

Politics & Pathogens: Countdown to Zero

COURSE GUIDE



ABOUT THIS COURSE

This medical anthropology course will provide students with a **humanistic perspective on health care and disease**. Students will learn about the life cycle of a Guinea worm, and will be encouraged to ask, what does it mean for those who are suffering from the disease? Through an approach that is part biology of infectious diseases, part media studies, and part cultural history, students will examine disease in the past, present, and future. Students will apply the course themes to independent research, and ask major questions such as: In what ways is disease a justification for not taking accountability for one another? What do human rights have to do with tropical disease research and treatment? How do some diseases further expose people to stigma, oppression, violence, and neglect? While these are big questions, the biggest question that students will answer for themselves over the course of this class is: What can we do in our lifetimes to end cycles of oppression and replace them with legacies of greater well-being for all humans worldwide?

TIME FRAME

- There are 12 sessions in this course.
- Each session is 120 minutes long, with activities that range in length from 10 to 75 minutes.
- Depending on how much time you have, you can break up the sessions and customize them for your class.

LINKS

Politics & Pathogens Course Guide

<http://amnh.org/explore/politics-and-pathogens>

Countdown to Zero Exhibition

<http://amnh.org/explore/countdown-to-zero>

The course guide and the related exhibition, *Countdown to Zero: Defeating Diseases*, is presented by the American Museum of Natural History in partnership with The Carter Center.

The Carter Center

<http://cartercenter.org>

The Carter Center, in partnership with Emory University, is guided by a fundamental commitment to human rights and the alleviation of human suffering. It seeks to prevent and resolve conflicts, enhance freedom and democracy, and improve health.

World Health Organization:

The Global Eradication Campaign

<http://who.int/dracunculiasis/eradication>

The primary role of WHO is to direct and coordinate international health within the United Nations' system. In 1986, The Carter Center joined the battle against the Guinea worm disease and, in partnership with WHO and UNICEF, has since been in the forefront of eradication activities.

Curriculum Learning Objectives

Students will:

- demonstrate an understanding of the connection between health, culture, and politics
- demonstrate an understanding of how political trends and pressures in the Western world directly and indirectly affect the ability of sub-Saharan African communities to develop a health infrastructure
- demonstrate an understanding of the connection between colonial history and trends of tropical diseases in contemporary cultures and societies
- explain how Western perception, specifically in the media, affects aid for tropical diseases
- describe how gender, race, class, wealth, etc., impact the epidemiological patterns of infectious diseases (and other illnesses) on particular individuals or communities
- identify problematic assumptions about people and places that create misconceptions about how diseases spread
- articulate why a local context is important for the discussion of and education about diseases, particularly those with epidemic potential
- describe a humanistic approach to public health values, or “a preferential option for the poor”
- develop a critical framework for understanding world history
- apply the course themes to independent research
- apply course themes to their everyday experiences via Instagram
- develop critical media-analysis skills
- develop presentation and public-speaking skills

Background Information for Educators

The **Resources** found at the back of this course guide provide background on the topics presented in the 12 sessions.

KEY TOPICS

bacteria
community health
critical media analysis
cultural concepts of suffering
disease transmission
disease treatment and prevention
empathy
ethnography
ethnomedicine
etic and emic
Eurocentrism
feminism
global public health
health economics and inequality
human rights
intersectionality
local public health
medical anthropology
neglected tropical diseases
parasites
pathophysiology
politics
postcolonial studies / postcolonial theory
social and historical contexts
social capital
social determinants of health
social norms
stigma
systemic poverty
Universal Declaration of Human Rights
vaccines
viruses

