



Global Health Sciences Module

Module Length: 6 hours

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Overview

We conceptualize our planet as a global village. Nowhere is our degree of interdependency more evident than in the area of health. We live in an age in which a case of fever that sends an Asian poultry farmer home sick also sends chills down the backs of financiers in Europe and the United States. No longer can we afford to see AIDS as a single pandemic that might, in this single instance, necessitate providing advanced medicines and medical technology for the developing world. We are now in an age where the so-called developing world is creating both medicines and health programs that are being exported to other nations. It is essential that we see health as a fundamental human right, one that need not be imported, but rather is indigenous to all nations and all peoples.

This module will focus on international aspects of health sciences. Participants will explore the ways in which culture, economics and technology intersect to create access to health care as well as health care disparities. Controversial issues in health sciences such as the access to reproductive health care and the use of developing nations as testing sites for new medicines and health technology will be examined in order to help participants develop an appreciation for multiple perspectives and diverse opinions about the role and purpose of health science in the world. Home-grown health initiatives and programs will be explored as a way of both examining best practices and our own biases about the nature of “good” health care.

Learning Objectives

Through the completion of this module, participants will be able to:

1. Identify the social, political and economic factors that lead to health inequities around the globe
2. Discuss the impact of education and technology in addressing global health concerns and health inequalities
3. Explain the importance of cultural competency in understanding and addressing global health issues
4. Explore their own preconceptions and biases about the nature of health and medicine



Key Terms and Concepts

Health- the World Health Organization defines health as a state of complete physical, mental and social well-being, not merely the absence of disease or infirmity.

Health disparities- health conditions that are more serious or common in socioeconomically disadvantaged (i.e., low education level, live in poverty) and medically underserved, rural, and urban communities.

Cultural competency - the ability to interact effectively and appropriately with people of different cultures.



Lesson Plans

Lesson 1: Introduction to Global Health

Overview

This lesson gives a brief history of the global health movement, and introduces the concepts of social justice and health equity- key components of global health.

Relevant Learning Objectives

Through the completion of this lesson, participants will be able to:

- Identify the social, political and economic factors that lead to health inequities around the globe
- 4. Explore their own preconceptions and biases about the nature of health and medicine.

Procedure

Pre-Class Assignments

- Students take the “Global Health Pre-Test” (Appendix A).
- Students read the two assigned articles

Possible Classroom Activities

- Introduction/Hook.
(Time: 5-7 minutes) (Skills: n/a) (Objectives 4) (Related Resource: Global Health Pre-Test)
 - To students: “What is the one goal for a global health program that you stated on your pre-test?”
 - Alternatively the class can view one of the film clips noted in “Optional resources” and discuss its relation to pre-test responses and/or readings
 - What are some of the common answers? What might account for this?
[Teacher looks for/highlights impacts of culture, experience, media
- Discussion: Pre-test and Initial Ideas about Global Health.
(Time: 20 minutes) (Skills: Holistic Thinking) (Objectives 1 & 4) (Related Resource: Global Health Pre-Test)

TEACHER: “In the beginning of this module, you were asked to take a pre-test that examined your ideas about what global health means. Let’s discuss your answers. At the



end of class we will revisit these initial ideas.”

- Divide students in small groups (3-5) students and ask them to analyze pre-test responses. They will have ten minutes to “prepare to share” with the whole class. Each group should summarize briefly its responses to the following:
 - Compare your definitions of global health, “one goal” responses, measures of health
 - To what extent do responses focus on current diseases (e.g. AIDS or Pan-Flu) rather than ongoing problems (e.g. malnutrition or infant mortality)?
 - To what extent is health defined as absence of disease (e.g. “not sick” “not overweight”) rather than as a state of wellness?
 - To what extent do we focus more on illness than wellness? More on emergencies (like Pan Flu) than chronic problems (malnutrition)?
 - What factors shape these views of global health? How might personal experiences or professional training have an impact?
- Whole-class discussion: Ask each group to answer one question. Solicit general comments, esp. for final question.

Teacher looks for/highlights: As above, culture, experience, media impact perspectives. Study/broader exposure shapes differences in public vs. professional vs. views.]

- Analysis of Readings: Key Issues in Global Health.
(Time: 25- 30 minutes) (Skills: Holistic Thinking) (Objectives 1 & 4) (Related Resources: Koplan et. al article and Garrett articles)

Class discussion on definitions of global health, and key concerns – including social justice and health equity

Options for discussion:

- Have each student write answer(s) to selected question(s) below and prepare to share in small-group and/or whole-class discussion.
- Have small groups “prepare to share” answers to questions below and then have teacher facilitate groups sharing/whole class discussion
- Teacher leads whole-class discussion of questions below.

Koplan article

- According to Koplan, how is the field of global health related to concepts of public health and international health? What are some common concerns?



[Note: list of 4 factors in public health, and chart in article comparing overlap between public/global/international health. Common goals include prevention, clinical care, socioeconomic and health equity]

- What is meant by “equity” or “social justice” in the context of public health?

One discussion: “justice stresses the fair disbursement of common advantages and the sharing of common burdens. It captures the twin moral impulses that animate public health: to advance human well-being by improving health and to do so by focusing on the needs of the most disadvantaged.”

Lawrence O. Gostin and Madison Powers,” What Does Social Justice Require For The Public’s Health? Public Health Ethics And Policy Imperatives,” *Health Affairs*, July 2006

Garrett article

- What challenges to global health does Garrett identify, and what examples does she use?

[Money poured into developing nations, but for “specific high-profile diseases” vs. basic public health. “Brain drain” as developed nations encourage immigration of health care workers from developing, dilution of local economy, wasted resources due to lack of infrastructure].

