fatigue hinder final push to end polio. *NY Times*. 20 March 2006.
- Muscat M, Bang H, Wohlfahrt J, et al. Measles in Europe: an epidemiological assessment. *Lancet* 373: 383–9, 2009.
- Parker AA, Staggs W, Dayan GH, et al. Implications of a 2005 measles outbreak in Indiana for sustained elimination of measles in the United States. *N Engl J Med* 355: 447–55, 2006.

Video:

- WGBH Educational Foundation, Vulcan Productions, Inc. *Rx for Survival. A Global Health Challenge*. 2005.

Resources:

- Roush SW, Murphy TV. Historical comparisons of morbidity and mortality for vaccine-preventable diseases in the United States. *JAMA* 298: 2155–2163, 2007.

6. Theme: HIV/AIDS

Topics:

- Overview, epidemiology, clinical features, treatment and prevention
- Stories of persons with HIV

Readings:

- Hill DR. HIV infection after motor vehicle trauma. *JAMA* 261: 3282–3286, 1989.
- Merson MH, O'Malley J, Serwadda D, Apisuk C, 2008. The history and challenge of HIV prevention. *Lancet* 372: 475–88, 2008.
- Selected chapters from:
 - Akhavi N, ed. *AIDS Sutra. Untold stories from India*. London: Vintage Books, 2008.
 - Nolan S, ed. *28 Stories of AIDS in Africa*. Portobello Books, Ltd. London, 2008
 - Pisani E. *Wisdom of Whores*. Granta Books. London, 2008.

Resources:

- UNAIDS. *AIDS Epidemic Update 09*. UNAIDS/09.36E UNAIDS. 2009.

7. Theme: Tuberculosis

Topics:

- Epidemiology, major clinical syndromes, treatment and prevention
- Control programs in low income settings

Readings:

- Chaisson RE, Martinson NA. Tuberculosis in Africa—combating an HIV-driven crisis. *N Engl J Med* 358: 1089–92, 2008.
- Gandhi NR, Moll A, Sturm AW, et al. Extensively drug-resistant tuberculosis as a cause of death in patients co-infected with tuberculosis and HIV in a rural area of South Africa. *Lancet* 368: 1575–80, 2006.
- Paralkar V. Worlds apart—tuberculosis in India and the United States. *N Engl J Med* 358: 1092–1095, 2008.

Video:

- WGBH Educational Foundation, Vulcan Productions, Inc. *Rx for Survival. A Global Health Challenge*. 2005.

Resources:

- World Health Organization. *Tuberculosis Control. A short update to the 2009 report*. WHO/HTM/TB/2009.426 WHO. Geneva, 2009

8. Theme: Malaria

Topics:

- Overview of epidemiology, diagnosis, and treatment
- Current principles of malaria control; comparison with malaria eradication efforts in the 1950s and 1960s

Readings:

- Dunavan CP. Tackling malaria. *Scientific American* December: 77–83, 2005.
- Gates B, Gates M. Malaria forum keynote address. Seattle, Washington, 17 October 2007.
- Needham CA, Canning R. *Global Disease Eradication. The Race for the Last Child*. Ch.: Malaria and the magic bullet. ASM Press, Washington, 2003; pgs. 5–37.
- Okie S. A new attack on malaria. *N Engl J Med* 2008; 358: 2425–2428.

Resources:

- Roll Back Malaria Partnership. *The Malaria Action Plan for a Malaria Free World*, 2008.
- World Health Organization. *World Malaria Report 2009*. WHO. 2009.

9. Theme: Emerging infections and pandemic threats

Topics:

- Emerging infectious diseases and International Health Regulations (2005)
- Pandemic threats: Comparison of SARS and pandemic influenza (H1N1)

Readings:

- Donaldson LJ, Rutter PD, Ellis BM, et al. Mortality from pandemic A/H1N1 2009 influenza in England: public health surveillance study. *BMJ* 339:b5213, 2009.
- Morens DM, Folkers GK, Fauci AS. The challenge of emerging and re-emerging infectious diseases. *Nature* 430: 242–9, 2004.

Resources:

- Abdel-Ghaffar AN, Chotpitayasunondh T, Gao Z, et al. Update on avian influenza A (H5N1) virus infection in humans. *N Engl J Med* 358:261–73, 2008.
- Belshe RB. The origins of pandemic influenza—lessons from the 1918 virus. *N Engl J Med* 353: 2209–11, 2005.
- Cutler SJ, Fooks AR, van der Poel WH. Public health threat of new, reemerging, and neglected zoonoses in the industrialized world. *Emerg Infect Dis* 16: 1–7, 2010.
- Department of Communicable Disease, Surveillance and Response, World Health Organization. *Consensus document on the epidemiology of severe acute respiratory syndrome (SARS)*. WHO/CDS/CSR/GAR/2003.11. WHO. Geneva, 2003
- Jain S, Kamimoto L, Bramley AM, et al. Hospitalized patients with 2009 H1N1 influenza in the United States, April–June 2009. *N Engl J Med* 361: 1935–44, 2009.
- Khan K, Arino J, Hu W, et al. Spread of a novel influenza A (H1N1) virus via global airline transportation. *N Engl J Med* 361: 212–214, 2009.
- Perez-Padilla R, de la Rosa-Zamboni D, Ponce de Leon S, et al. Pneumonia and respiratory failure from swine-origin influenza A (H1N1) in Mexico. *N Engl J Med* 361: 680–9, 2009.
- World Health Organization. Summary of human infection with highly pathogenic avian influenza A (H5N1) virus reported to WHO, January 2003–March 2009: cluster-associated cases. *Wkly Epidemiol Rec* 85: 13–20, 2010.