Session Syllabus

SESSION TITLE	DESCRIPTION	COMPONENTS
<p>1. <u>Disease and Illness</u></p>	<p>This session introduces students to the idea of disease as a category of exclusion. It presents the idea that disease “takes people out of their day-to-day lives” and that the cycle of infectious disease, from getting sick, receiving care, experiencing symptoms, etc., is common to disease and illness narratives globally.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Warm-up <input type="checkbox"/> 1. Discussion: Brainstorm “Disease” <input type="checkbox"/> 2. Quick Write: Infectious Disease <input type="checkbox"/> 3. Ponder This: “Letter to My Son” <input type="checkbox"/> 4. Discussion: The Four Meanings of Illness <input type="checkbox"/> Wrap-up
<p>2. <u>Intersectionality and Guinea Worm</u></p>	<p>This session introduces the concept of intersectionality. Students will apply this lens to the biological reality and social representation of Guinea worm disease. This application will allow students to understand how an intersectional framework can engender a nuanced and empathetic understanding of disease and its impact on people.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Warm-up <input type="checkbox"/> 1. Activity: What Is Intersectionality? <input type="checkbox"/> 2. Lecture: What Is Intersectionality? <input type="checkbox"/> 3. Video: Public Health and Homelessness <input type="checkbox"/> 4. Video: Guinea worm <input type="checkbox"/> 5. Lecture: Guinea worm <input type="checkbox"/> Wrap-up
<p>3. <u>Bacteria, Viruses, and Parasites</u></p>	<p>This session introduces the foundational medical and biological content for the course. It includes background on bacteria, viruses, parasites, zoonotic diseases, pathophysiology, and neglected tropical diseases. Students will observe how these concepts are influenced by socioeconomic, culture, history, race, and identity.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Warm-up <input type="checkbox"/> 1. Lecture: Bacteria, Viruses, and Parasites <input type="checkbox"/> 2. Activity: Immunity vs. Pathogen Card Game <input type="checkbox"/> 3. Lecture: Zoonotic Disease <input type="checkbox"/> 4. Lecture: Pathophysiology <input type="checkbox"/> 5. Lecture: Neglected Tropical Diseases <input type="checkbox"/> Wrap-up
<p>4. <u>Vaccination and Health Infrastructure</u></p>	<p>This session introduces students to vaccination from a biological and anthropological perspective. Students will explore what vaccines are, how they work, and the misunderstandings and myths that accompany them. They will examine disease prevention versus disease treatment from the perspective of ethics and economics.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Warm-up <input type="checkbox"/> 1. Activity: Vaccine Animations <input type="checkbox"/> 2. Lecture: Vaccines <input type="checkbox"/> 3. Activity: Illsville Computer Game <input type="checkbox"/> Wrap-up

Session Syllabus

SESSION TITLE	DESCRIPTION	COMPONENTS
<p>5. <u>Tropical Medicine and Postcolonial Theory</u></p>	<p>This session introduces students to postcolonial theory to better frame the history of tropical medicine, and why neglected tropical diseases occur in areas once ruled by colonial empires. This session will emphasize that to talk about neglected tropical disease is to talk about history, power, and culture.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Warm-up <input type="checkbox"/> 1. Hall Visit: <i>Countdown to Zero Exhibition</i> <input type="checkbox"/> 2. Lecture: Tropical Medicine <input type="checkbox"/> 3. Think-Pair-Share: Tropical Medicine <input type="checkbox"/> 4. Lecture and Videos: Postcolonial Theory <input type="checkbox"/> 5. Video: Louis Farrakhan on <i>60 Minutes</i> <input type="checkbox"/> Wrap-up
<p>6. <u>Health Economics</u></p>	<p>This session introduces students to the concept of social epidemiology, or the social factors that influence health and disease. Students will begin to explore how different socioeconomic, cultural, and historical backgrounds impact a person's access to social determinants of health.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Warm-up <input type="checkbox"/> 1. Mind-Map: "Healthy Life" <input type="checkbox"/> 2. Lecture and Video: Social Determinants of Health <input type="checkbox"/> 3. Teamwork Activity: Health Inequality <input type="checkbox"/> 4. Video: Paul Farmer <input type="checkbox"/> Wrap-up
<p>7. <u>Human Rights and Health-Care Access</u></p>	<p>This session introduces human rights as rights that all people are entitled to. As students better understand what constitutes a human right, they will closely evaluate the idea of human health as a human right.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Warm-up <input type="checkbox"/> 1. Activity: Create Your Own Museum Exhibit <input type="checkbox"/> 2. Activity: Introduction to Human Rights <input type="checkbox"/> 3. Discussion: The Story of Human Rights <input type="checkbox"/> Wrap-up
<p>8. <u>Global Public Health</u></p>	<p>This session introduces students to the concept of global public health. By researching broad trends in global public health organizations and campaigns, and by focusing on the leadership priorities of the World Health Organization, students will gain an understanding of public-health purposes and functions.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Warm-up <input type="checkbox"/> 1. Activity: Public Health Quick Search <input type="checkbox"/> 2. Lecture and Video: Global Public Health <input type="checkbox"/> 3. Discussion: WHO Leadership Priorities <input type="checkbox"/> 4. Activity: Create Your Own NGO <input type="checkbox"/> Wrap-up