She uses the AIDS pandemic and the development of anti-retroviral drugs to illustrate the idea of social justice. She outlines successes in HIV/AIDS programs in Haiti but neglects other health problems, esp. “the diseases of poverty”

- What could be done to address these issues?
[Focus on supporting health care infrastructure/systems, viable state]

Synthesis and values and attitudes questioning

- How do these readings challenge or support some of the ideas about global health expressed in the pre-test responses?
 - Do all people have a right to the same health care? Explain your answer.
- Conclusion: Comparing and Contrasting Ideas about Global Health.
(Time: 5-7 minutes) (Skills: Holistic Thinking) (Objectives 1 & 4)(Resources: n/a)



Tell students to choose one of the questions below and write a brief response [teacher may collect responses or ask students to keep them in their notes].

If time, students may discuss in small groups/whole class

- How do definitions of public health vary and what factors affect this variation?
- What are some the factors affecting global health and perceptions about it – including your own?
- How have your background and experiences shaped the ideas you expressed in the pre-test, and what impacts did the readings and discussion have on these views?

Resources

- Appendix A: Global Health Pre-Test
- Garrett, L. (2007). The challenge of global health. In *Foreign Affairs*, 86: 155-161.
- Koplan, J., Bond, T., Merson, K., Reddy, M., Rodriguez, M., Sewankambo, N. & Wasserheit, J. (2009) Towards a common definition of global health. In *The Lancet*, 373, 9679: 1993-1995. Available online at <http://www.naturopathicstudent.org/sites/default/files/file/Global%20Health/Global%20Health%20-%20Towards%20a%20Common%20Definition.pdf>

Optional Resources

- UNAIDS Country Fact Sheets. (n.d). UN AIDS. Retrieved from: <http://www.unaids.org/en/dataanalysis/tools/aidsinfo/countryfactsheets/> [can do comparisons easily and is interactive]
- HIV/AIDs Data and Statistics. (n.d.). World Health Organization. Retrieved from: <http://www.who.int/hiv/data/en/index.html> [click on the PowerPoint link]
- Global Health Observatory MD6 Combat Tuberculosis. (n.d.). World Health Organization. Retrieved from: <http://www.who.int/gho/mdg/diseases/tuberculosis/en/index.html>
- Global Health Map Gallery. (n.d). World Health Organization. Retrieved from: <http://gamapserver.who.int/mapLibrary/app/searchResults.aspx>
- Priority Medicines for Mothers & Children 2011. (2011, March 21). World Health Organization. Retrieved from: http://www.who.int/medicines/publications/emp_mar2011.1/en/index.html
- CSIS Expert Stephen Morrison, on the global AIDS crisis. (n.d). Globalization101. Retrieved from: http://www.globalization101.org/http://www.globalization101.org/experts/Global_AIDs



[Crisis](#) [This video is over 17 min. long but at 8 min. 46 sec. it focuses on how the international community is addressing AIDS.]

- Haiti's Government-Imposed, Cholera Epidemic?. (2011, January 10). Globalization101. Retrieved from: <http://www.globalization101.org/news1/Haiti-Cholera>



Lesson 2: Measuring Global Health

Overview

This lesson discusses ways to evaluate global health, difficulties in finding objective and feasible measures. It also introduces the concept of health disparities.

Relevant Learning Objectives

Through the completion of this lesson, participants will be able to:

1. Identify the social, political and economic factors that lead to health inequities around the globe
2. Discuss the impact of education and technology in addressing global health concerns.

Procedure

Pre-Class Assignments

- Students read the assigned article (Larson and Mercer). Ask that students visit and review at least three of the seven websites listed in the article as sites that provide global health indicators. (Skills: Technology)

Possible Classroom Activities

- Introduction/Hook.
(Time: 5-7 min.)(Skills: Holistic Thinking)(Objective 1)(Related Resources: Larson and Mercer)
Based on the Larson and Mercer article and the websites you reviewed, choose two important health indicators. Be able to explain how data for this indicator might be obtained, and any challenges in doing so.

Pair-share with your neighbor.

- Developing Health Measures.
(Time: 20 minutes) (Skills: Holistic Thinking) (Objectives 1) (Related Resource: "Developing Health Measures" activity sheet Appendix B)

Small group completion of the "Developing Health Measures" sheet.

Pass out activity sheet. Review instructions/clarify as needed.



Place students in small groups. Each group will develop a health measure and prepare to share with the class.

For instructor clarification- the measure will be a series of questions and/or data collections about many different health indicators. Be sure that students understand that they are being asked to list the questions that they would ask people and the data that they would collect).

- Class discussion of global health measures (Time: 40 minutes) (Skills: Holistic Thinking) (Objectives 1 & 2) (Related Resources: Larson and Mercer article)

Ask each group to list and discuss the measure that their group developed. After each group has reported to the class, segue into a class discussion. Discussion and follow-up questions

- a. Which indicators were included in every, or almost every, group? Are these indicators more significant or important than others? Why or why not?
 - b. How did groups decide which environmental factors to include in their measures?
 - c. The reading discusses multiple barriers to obtaining accurate and relevant health indicators. What are some of these barriers? How might they be overcome?
 - d. The websites that you reviewed for class are from organizations tasked with collecting and presenting global health data. How was this data organized and presented? Was it understandable? What things were that you found on the websites were especially interesting or surprising?
- Conclusion.
(Time: 5 minutes)(Skills: Holistic Thinking)(Objective 1)(Resources: n/a)

Write a short response to the following. (Can discuss if time permits or collect.)

How does the gathering of global health data reveal issues of [in]equity?

[Obstacles to gathering data; obstacles to acting on data; comparisons of indicators...]