10. Theme: Humanitarian aid

Topics:

- Principles of humanitarian aid
- The Haitian earthquake

Readings:

- Harr J, 2009. Lives of the saints. *The New Yorker*, January 5, 2009.
- Birch M, Miller S. Humanitarian assistance: standards, skills, training, and experience. *BMJ* 330: 1199–201, 2005.

- Kett M. Displaced populations and long-term humanitarian assistance. *BMJ* 331: 98–100, 2005.
- Noji EK. Public health in the aftermath of disasters. *BMJ* 330: 1379–81, 2005.
- Redmond AD. Natural disasters. *BMJ* 330: 1259–61, 2005.
- Redmond AD. Needs assessment of humanitarian crises *BMJ* 330: 1320–2, 2005.
- Seaman J, Maguire S. ABC of conflict and disaster. The special needs of children and women. *BMJ* 331: 34–6, 2005.

Resources:

- Kraemer JD, Bhattacharya D, Gostin LO. Blocking humanitarian assistance: a crime against humanity? *Lancet* 372: 1203–5, 2008.
- Brennan RJ, Sondorp E. Humanitarian aid: some political realities. *BMJ* 333: 817–8, 2006.

11. Theme: Global health leaders and careers

Topics:

- Discussion of *Strength in What Remains*
- Exploration of career pathways in global health using examples of current global health leaders and workers from multiple disciplines

Readings:

- Kidder T. *Strength in What Remains*. Random House, 2009.
- Wolfberg AJ. Volunteering overseas—lessons from surgical brigades. *N Engl J Med* 354: 443–5, 2006.
- Mutongi K. The bore hole: an essay. University of Virginia Magazine, Winter 2007.
- Selections from:
 - Gates B. Remarks of Bill Gates. Harvard Commencement. Harvard Gazette, online. June 7, 2007.
 - Bono. This generation’s moon shot. *Time*, November 7, 2005, p. 98.
 - Boseley S. Drug giant GlaxoSmithKline pledges cheap medicine for world’s poor. Available at: guardian.co.uk. February 13, 2009.
 - Geldof B. The healer. *Time*. 3, March 2008, pp. 26–7.
 - Carter J. A village woman’s legacy. *Time*. 31 March 2008, 45.
 - Kim JY. Passion and practicality—Dartmouth and the liberating arts. 22 September 2009. Dartmouth College.

Resources:

- Crump JA, Sugarman J. Ethical considerations for short-term experiences by trainees in global health. *JAMA* 300: 1456–8, 2008.
- Mills EJ, Schabas WA, Volmink J, et al. Should active recruitment of health workers from sub-Saharan Africa be viewed as a crime? *Lancet* 371: 685–688, 2008.

12. Theme: Global Health: conclusions and presentations

Topics:

- Student presentations
- Discussion and conclusions

Readings:

- Lawn JE, Rohde J, Rifkin S, et al. Alma-Ata 30 years on: revolutionary, relevant, and time to revitalise. *Lancet* 372: 917–27, 2008.
- Poma SR, Soto MV, Chahua Jde L, Poma MR. Which single intervention would do the most to improve the health of those living on less than \$1 per day? Interview by Gavin Yamey. *PLoS Med* 4: 1557–60, 2007.

SUPPLEMENTAL TABLE 2

Colleges Surveyed for Global and/or Public Health Offerings, 2009–2010 Academic Year

Amherst College; Amherst, Massachusetts
 Bard College; Annandale-on-Hudson, New York
 Barnard College; New York, New York
 Bates College; Lewiston, Maine
 Bowdoin College; Brunswick, Maine
 Bryn Mawr College; Bryn Mawr, Pennsylvania
 Bucknell University; Lewisburg, Pennsylvania
 Carleton College; Northfield, Minnesota
 Center College; Danville, Kentucky
 Claremont McKenna College; Claremont, California
 Colby College; Waterville, Maine
 Colgate University; Hamilton, New York
 Colorado College; Colorado Springs, Colorado
 Connecticut College; New London, Connecticut
 Davidson College; Davidson, North Carolina
 DePauw University; Greencastle, Indiana
 Dickinson College; Carlisle, Pennsylvania
 Franklin & Marshall College; Lancaster, Pennsylvania
 Furman University; Greenville, South Carolina
 Gettysburg College; Gettysburg, Pennsylvania
 Grinnell College; Grinnell, Iowa
 Hamilton College; Clinton, New York
 Harvey Mudd College; Claremont, California
 Haverford College; Haverford, Pennsylvania
 College of the Holy Cross; Worcester, Massachusetts
 Kenyon College; Gambier, Ohio
 Lafayette College; Easton, Pennsylvania
 Macalaster College; St. Paul, Minnesota
 Middlebury College; Middlebury, Vermont
 Mount Holyoke College; South Hadley, Massachusetts
 Oberlin College; Oberlin, Ohio
 Occidental College; Los Angeles, California
 Pitzer College; Claremont, California
 Pomona College; Claremont, California
 Reed College; Portland, Oregon
 Scripps College; Claremont, California
 Sewanee, The University of the South; Sewanee, Tennessee
 Skidmore College; Saratoga Springs, New York
 Smith College; Northampton, Massachusetts
 St. Olaf College; Northfield, Minnesota
 Swarthmore College; Swarthmore, Pennsylvania
 Trinity College; Hartford, Connecticut
 Union College; Schenectady, New York
 University of Richmond; Richmond, Virginia
 Vassar College; Poughkeepsie, New York
 Washington & Lee University; Lexington, Virginia
 Wellesley College; Wellesley, Massachusetts
 Wesleyan University; Middletown, Connecticut
 Whitman College; Walla Walla, Washington
 Williams College; Williamstown, Massachusetts