Session Syllabus

SESSION TITLE	DESCRIPTION	COMPONENTS
9. <u>Local Public Health and Ethnomedicine</u>	This session introduces students to the concept of ethnomedicine, and what it means to understand traditional medicine practices from an emic, or local, perspective. Students will apply these concepts to their own community by creating a photo campaign around a local issue.	<ul style="list-style-type: none"> <input type="checkbox"/> Warm-up <input type="checkbox"/> 1. Lecture and Video: Ethnomedicine <input type="checkbox"/> 2. Think-Pair-Share: Ethnomedicine <input type="checkbox"/> 3. Activity: Create a Five-Photo Campaign <input type="checkbox"/> Wrap-up
10. <u>Media and Health</u>	In this session, students will examine how the media’s representation of infectious diseases portrays people and health. Students will analyze images, statistics, graphs, and animation as well as word choice and phrasing to critique how visual and print media illustrate and describe disease, the experience of suffering, and the process of eradication.	<ul style="list-style-type: none"> <input type="checkbox"/> Warm-up <input type="checkbox"/> 1. Video Discussion: River Blindness Media Analysis <input type="checkbox"/> 2. Discussion: Infectious Disease Print Media Analysis <input type="checkbox"/> 3. Activity: Final Project <input type="checkbox"/> Wrap-up
11. <u>Disease, Art, and Discussing Challenges</u>	In this session, students will explore the relationship between art and disease by viewing the works of Keith Haring and Werner Horvath as well watching a music video by Ground Zero. Students will reflect on how art communicates about disease and whether it explores suffering, offers information, or raises awareness.	<ul style="list-style-type: none"> <input type="checkbox"/> Warm-up <input type="checkbox"/> 1. Quick Write: Art Reflection <input type="checkbox"/> 2. Activity: Jigsaw Readings <input type="checkbox"/> 3. Video Discussion: Keith Haring <input type="checkbox"/> 4. Video Discussion: Ebola Music <input type="checkbox"/> 5. Think-Pair-Share: Artistic Expression <input type="checkbox"/> Wrap-up
12. <u>Presentations and Reflections</u>	During this session, students will present their final projects. To prepare their projects, each student chooses one of the major themes of the course and applies it to independent research. Students will also reflect on the course and how the course has changed their thinking on disease and health.	<ul style="list-style-type: none"> <input type="checkbox"/> Warm-up <input type="checkbox"/> Presentations <input type="checkbox"/> Wrap-up

SESSION 1

Disease and Illness

How does oppression make the experience of disease and illness different in various cultural contexts?

INTRODUCTION

This session serves as an introduction for students to begin thinking about disease as a category of exclusion. This session presents the idea that disease “takes people out of their day-to-day lives” and that the entire cycle of infectious disease—from getting sick, receiving care, experiencing symptoms, etc.—is common to disease and illness narratives globally.

LEARNING OBJECTIVES

Students will:

- demonstrate an understanding of disease through a humanistic and critical framework,
- demonstrate an understanding that when one talks about disease, one is also talking about bodies, individuals, and cultural context,
- identify the difference between disease and illness,
- explore the connection between disease and socioeconomic insecurity.

TIME FRAME

15 min	<p>Warm-up: Name Tag Icebreaker Students will create name tags. Students will answer introductory questions.</p>
20 min	<p>1. Discussion: Brainstorm “Disease” Instructor will lead a discussion around the concept of disease.</p>
20 min	<p>2. Quick Write: Infectious Disease Students write about a time they had an infectious disease.</p>
45 min	<p>3. Ponder This: “Letter to My Son” Students read and discuss “Letter to My Son.”</p>
15 min	<p>4. Discussion: The Four Meanings of Illness Students reflect on the different conceptions of illness.</p>
5 min	<p>Wrap-up Homework</p>

SESSION 1 **Disease and Illness**

MATERIALS

- Markers**
- Card stock** (one per student)
- Folders** (one per student—for handouts)
- Notebooks** (one per student—for notes and reflections)
- PowerPoint: Welcome to Politics & Pathogens**
- Article: “The Diseases You Only Get If You Believe In Them”**
(one per student—optional)
- Article: “How to Write About Africa”**
(one per student)
- Handout: Writing Prompt Homework Session 1** (one per student)