Resources

- Appendix B Developing Health Measures activity sheet
- Larson, C. & Mercer, A. (2004). Global health indicators: An overview. In *Canadian Medical Association Journal*, 171, 10; 1199-1200. Retrieved from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC524951/>



Optional Resources

- The Global Health Public System. (n.d). Globalization101. Retrieved from: http://www.globalization101.org/issue_sub/health/gdorglobalizationdisease/global_public_health [can use this to see which aspects the class would prioritize, rank them, etc.]
- Global Burden of Disease study. (2010). Retrieved from: <http://www.globalburden.org/> [This is interesting because if you look at the survey questions, it focuses on feeling of pain instead of what is the disease label. The students don't have to do the survey, but I think it could be interesting for the instructor to ask some of the questions.]
- Wealth & Health of Nations stats from 1800-present. (n.d). Gapminder. Retrieved from: [http://www.gapminder.org/world/#\\$majorMode=chart\\$;shi=t;ly=2003;lb=f;il=t;fs=11;al=30;stl=t;st=t;ns1=t;se=t\\$wst;tts=C\\$ts;sp=5.59290322580644;ti=1839\\$zpv;v=0\\$inc_x;mid=XCOORDS;iid=phAwcNAVuyj1jiMAkmq1iMg;by=ind\\$inc_y;mmid=YCOORDS;iid=phAwcNAVuyj2tPLxKvvnNPA;by=ind\\$inc_s;uniValue=8.21;iid=phAwcNAVuyj0XOoBL_n5tAQ;by=ind\\$inc_c;uniValue=255;gid=CATID0;by=grp\\$map_x;scale=log;dataMin=295;dataMax=79210\\$map_y;scale=lin;dataMin=19;dataMax=86\\$map_s;sma=49;smi=2.65\\$cd;bd=0\\$inds=;modified=75](http://www.gapminder.org/world/#$majorMode=chart$;shi=t;ly=2003;lb=f;il=t;fs=11;al=30;stl=t;st=t;ns1=t;se=t$wst;tts=C$ts;sp=5.59290322580644;ti=1839$zpv;v=0$inc_x;mid=XCOORDS;iid=phAwcNAVuyj1jiMAkmq1iMg;by=ind$inc_y;mmid=YCOORDS;iid=phAwcNAVuyj2tPLxKvvnNPA;by=ind$inc_s;uniValue=8.21;iid=phAwcNAVuyj0XOoBL_n5tAQ;by=ind$inc_c;uniValue=255;gid=CATID0;by=grp$map_x;scale=log;dataMin=295;dataMax=79210$map_y;scale=lin;dataMin=19;dataMax=86$map_s;sma=49;smi=2.65$cd;bd=0$inds=;modified=75)



Lesson 3: Global Health Disparities

Overview

This lesson introduces the idea of health disparities- that people's access to health, and even how long they can expect to live, are shaped by factors, like geography, that are largely beyond individual control.

Relevant Learning Objectives

- 1) Identify the social, political and economic factors that lead to health inequities around the globe,
- 2) Discuss the impact of education and technology in addressing global health concerns and health inequalities

Procedure

Pre-Class Assignments

- Students read the Gostin and Hodge and WHO articles.
*Option: Students also view the 15-min video *A Slum Insight* – OR see plan below to screen portions in class

Possible Classroom Activities

- Introduction/hook.
(Time: 5-7 min.)(Skills: Holistic Thinking)(Objective 1)(Related Resources: Rosling video)
 - Play first 2 min 30 seconds of film clip, *A Slum Insight*, with Hans Rosling [keep it cued at that halting point for later in lesson]
 - Instruct students to record the following:
 - What are the five basic needs that UN Habitat has identified for housing.
 - How do these relate to the agency's definition of a slum?
 - Discuss (pair share, or whole class)
 - What are the implications of these needs for health?
 - What are the implications of continuing urbanization for global health?

Alternate plan: Have students view video as Pre-Class Assignment; reduce time for hook or expand discussion of clip's public health implications

- Class activity on Access to Health Resources.
(Time: 20 minutes) (Skills: Holistic Thinking) (Objectives 1) (Related Resource: "Health Resources Evaluation" Appendix C)
 - Hand out "Health Resources Evaluation" and review the instructions.
 - Allow students five minutes to make their selections. Then discuss their choices and observations about the exercise.



- Questions to consider:
 - Do students have access to the majority of health resources?
 - Do students perceive that they have control over many of these resources?
 - Does access to or control over some of these resources (e.g. education) in turn allow better access to and control over others (like safe work and shelter)?
 - Since many of the resources on the list are beyond individual control, what are the implications for improving individual and community health?
- Class Discussion on Health Disparities.
(Time: 30 minutes) (Skills: Holistic Thinking and Cross-cultural Communications)
(Objectives 1 & 2) (Related Resources: Gostin and Hodge article, WHO article, Rosling video)

Play A *Slum Insight* clip (2 min 30s sec-9 min 36 sec.) either before all questions or before questions on video. This segment has Kenyan slum dwellers describing their housing conditions, and ends with a child's funeral (sanitation-related death).

May add 9:50-11 min: Anna Tibaijuka, Exec. Director UN Habitat on solutions.

“The readings talk about human right to health. Is health a human right? And if so, what things are essential to health and must be provided?” Follow-up questions and issues:

- What are some reasons that health disparities exist and are increasing?
 - What are the obligations of healthy and wealthy nations to help others achieve health?
 - Given what Gostin and Hodge say about the impact of government on health, can one nation improve the health of others? How?
 - If one of the slum dwellers from Han's Rosling's video “A Slum Insight” could speak to us about the health disparities that s/he experiences what might s/he talk about?
 - What things would they think are most important?
 - How might these perspectives be different if a woman were talking rather than a man?
- Class Demonstration and Discussion: Life Expectancy Around the Globe.
(Time: 30 minutes) (Skills: Holistic Thinking and Cross-cultural Communications)
(Objective 1) (Related Resource: Appendix D)
 - Conclusion: Reflection and application.
(Time: 5-7 minutes) (Skill: Holistic Thinking) (Objectives 1 & 2)(Related Resources: n/a)



How can education and/or technology be used to address some of the issues raised in today's lesson?