AUDIO-VISUAL NEEDS

- Speakers**
- Projector**
- Computer**

VOCABULARY

- **disease**
- **illness**
- **symptom symbols**
- **culturally marked disorder**
- **personal and impersonal significance**
- **patient and family explanatory models**

PREPARATION

- Read the following articles before class:
 - **Article: “How to Write About Africa”**
Wainaina, Binyavanga. “How to Write About Africa.” *Granta* 92. (2005). Web.
<http://granta.com/how-to-write-about-africa/>
 - **Article: “Letter to My Son”**
Coates, Ta-Nehisi. “Letter to My Son.” *The Atlantic*. 4 July 2015. Web.
<http://theatlantic.com/politics/archive/2015/07/tanehisi-coates-between-the-world-and-me/397619>
- Print all articles and the handouts located in the Materials section before class.
- Review the PowerPoint. There is no content for this session, so the PowerPoint is optional.
 - **PowerPoint: Welcome to Politics & Pathogens**
<http://amnh.org/explore/politics-and-pathogens>

SESSION 1

Disease and Illness

PREPARATION

(CONTINUED)

- The following resources will provide you with background on the material presented in this session.
 - **Article: “Ta-Nehisi Coates and the Generation Waking Up”**
Bennett, Brit. *The New Yorker*. 15 July 2015
<http://newyorker.com/culture/cultural-comment/ta-nehisi-coates-and-a-generation-waking-up>
 - **Article: “Interpreting people as they interpret themselves”**
Kaplan-Myrth, Nili. “Interpreting people as they interpret themselves: Narratives in medical anthropology and family medicine.” *Cam Fam Physicians* (2007): 1268-1269.
<http://ncbi.nlm.nih.gov/pmc/articles/PMC1949239>
 - **Article: “To Give Suffering a Language”**
Schweizer, Harold. “To Give Suffering a Language.” *Literature & Medicine* (1995): 210-221.
http://muse.jhu.edu/journals/literature_and_medicine/summary/v014/14.2schweizer.html
 - **Video: Yona Harvey reads for Ta-Nehisi Coates at the 2015 National Book Awards Finalists Reading**
National Book Foundation and the Creative Writing MFA Program. YouTube, 1 Dec. 2015. Web.
http://YouTube.com/watch?v=_rqgiRqVVe8
 - **Video: TTT#451 Reading Ta-Nehisi Coates’s “Letter to My Son” Together**
Allison, Paul. “TTT #451 Reading Ta-Nehisi Coates ‘Letter to My Son.’” *Teachers Teaching Teachers*. YouTube, 15 July 2015. Web.
<http://YouTube.com/watch?v=7RMZI38KzoM>
 - **Article: “Culture, Illness, and Care”**
Kleinman, Arthur, Leon Eisenberg, and Byron Good. “*Culture, Illness, and Care: Clinical Session from Anthropologic and Cross-Cultural Research.*” *Annals of Internal Medicine* (1978): 251-258.
<http://in.bgu.ac.il/en/fohs/communityhealth/Family/Documents/ShlavB/culture%20illness%20and%20care.pdf>
 - **Article: “The Diseases You Only Get if You Believe in Them”**
Beck, Julie. *The Atlantic*.
<http://www.theatlantic.com/health/archive/2016/04/the-diseases-you-only-get-if-you-believe-in-them/479367/>
 - **Book: “The Geography of Madness: Penis Thieves, Voodoo Death and the Search for the Meaning of the World’s Strangest Syndromes”**
Bure, Frank. Melville House Publishing
<http://www.indiebound.org/book/9781612193724>

SESSION 1

Disease and Illness

PROCEDURE

Warm-up: Name Tag Icebreaker (15 min)

This Warm-up will allow the students and instructor to get to know one another and exchange ideas about how they see themselves in the world. It gives the instructor the opportunity to connect students' responses to class content.

1. Pass around markers and card stock.
2. Have students fold the card stock into three long sections to create and decorate a nametag that will stand on its own.
3. Have students introduce themselves.
4. Depending on the size of the class and whether or not the students are familiar with one another, you may wish to eliminate some questions beforehand. If the students and the instructor know each other, the instructor may want to skip the name tags and spend more time on the last two questions.
 - *What is your name?*
 - *Where do you go to school?*
 - *Where do you live?*
 - *Why did you want to take this class?*
 - *What would you like to do in your lifetime to make the world a better, kinder, and fairer place? (You are not locked into this answer, and if you change your mind during this class, let us know!)*
 - *What do you think of when you think of tropical disease?*

i Instructor Note:

- The instructor can connect student responses to class content. For example, if a student explains that they want to work one day with their local community to provide health care, the instructor can use this response to elaborate on how the class will discuss local and global perspectives on health and health care.

SESSION 1

Disease and Illness

PROCEDURE

1. Discussion: Brainstorm “Disease” (20 min)

This activity will enable students to critically think about disease as a culturally contingent concept.

1. Write the term “Disease” on the board and ask:
 - *What words, images, and ideas come to mind when you think of the term disease?*
2. As the students contribute their ideas, write them on the board, and create a mind-map from their responses.
3. Review student contributions and ask them to further explain their responses.
4. Use the following questions to generate discussion:
 - *Now that we’ve compiled a range of ideas, what do you think disease is?*
 - *Who do you think is in charge of defining what a disease is? Doctors? Patients?*
 - *What does it mean to experience a disease? What does that feel like?*

i Instructor Note:

- If the students are unable to come up with ideas, give them 3–5 minutes to write down a few ideas and then share.

SESSION 1

Disease and Illness

PROCEDURE

2. Quick Write: Infectious Disease (20 min)

This activity will help students think of disease as something that can and does happen to them, as opposed to thinking of disease as part of “the other” or something they do not have to worry or think about as significant. When students put themselves in the role of the patient, a sense of empathy is engendered that helps them to create more meaningful, personalistic, engaged responses to the examples provided in the class that might seem “worlds” away from their own experience. This is a primer for the follow-up conversation about illness and suffering.

1. Provide this prompt to students:
 - Write about an experience you and your body went through when you had an infectious disease. What stands out to you as you recall this experience?
2. Allow students 10 minutes to respond to the prompt.
3. Pose additional questions to help students recall and write about their experience:
 - *What were the emotions you felt? Did they change over the course of time you were sick?*
 - *What were the physical sensations? How did your body feel?*
 - *How did people treat you?*
 - *What was the worst part?*
 - *What did “getting better” feel like?*
 - *How long did you feel “different”?*
4. Call on students to share their responses. This is a particularly personal writing assignment and it is also early on in the course cycle, so some students may be reluctant to share.
5. Use the prompt question and the questions below to generate discussion:
 - *When you were dealing with the infectious disease, what did you do to feel better?*
 - *What do you think you would do if the remedies, institutions, and/or individuals who helped you get better weren't available?*

i Instructor Note:

- Prepare your own experience to share in order to encourage students to share. The experience of disease can be traumatic, and not every student will be writing about a mild case of the flu.
- Exercise sensitivity when facilitating responses. Ask students to share emotion words or phrases if they are not comfortable sharing what they've written.

SESSION 1

Disease and Illness

PROCEDURE

3. Ponder This: “Letter to My Son” (45 min)

Racial and socioeconomic inequality are major themes of the course that can be difficult for students to articulate. This activity and discussion will introduce students to this major theme and set the tone for similar discussions.

1. Project the article “Letter to My Son:”
 - **Article: Letter to My Son**
Coates, Ta-Nehisi. “Letter to My Son.” *The Atlantic*. 4 July. 2015. Web.
<http://theatlantic.com/politics/archive/2015/07/tanehisi-coates-between-the-world-and-me/397619/>
2. Have students take turns reading the excerpt aloud (ending with the paragraph that begins with the sentence, “This realization was important but intellectual.”).
3. Have students form groups of two or three.
4. In small groups, students will respond to the reading and share responses within their groups.
5. After 20 min, bring the class back together and allow students to share their reactions to the article.
6. Use the following questions to generate discussion:
 - *What were some of the reactions your group talked about?*
 - *What stood out to you in this reading?*
 - *Is the author saying something that you haven’t heard before?*
 - *What was your feeling while you were reading? What about immediately afterward?*
 - *Why do you think we’re talking about racism in a class about infectious diseases?*

i Instructor Note:

- While the students are in small groups, the instructor may want to walk around and listen in on conversations to get a sense of what students are talking about.
- Students can be hesitant to discuss sensitive topics, especially during the first class. It may help if you share a personal reflection or anecdote and offer prompting follow-up questions to groups while walking around to help conversation flow.