*Can be done as a "quick write" to discuss and/or for instructor to collect

[Some issues: technology to raise awareness and support (as in the video), public health education, urban planning; possible aids to alleviate poverty/promote individual and community development]

Resources

- Appendix C: Health Resources Evaluation.
- Gostin, L.O. & Hodge, J.G. (2007). Global health law, ethics and policy. In *Journal of Law, Medicine & Ethics*, 34, 4, 519-525.
- Population and Development Review. (2007). The World Health Organization on Health inequality, inequity, and social determinants of health. *Population and Development Review*, 33, 4; 839-843.
- Rosling, H. (2010). *A slum insight*. A GapMinder Video (15 min.) available online at: <http://www.gapminder.org/videos/a-slum-insight/>

Optional Resources

- Abbrar Karan, Brian de. (2008, November 16). Ranking the World's Healthcare Systems. *Yale Journal of Medicine and Law*, Vol V. Issue 1. Retrieved from: <http://www.yalemedlaw.com/graphic-features/ranking-the-worlds-healthcare-systems/>
- Whitman, Glen. (2008, February 28). WHO's Fooling Who? The World Health Organization's Problematic Ranking of Health Care Systems. CATO Institute Briefing Paper, No. 101. Retrieved from: <http://www.cato.org/pubs/bp/html/bp101/bp101index.html> [Interesting rebuttal article to WHO's health system rankings.]
- WHO's Countries with a Critical Shortage of Health Service Providers. (n.d.). [data table]. Retrieved from: http://www.google.com/imgres?imgurl=http://www.who.int/mediacentre/events/2006/g8summit/healthworkers_large.gif&imgrefurl=http://www.realizingrights.org/%3Foption%3Dcontent%26task%3Dview%26id%3D193&usq=_kd-RGJcgULf3-cjfmSvyfArS5yM=&h=596&w=842&sz=60&hl=en&start=30&zoom=1&tbnid=oBtY_wjRcGSBUM:&tbnh=110&tbnw=155&ei=0nGLTfukG8qdgQf86P3PDQ&prev=/images%3Fq%3Dglobalization%2Band%2Bpublic%2Bhealth%26um%3D1%26hl%3Den%26sa%3DN%26biw%3D1280%26bih%3D709%26tbs%3Disch:10%2C521&um=1&itbs=1&iact=hc&vpx=112&vpy=311&dur=7110&hovh=189&hovw=267&tx=163&ty=105&oei=tn



[GLTYOsL8qBgAeLjpm9DQ&page=2&ndsp=33&ved=1t:429,r:8,s:30&biw=1280&bih=709](https://www.photius.com/rankings/healthranks.html)

- WHO's health system ranking of the world health systems. (2000). Retrieved from: <http://www.photius.com/rankings/healthranks.html>



Lesson 4: Culture and Health

Overview

This module gives definition of culture and many examples of how culture influences peoples' behaviors and interactions related to health.

Relevant Learning Objectives

Through the completion of this lesson, participants will be able to:

3. Understand the importance of cultural proficiency in understanding and addressing global health issues
4. Address global health issues and explore their own preconceptions and biases about the nature of health and medicine.

Procedure

Pre-Class Assignments

- Students read Gerard, WHO Global Health Council articles.
- Students choose and view at least two of the videos (5-6 min. each)

Possible Classroom Activities

- Introduction/hook.
(Time: 5-7 minutes)(Skills: n/a)(Objective 3)(Related Resources: n/a)

What is culture?

Put responses on board and discuss. Underscore key elements for a class understanding/definition – important for public/global health.

*Option: View a selection of definitions compiled by the Intercultural Studies Project at the University of Minnesota's Center for Advanced Research on Language Acquisition: <http://www.carla.umn.edu/culture/definitions.html>.

- “Cultural Compass” Activity.
(Time: 25 minutes) (Skills: Holistic Thinking) (Objectives 3 & 4) (Related Resources: “Cultural Compass” Appendix E, Videos: “Asian American/Pacific Islanders and Mental Health,” “Health and Well Being,” “Mental Health in the Latino Community,” “Mental Health Matters: Challenges in Native American Healing” and “Jewish Families of Faith and Mental Illness”)



NOTE: To build holistic thinking skills, this activity needs to be carried out in a multi-cultural classroom. If students have the same background, the teacher will need to provide examples of how the answers change based on culture/ethnicity/religion/nationality/etc. One way that can be done is by showing a couple of videos about different cultural perspectives on a specific health issue. For example, the instructor could show the video clips on cultural perspectives on mental health – perhaps those not seen by most students.

Pass out “Cultural Compass” to the students.

To students: “Your readings describe the enormous influence that culture can have on health and the ways in which people interact with health resources. This exercise will help students think about their own culture(s) and the cultural messages that these cultures may impart about health.

Instructions for the Cultural Compass:

- “First identify the culture(s) to which you belong. Culture can be based on many things such as: race or ethnicity, religion, the area in which you live (e.g. city or farm culture, your occupation (e.g. student culture), hobbies or abilities (e.g. gaming culture).
- “After you have listed all of the cultures with which you identify, circle one that is very important to you, or one from which you received lots of health-related messages.
- “In each corner of the compass, list the beliefs or messages that you received as a member of your culture about these things. What messages, for instance, did you receive about what you should do or be as a man or a woman? How do people in your culture act when someone they love is very ill or dies? What about mental illness, which is emphasized in our readings and videos?

Once students have completed the activity, lead a discussion in the messages that they received and the ways in which those messages have influenced their lives and health-related behaviors.

- **Class Discussion of Culture and Health.**
(Time: 20-25 minutes) (Skills: Holistic Thinking) (Objectives 3 & 4) (Related Resources: Gerard article and When Culture Helps Saving Women's Lives in Senegal)

“The readings gave many examples of how culture can be both a barrier and a facilitator for health. In thinking about creating health programs and services, how should we take cultural beliefs into account?” Follow-up questions:



- a. What about cultural practices or beliefs with which we disagree, for instance the idea that literacy is not important for women?
 - b. Do what extent are gender inequities perpetuating health inequalities? How does the treatment of women affect the health of all?
 - c. Is introducing our health practices and beliefs to other cultures unfairly imposing our culture on them?
 - d. Is or should health be culture-free? Can/should anything be culture-free?
- Conclusion: Reflection and Application.
(Skills: Holistic Thinking, Cross-Cultural Communication) (Objectives 3)

Our readings emphasized global health and the videos focused on cultural diversity in the United States. How are these connected and what are the implications for health care providers and delivery systems?

*Can be done as a “quick write” to discuss and/or for instructor to collect

Resources

- Appendix E Cultural Compass
- Gerard, N.K. (2000). In the Shadow of the Temple: Cross-cultural Sensitivity in International Health Program Development. In *Ethnicity & Health*, 5,2; 161-171.
- National Alliance on Mental Illness (NAMI), “Asian American/Pacific Islanders and Mental Health” (2011, February 11). (6 min., 37 sec.) Retrieved from: <http://www.youtube.com/watch?v=s4iSGIAjneA&feature=related>
- QuranSpeaks, “Health and Well Being,” from Canadian Public Television’s Let the Quran Speak (2008, December 7). Retrieved from: <http://www.youtube.com/watch?v=ZhPeuXF0IT0&feature=related>
- National Alliance on Mental Illness (NAMI), Mental Health in the Latino Community - NAMI NJ 2009 Conference in Spanish (English video) (5 min., 20 sec.) Retrieved from: <http://www.youtube.com/watch?v=s4iSGIAjneA&feature=related>
[In addition to other cultural factors, viewers should contemplate the issue of language in health care access, which is addressed by speakers in this clip and the fact that portions are in Spanish with English subtitles]
- Peers Envisioning and Engaging in and Recovery, “Mental Health Matters: Challenges in Native American Healing” (5 min. 41 sec.) Retrieved from: http://www.youtube.com/watch?v=9qRE_XxfZFg
- Mental Health Ministries, “Jewish Families of Faith and Mental Illness” (2007, March 5). (4 min., 36 sec.) Retrieved from: <http://www.youtube.com/watch?v=js0MbIknaRc>
- When Culture Helps Saving Women's Lives in Senegal (2011, December 12). Fitness News. Retrieved from: http://www.womenfitness.net/news/womens_health/saving_women.htm?no_redirect=true



Optional Resources

- Alzheimer's Disease. (2008). In *Global Medical Research Fund*. Retrieved from: <http://www.gmrfund.org/Facts%20&%20Figures%20in%20stem%20cell%20research.htm> [Statistics to complement above article. Look three-fourths of the way down the page]
- Health of indigenous peoples. (2007, October). World Health Organization. Retrieved from: <http://www.who.int/mediacentre/factsheets/fs326/en/index.html>
- Kagawa-Singer, Marjorie and Valdez Dadia, Annalyn and Yu, Mimi C. and Surbone, Antonella. (2010). Cancer, Culture and Health Disparities: Time to Chart a New Course?. (2010). In *CA Cancer J Clin*, 60:12-39. Retrieved from: <http://caonline.amcancersoc.org/cgi/content/full/60/1/12> [*This touches upon ideas of race, inequity and more in the United States*]
- Racial and Ethnic Differences in Self-Related Health Status Among Adults With and Without Disabilities. (2008, October 16). Center for Disease Control and Prevention. Retrieved from: <http://www.cdc.gov/Features/dsDisabilityAndHealthStatus/>



Lesson 5: Globalization, Technology and Health

Overview

This lesson explores globalization and examines the impact that globalization has and could continue to have on global health issues. The impact of technology on health and ways in which technology could be used to decrease health disparities is also introduced and discussed.

Relevant Learning Objectives

Through the completion of this lesson, participants will be able to:

1. Identify the social, political and economic factors that lead to health inequities around the globe
2. Discuss the impact of education and technology in addressing global health concerns and health inequalities.

Procedure

Pre-Class Assignments

- Students read BBC and Harris and Seid articles.
* Option: Also assign the Fidler reading.

Possible Classroom Activities

- Introduction/hook.
(Time: 5-7 minutes)(Objective 2)(Related Resources: Fiddler)

Project for the class the tables of past international treaties on health issues, in the Fidler article.

How do the issues seen in these past treaties compare with current-day concerns?

- Discussion on the Impact of Globalization on Health.
(Time: 30 minutes) (Skills: Holistic Thinking) (Objective 2) (Related Resources: Harris and Seid article)

“The first half of the reading for this lesson talks about the impact of globalization on world health. In some ways, globalization has reduced health quality. How has globalization affected health?” Follow-up questions and issues:

- Are these issues the inevitable consequences of globalization? Could they be prevented?



- The spread of infectious disease through global networks is an increasing issue. What can be done to address this?
- How does technological and economic development impact health?
- Discussion on Technology and Health.
(Time: 30 minutes) (Skills: Holistic Thinking) (Objective 2) (Related Resources: Harris and Seid article)

“Harris and Seid suggest that technology might be an instrument for addressing poor health and health disparities. How might this happen?” Follow-up questions and issues:

- What technologies seem to be most promising/ important?
- What are some barriers to the implementation of health technology in the areas that most need it?
- Global Patents Role-Play.
(Time: 30 minutes) (Skills: Holistic Thinking and Cross-cultural Communications)
(Objective 2) (Related Resources: Appendix F and BBC reading)
- Conclusion: Reflection on Update about the Issues.
(Time: 5-7 minutes)(Skills: Holistic Thinking) (Objectives 1, 2, 4)(Related Resources: Brazil’s AIDS policy ‘remarkable’)

Instructor distributes copies of BBC articles “Brazil’s AIDS policy ‘remarkable’” (2007) and “India stands to gain from ‘patent cliff’” (2011, on generic pharmaceutical production)

What were some of the outcomes of Brazil’s decision to break AIDS drug patents?
Would reading these articles have affected your thinking about the role-play? Explain.