SESSION 1

Disease and Illness

PROCEDURE

4. Discussion: The Four Meanings of Illness (15 min)

This exercise will help students distinguish between internal and external experiences, and understand the difference. Students will be encouraged to think of an illness as a purely personal event instead of a part of a wider system of political and natural ecologies. The definitions are provided to help students think about suffering as part of the cycle of human illness—one that requires gravity and consequence, but not one to be obsessed over. Communicate a balanced approach to understanding the lives of people who are ill. For example, they might have a preconceived notion of an infectious disease as being deadly, and not consider the suffering experienced by a person with a chronic, rather than acute, illness. At the same time, focusing only on a sick person's suffering might cause them to dehumanize the person who is sick.

1. On the board or PowerPoint, display the four meanings of illness and the quote from Arthur Kleinman's *The Illness Narratives*:
 - In his book *The Illness Narratives*, Arthur Kleinman notes that:
“[C]linical and behavioral science research . . . possess no category to describe suffering, no routine way of recording this most thickly human dimension of patients' and families' stories of experiencing illness.”
 - **symptom symbols:** Turns of phrase that communicate the feeling and experience of the symptom—a splitting headache, pins and needles in the leg, etc., especially when linked with an explanation of why the symptom occurred—connecting a symbolic sense of cause and effect
 - **culturally marked disorder:** Something commonly experienced within a community, such as a genetic disease frequent in Ashkenazi Jewish populations, with community-empowered explanations as to why this disorder is present in the community. Some culturally marked disorders are seen by communities as punishment for seemingly unrelated events.
 - **personal and interpersonal significance:** This relates to the way in which the personal experience of symptoms, as told by the patient, directs the narrative, such as: “I had such a profound headache that I was in bed with the pain and I wasn't able to be near any sound or light. No one could see or touch me, I was so sensitive to external stimuli.”
 - **Patient and family explanatory models:** Social and interpersonal events connecting in a larger way in an individual's life. For example, “I think he died of a broken heart. After his wife of 50 years passed away, he just didn't have the will to carry on.”
2. Have students write down the four definitions of illness and the Kleinman quote. Tell them that they will refer back to these definitions throughout the class, including in firsthand descriptions of people who have contracted tropical infectious diseases, government reports, and media stories.

SESSION 1

Disease and Illness

PROCEDURE

4. Discussion: The Four Meanings of Illness

(continued)

3. Facilitate a discussion from Kleinman's *The Illness Narratives* quote:

"[C]linical and behavioral science research . . . possess no category to describe suffering, no routine way of recording this most thickly human dimension of patients' and families' stories of experiencing illness."

- *What does the author mean when he describes suffering as "a thickly human dimension"?*
 - In response to this concept, a student explained that it made her realize that she doesn't often think about the patient or about how other people experience illness.
- *Are there types of culture-bound syndromes that you have heard about in your family or community? If so, what did you think about them?*
- *How can you, personally, tell when a disease or illness is "real"?*
- *Do you think that we have biases about what type of disease or illness is "real" to us or not "real" to us?*
- *If an illness is not identified as "real" in Western medicine/biomedicine, but the local/traditional cure for the illness succeeds in making people well, what do you think is happening? Should biomedical practitioners intervene and stop the treatments or collaborate with the healers using the local/traditional medicine to learn more?*

Additional Resources

- The article "The Diseases You Only Get If You Believe in Them" can be printed out to generate classroom conversation—if there is interest in a greater focus on ethnomedicine—or to be read at home.
 - **Article: "The Diseases You Only Get If You Believe in Them"**
Beck, Julie. *The Atlantic*.
<http://www.theatlantic.com/health/archive/2016/04/the-diseases-you-only-get-if-you-believe-in-them/479367/>
- The following quote from the article may be used to help guide discussion: "One of the problems is this whole distinction between real and not real, because the symptoms can be real even if the cause is not exactly what you think it is."

SESSION 1

Disease and Illness

PROCEDURE

Wrap-up (5 min)**Homework: “How to Write About Africa” Article** (5 min)

1. Distribute the “How to Write About Africa” article:
 - **Article: “How to Write About Africa”**
Wainaina, Binyavanga. “How to Write About Africa.” *Granta* (2005). Web.
<http://granta.com/how-to-write-about-africa/>
2. Hand out **Writing Prompt: Homework Session 1**. Students will respond to the prompt:
 - Both “A Letter to My Son” and “How to Write About Africa” discuss limitations that stem from narrow images and representations of people of color in society. Ta-Nehisi Coates’s article discusses the violence that emerges from the perpetuation of white “norms” and how this creates subtle (and not so subtle) harmful ideas around the value of lives on the basis of the social construct of race. “How to Write About Africa” emphasizes the very narrow, stereotypical views in the portrayal of African culture, history, and experience. The satirical tone is meant to convey frustration, anxiety, dismay, and, ultimately, awareness.
 - What do these readings and the perspectives of these authors have to contribute to our conversation about infectious disease and tropical medicine?
 - What limitations are placed on your understanding by society and media’s portrayal of infectious diseases in African countries?
 - Why do you think we need to talk about race in order to talk about health in a meaningful way?