Resources

- BBC: Brazil to break AIDS drug patent. (2007, May 4). Retrieved from:
<http://news.bbc.co.uk/2/hi/americas/6626073.stm>
- Harris, R.L. & Seid, M. J. (2004) *Globalization and Health in the New Millennium. Perspectives on Global Development & Technology*, 3, 1-2; 1-46. [*For this plan, the readings below should be provided to students after the role play. An alternate plan for the lesson would be to assign them beforehand and modify the wording of the activity, perhaps adding the role of a Cipla company executive.]
- BBC: Brazil’s AIDS policy “remarkable” (2007, November 14) Retrieved from:
<http://news.bbc.co.uk/2/hi/americas/7093809.stm>



- BBC: India stands to gain from 'patent cliff'. (2011, December 2011). Retrieved from <http://www.bbc.co.uk/news/business-16064606>

Optional Resources

- Fidler, David P. (2001). The globalization of public health: the first 100 years of international health diplomacy. In *Bulletin of the World Health Organization*, 79 (9). Retrieved from: [http://www.who.int/bulletin/archives/79\(9\)842.pdf](http://www.who.int/bulletin/archives/79(9)842.pdf) [I think the tables could be used at the very least]
- How Wireless Technology is Changing Global Health & Empowering Women. (2010, October 27). Retrieved from: <http://www.youtube.com/watch?v=iW9Df3R1dZw> [Short video extolling use of wireless, could ask students if they agree or if there is another technology that is better suited to this issue] (3 min 20 sec)



Lesson 6: Creating Health for All

Overview

This lesson is the culmination of the Global Health Science module. It encourages students to use the content and context of the previous lessons to envision a world in which geographic, cultural and technological barriers have been addressed and health care is in fact a basic human right.

Relevant Learning Objectives

1. Identify the social, political and economic factors that lead to health inequities around the globe, discuss the impact of education and technology in addressing global health concerns and health inequalities
- 3 Understand the importance of cultural proficiency in understanding and addressing global health issues
- 4 Explore their own preconceptions and biases about the nature of health and medicine.

Procedure

Pre-Class Assignments

- Students read Sachs and WHO articles.

Possible Classroom Activities

- Introduction/hook.
(Time: 5-7 minutes)(Skills: n/a)(Objective 1)(Related Resources: Voice of America clip)

Show this video to get students ready to discuss the concept of health for all.
- “Health for All Worksheet” and Discussion.
(Time: 50 minutes) (Skills: Holistic Thinking) (Objectives 1, 3, & 4) (Related Resources: “Health for All Worksheet” Appendix G, Sachs article, WHO article)

Place students into small groups. “The readings for today include two different sets of instructions to produce health for all. Each article focuses (largely or exclusively) on those living in poverty. Imagine that you are now the part of a working group at the World Health Organization tasked with creating health for all by 2020. Use your worksheet as a framework for your planning. After you have had 20 minutes to develop your plan, we will talk- as a class- about the plans.

[Discuss plans, moving through each thematic set of questions and soliciting groups’



responses. Record (or have a student record) key elements on the board; have students take notes.

*Alternative: Have each group briefly present (and project) its plan. If time permits, discuss individual plans before moving to compare/contrast questions.

Follow-up questions and issues:

- In which areas of the plan do students show widespread agreement? In which areas are there major differences?
 - How have the readings shaped students' thinking about global health issues?
 - What obligations do we have to support cultural traditions and practices that may conflict with health programs? And: how do we incorporate cultural traditions and practices into health programs?
 - What barriers do students identify? How do these barriers impact the delivery of health for all in the real world?
- Conclusion: Summary and Reflection.
(Time: 5-7 minutes) (Skills: Global Knowledge, Holistic Thinking) (Objectives 1, 2, 3, & 4)(Related Resources: n/a)

What are the most important things you have learned about global health?
How has your thinking about global health issues changed?

Resources

- Appendix G: Health for All Worksheet
- Sachs, J.D. (2008). Primary health for all. *The Scientific American*, 298, 1; 34-36.
- The World Health Organization. (2004). Dying for change - Poor peoples experience of health and ill health. Retrieved from: <http://www.who.int/hdp/publications/en/>

Optional Resources

- Light, Paul. (2011, February 4). Is Bill Gates Right About Polio. In *Washington Post*. Retrieved from: <http://views.washingtonpost.com/leadership/light/2011/02/is-bill-gates-wrong-about-polio.html>
- Global Strategy on Occupational Health for All: The way to health at work. (1994, October 11-14). World Health Organization. Retrieved from: http://www.who.int/occupational_health/publications/globstrategy/en/index6.html [*Could be shortened and make a nice visual*]
- Summary Results. (n.d.). In *Burden of Disease Attributable to Selected Environmental Factors & Injuries Among Europe's Children*. Retrieved from:



http://www.who.int/quantifying_ehimpacts/publications/en/ebd8chap6.pdf [I like these stats and connecting global health back to the environment (there are many other studies like this that could be used)]



Appendices

Appendix A

Lesson 1: Introduction to Global Health

Global Health Pre-Test Name:

Directions: Complete this pre-test before you have started any of the readings for this module. The purpose of this pre-test is to help you think about your own ideas and beliefs about Global Health. There are no right or wrong answers.

Question 1: When you think of the term “global health” what health problems, issues or diseases come to mind?

Question 2: If you could pick only one goal for a global health program, what would that goal be?

Question 3: What are some ways that you use to measure health?



Appendix B

Lesson 2: Measuring Global Health

Small Group Activity- Developing Health Measures

Instructions: Imagine that you have been put in charge of developing a **measure** (a set of questions or data) that will be used to assess the health of an entire nation. Ideally, this measure will be something that could be used to compare one country or region to another to determine which area has better health. This means that your measure must be something that other people, in other areas, would be able to understand and use.

Be prepared to describe your measure to the class, and explain your choices.

Your measure should:

- **List** the exact questions that will be asked of people surveyed for the measure.
- **List** what data you will collect, and explain how it will be collected

Things to think about as you discuss and design your group's measure:

- What types of health data might you collect?
 - How would you collect/measure this data?
- What types of environmental data might you collect?
 - How would you collect/measure this data?
- What types of other data might you collect?
 - How would you collect/measure this?



Appendix C

Lesson 3: Health Disparities

Name:

Health Resource Evaluation Instructions: Listed below are some of the resources that have been determined to have a great impact on individual and community health:

1. Next to each resource put a plus sign (+) if this is something that you have access to in your home or community.
2. Write a negative sign (-) next to the resource if this is not something you have access to in your home or community.
3. Finally circle all of the resources over which you have personal control. If you, by yourself, have the ability to make this thing happen, or stop it from happening, circle the resource.

Resources:

Adequate shelter	Clean, unpolluted water	Hospitals
Education	Freedom from violence (including war and terrorism)	Immunizations
Safe work environment	Social support from friends or family	Spirituality
Reproductive health care	Stable government	Transportation
Nutritious food	Cultural or family traditions that support healthy behavior	Access to parks/nature



Appendix D

Lesson 3: Health Disparities

Class Demonstration and Discussion: Life Expectancy Around the Globe

Instructions: Give students twelve sheets of paper. Each sheet should have one of the following country names written or printed on it in a large font: Japan, Canada, England, South Korea, United States, Mexico, Iraq, India, Haiti, Rwanda, South Africa, Angola.

Ask students to hold their paper to their chests to represent “their” country. Then ask the class to help their classmates (the countries) arrange themselves in a line in the front of the class. The country that the class believes to have the longest life expectancy should be on the far left and the country with the shortest life expectancy at the far right. Other countries should be ranked in between based on how long the class believes people born in that country live.

After the class has had the chance to agree on an order for all of the countries, write the actual life expectancy of each country to the paper with a marker.

Allow students to see how well they estimated the country rankings, then ask students to reorder their line so that the order is as follows:

Japan 82	Canada 81	England 80	South Korea 79	United States 78	Mexico 77
Iraq 71	India 67	Haiti 62	Rwanda 58	South Africa 49	Angola 39

Now debrief the exercise by asking the following questions:

- Are any of the students representing countries surprised at their order? What rankings are unexpected (either higher or lower than you would have guessed)? Note that the United States is actually in 50th place worldwide for life expectancy.
- In looking at the rankings what things do you expect contribute to the disparities in life expectancy? Examples: technology and access to care in Japan, war in Iraq, AIDS in South Africa.



- People born in Japan can expect to live more than twice as long as people born in Angola and some other countries in Africa. How would you feel about that if you lived in Angola?
- One out of every five infants in Angola die before their first birthday. In Japan less than three out of every thousand infants will die in their first year of life. How might those statistics shape family life in Japan and Angola?

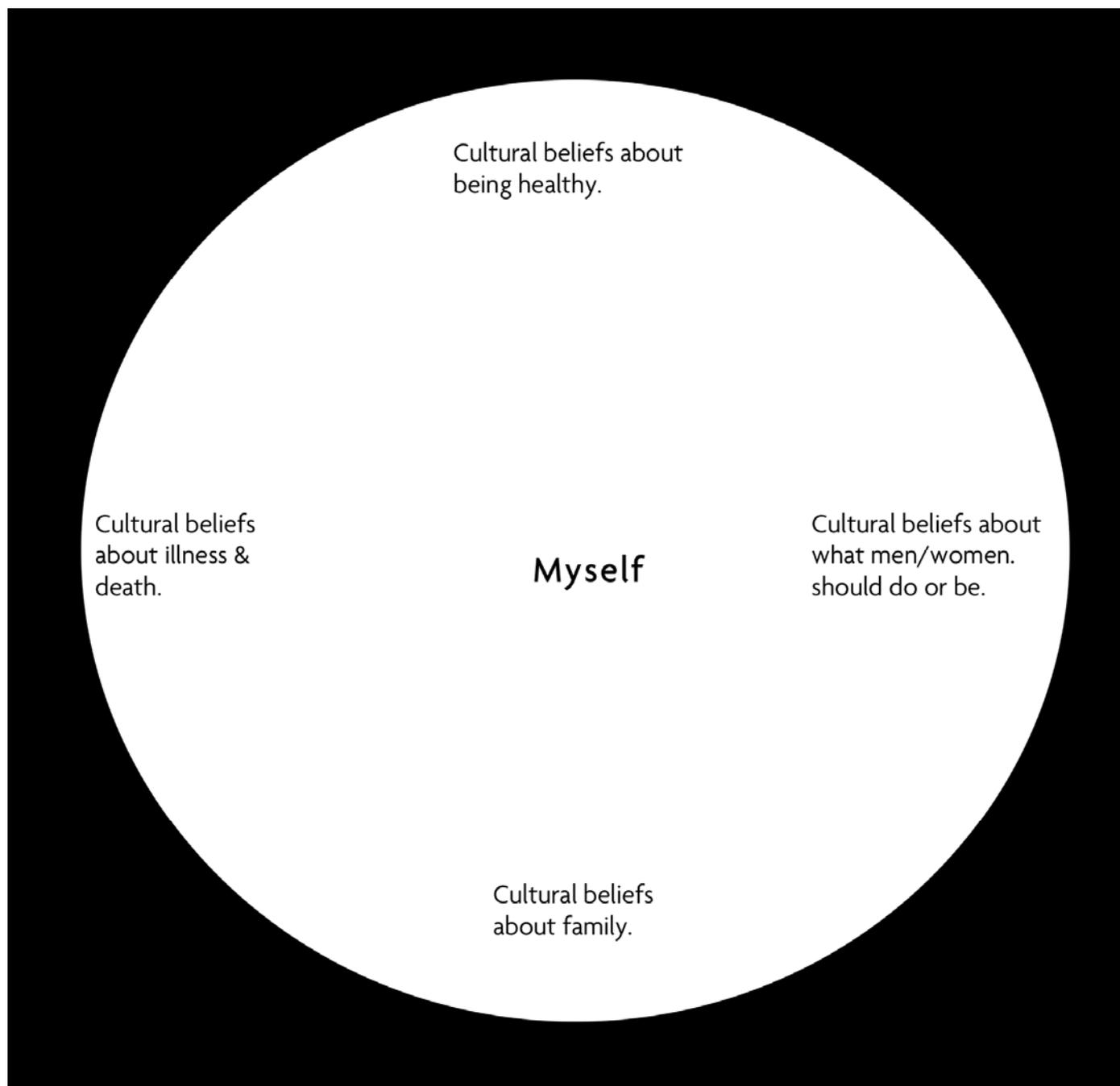
Appendix E

Lesson 2: Culture and Health

Cultural Compass

Name:

My Cultures:





Appendix F Global Patents Role-Play

Lesson 5: Globalization, Technology and Health

Instructions: Tell the students, “The BBC article that you read discusses Brazil’s plan to break the patent for a new AIDS drug. Instead of buying from the company that developed the drug, Brazil planned to break the patent and purchased the drug much more cheaply from another country. This decision created a global controversy about the ways in which medicine is provided to developing nations, and how we pay for the technology and research used to create medical breakthroughs. In order to better understand this issue, we will role-play an international meeting in which this decision is discussed by all of the participants.”