📌 Instructor Note:

- Make sure that students understand that the tone of “How to Write About Africa” is meant to be satirical, and that the piece is intended to demonstrate how, in Western contexts, the written and visual representation of the African continent is often narrow and limited.

📖 Additional Resources

- Provide this resource to students who would like to read the complete article:
 - Coates, Ta-Nehisi. “Letter to My Son.” *The Atlantic*. 4 July. 2015. Web.
<http://theatlantic.com/politics/archive/2015/07/tanehisi-coates-between-the-world-and-me/397619/>

Name: _____

Date: _____

Session 1 Writing Prompt

Write a one-page essay (double-spaced) around this prompt:

Both “Letter to my Son” and “How to Write About Africa” discuss limitations that stem from narrow images and representations of people of color in society. Ta-Nehisi Coates’s article discusses the violence that emerges from the perpetuation of white “norms” and how this creates subtle (and not so subtle) harmful ideas about the value of lives on the basis of the social construct of race. “How to Write About Africa” emphasizes the very narrow, stereotypical views in the portrayal of African culture, history, and experience. The satirical tone is meant to convey frustration, anxiety, dismay, and, ultimately, awareness.

- What do these readings and the perspectives of these authors have to contribute to our conversation about infectious disease and tropical medicine?
- What limitations are placed on your understanding by society and the media’s portrayal of infectious diseases in African countries?
- Why do you think we need to talk about race in order to talk about health in a meaningful way?

SESSION 2

Intersectionality and Guinea Worm

What is the theory of intersectionality, and why should we apply it to better understand neglected tropical diseases?

INTRODUCTION

This session will introduce students to the main concept behind intersectionality. Students will apply this lens to the biological reality and social representation of the Guinea worm. Through this application, students will become aware of how an intersectional framework can engender a nuanced and empathetic understanding of disease and its impact on people.

LEARNING OBJECTIVES

Students will:

- define intersectionality,
- demonstrate the pros and cons of using an intersectional framework to address issues of disease and public health,
- identify the ongoing efforts to eradicate Guinea worm,
- describe how an intersectional framework provides a much more robust understanding of what a disease is and how it impacts people.

TIME FRAME

15 min	Warm-up: Turn and Talk Turn and talk: students reflect on previous class.
35 min	1. Activity: What Is Intersectionality? Intersectionality word search; intersectionality handout; instructor leads discussion on intersectionality.
15 min	2. Lecture: What Is Intersectionality? Instructor lectures on intersectionality content.
15 min	3. Video: Public Health and Homelessness Students watch video about health and homelessness; instructor leads discussion on video.
20 min	4. Video: Guinea worm Students watch Guinea worm video; instructor leads discussion of Guinea worm video.

continued on next page

SESSION 2 Intersectionality and Guinea Worm

TIME FRAME (CONTINUED)

10 min	5. Lecture: Guinea worm Instructor lectures on Guinea worm content
10 min	Wrap-up Explain Instagram vocabulary; homework.

MATERIALS

- Video: "Public Health and Homelessness"** (3:02 minutes)
- Video: "Guinea Worm Disease Eradication"** (2:20 minutes)
- Handout: "What Is Intersectionality?"** (one per student)
- PowerPoint: Intersectionality**
- PowerPoint: Guinea Worm**
- Handout: Intersectionality Word Search** (one per student)
- Handout: Instagram Vocabulary** (one per student)
- Handout: Writing Prompt Homework Session 2** (one per student)

AUDIO-VISUAL NEEDS

- Speakers**
- Projector**
- Computer**

VOCABULARY

- | | | |
|---------------------|--------------------------|--------------------|
| ■ intersectionality | ■ patriarchy | ■ stigma |
| ■ indigenous | ■ oppression | ■ discrimination |
| ■ ageism | ■ privilege | ■ health disparity |
| ■ ableism | ■ vulnerable populations | ■ feminism |