Ask the class to break into four small groups. Pass out one role (which you have printed out in advance) to each group:

Brazilian Health Minister- your country’s constitution guarantees all citizens free health care. If you buy the AIDS medications from Merck for \$1.10 a pill, your country will either have to stop treating people with HIV/AIDS or go bankrupt. If you buy the drug from India for 45 cents a pill, you will be able to provide AIDS treatment for everyone who needs it. This is a matter of life or death for your people.

Merck Pharmaceutical Executive- your company spends millions of dollars to research and develop AIDS drugs. The prices that you charge for the drugs not only represent the amount of time and money that the drugs take to develop, but also allow your company to research and develop new medicines. By breaking your patent and taking your profits, Brazil is undermining your ability to produce new drugs. If the developing world will not pay for medicines why should companies continue to develop treatments for these counties?

Physician from Doctors Without Borders - you treat people with AIDS in developing nations around the world. Every day you see men, women and children die from lack of treatment. The pharmaceutical companies do provide free and discounted medicines to your clinics, but there are usually not enough to go around, and you have difficulty getting the newest, best medicines. You have to treat people based on what the country can afford, and not what the patient needs.

World Trade Organization Official- your job is to enforce the global rules of trade between nations and make to promote free trade between nations. Merck, an American company, is arguing that Brazil is breaking global trade regulations by breaking their patent for AIDS drugs. Brazil argues that Merck is charging an unfair price for its drug, so Brazil is not ethically required to follow the patent. You are trying to find a solution to satisfy everyone involved.

Ask each group of students to discuss their role and the perspectives that someone in their role would have. After the small group discussion, each group should select one member to represent



their role for the class. Have the WTO official facilitate a meeting in which the other three roles discuss the issue and try to reach an agreement on what to do.

Debrief the role-play, by asking students in the audience to discuss the following questions:

- What is the issue or conflict?
- Who is raising the issue or concern, and to whom?
- Who else should be involved in the discussion?
- What possible actions could be taken to address this situation?
- What are the pros and cons of each one?



Appendix G

Lesson 6: Health For All Worksheet

Directions: You are now the part of a working group at the World Health Organization. You have the responsibility to creating a plan that will lead to health for all by 2020. This worksheet will give your working group issues and aspects of health to consider in your planning. You may use materials or ideas from the assigned readings to support your plan. Write your plan on a separate sheet of paper with group members' names.

1) Financing:

- Who should pay for health care for the poor, and for developing nations?
- Should expenses be shared? If so, by whom?

2) Education

- What educational structures are essential for health?
- How and where should these structures be created?

3) Cultural/Social change:

- In what areas might social or cultural change be needed to improve health and access to health?
- How could these changes be implemented?

4) Technology:

- What technology is essential to improving health (e.g. vaccines, medicine, clean water)?
- How is this technology to be shared with developing nations?

5) Public Health Infrastructure:

- How will health care be delivered, especially in poor and remote areas?
- Who will be responsible for the delivery of care?

6) Barriers:

- What objections are people likely to raise in response to your plan?
- How will you respond to these objections?



Appendix H: Additional Resources

- **Background Readings for the Instructor**

Labonte, R. & Torgerson, R. (2005). Interrogating globalization, health and development: Towards a comprehensive framework for research, policy and political action. *Critical Public Health*, 15 2:157-179.

Never Again? Reflections on Human Values and Human Rights. The Tanner Lecture on Human Values delivered by Paul Farmer at the University of Utah. Available online at: www.pih.org/inforesources/articles.html

Piva, P. & Dodd, R. (2009). Where did all the aid go? An in-depth analysis of increased health aid flows over the past 10 years. *Bulletin of the World Health Organization*, 87; 608-613.

Resnick, D.B. (2004). The distribution of biomedical research resources and international justice. *Developing World Bioethics*, 4,1, 42-57.

Stuckler, D. (2008). Five metaphors about global-health policy. *The Lancet*, 372, 92.

- **Additional Resources for Students**

The World Health Organization. (2004). Poverty reduction strategic papers: Their significance for health. Available online at: <http://www.who.int/hdp/publications/en/>

The World Health Organization. (2008). The World Health Report 2008 - Primary Health Care: Now more than ever. (Full Report). Available online at: <http://www.who.int/whr/2008/en/index.html>

PBS. (2010). Unnatural Causes: Is inequality making us sick? Available online at: http://www.pbs.org/unnaturalcauses/explore_learn.htm

Centers for Disease Control and Prevention. (2010). Global Health. Available online at: <http://www.cdc.gov/globalhealth/>



Assessment

Workforce Skills Assessment:

- **Global knowledge-** Students' knowledge of the global issues related to health will be demonstrated in class discussions and activities. Specifically, students will demonstrate their knowledge of global health issues through the completion of the "Developing Health Measures" and "Health for All" worksheets.
- **Holistic thinking-** Students will demonstrate holistic and critical thinking about the nature of human rights, health as a human right, the impact of cultural and poverty on health and their own status with regard to privilege, in class discussions and activities. Specifically students will demonstrate their knowledge of global health issues through the completion of the "Cultural Compass" and "Resource Evaluation" activities.
- **Cross-cultural communication** – student will demonstrate cross-cultural communication skills in discussing privilege and access to health resources with their classmates and through the creation of the health for all plan, and in articulating the impacts of culture on health concepts and behaviors in Lesson Four.
- **Technology Skills** students will demonstrate technology competence by using the internet and the online databases from global health organizations to download readings and statistics about global health, and to view video.

The instructor will also be able to assess students' Workforce Skills development through their performance in other lesson activities and discussions.