PREPARATION

- Create an Instagram account for the course and become familiar with the social media platform.
- Print all handouts and worksheets in the Materials section before class.
- You may want to review the PowerPoint content before class.
<http://amnh.org/explore/politics-and-pathogens>
 - **PowerPoint: Intersectionality**
 - **PowerPoint: Guinea Worm**

SESSION 2

Intersectionality and Guinea Worm

PREPARATION

(CONTINUED)

- You may want to watch the videos and review the handouts in the Materials section before class.
 - **Handout: “What Is Intersectionality?” (page 2)**
Hankivsky, Olena. *Intersectionality 101*. Institute for Intersectionality Research and Policy, SFU. April. 2014. Pg 2. Web.
http://sfu.ca/iirp/documents/resources/101_Final.pdf
 - **Video: “Guinea Worm Disease Eradication” (2:19 minutes)**
Carter Center. “Guinea Worm Disease Eradication: Countdown to Zero” (Carter Center). YouTube, 24 Oct. 2013.
<http://YouTube.com/watch?v=oCB1A2gFvuU>
 - **Video: “Public Health and Homelessness” (3:02 minutes)**
“Public Health and Homelessness.” Centers for Disease Control. Web.
<http://www2c.cdc.gov/podcasts/videowindow.asp?f=2844357&af=v>
- The following resources will provide you with background on the material presented in this session.
 - **Webpage: Reducing Guinea Worm in Asia and Sub-Saharan Africa**
Kinder, Molly. “Reducing Guinea Worm in Asia and Sub-Saharan Africa.” *Center for Global Development* (n.d.). Web.
<http://cgdev.org/page/case-11-reducing-guinea-worm-asia-and-sub-saharan-africa>
 - **“Games People Play: A Quick Guide to Intersectionality Theory”**
Miller, Angela. “Games People Play: A Quick Guide to Intersectionality Theory.” University of Houston-Clear Lake, 2010.
<http://socialpsychology.org/action/pdf/2012intersect-handout.pdf>

SESSION 2

Intersectionality and Guinea Worm

PROCEDURE

Warm-up: Turn and Talk (15 min)

1. Students will work with a partner to answer this question:
 - “What themes stood out for you from last class?”
2. Follow-up questions might include:
 - *Did you talk about either of the readings from class with your friends or family?*
 - *Did your ideas about either of the readings change over the past few days?*
3. Once partners have shared, each student will share his or her partner’s response with the class.

i Instructor Note:

- Before students pair up, let students know that they will be speaking on behalf of their partners.

SESSION 2

Intersectionality and Guinea Worm

PROCEDURE

1. Activity: What Is Intersectionality? (35 min)

This activity will introduce students to the words and phrases associated with the theory of intersectionality.

1. Hand out Intersectionality Word Search.
 - **Handout: Intersectionality Word Search**
2. Have students work in pairs to complete the Intersectionality Word Search.
3. Prompt students to think about the terms that are intersecting as they are working on the word search. For example, race and religion, or race, religion, and nationality.
4. Once partners have shared, each student will share his or her partner's response with the class.
5. Have students highlight words they are unsure or confused about.
6. Distribute the "What Is Intersectionality?" handout.
 - **Handout: "What is Intersectionality?"**
http://sfu.ca/iirp/documents/resources/101_Final.pdf
7. With their partners, students will read the intersectionality handout.
8. Have students highlight words they are unsure or confused about.
9. Ask students to share words from the Intersectionality Word Search and the "What Is Intersectionality?" handout that they are unsure about.
10. Write these words on the board, or have students write them on the board to create a visual display. Explain confusing and/or unknown terms and phrases.
 - **"social locations"**: The groups people belong to based on their place or position in history. This influences how people look at you and where you are told you belong.
 - **indigenous**: referring to groups of people who have a long relationship to their land or have been pushed off their lands.
 - **ageism**: prejudice or discrimination based on a person's age.
 - **"interdependent forms of privilege and oppression"**: how power and oppression come together to create a lack of, or difficulty assessing, medical care.
 - **ableism**: discrimination in favor of able-bodied people and assumption of a person's capabilities based on perceived ability limitations.

SESSION 2

Intersectionality and Guinea Worm

PROCEDURE

1. Activity: What Is intersectionality? (continued)

- **patriarchy:** has to do with lack of equality for women, but it is also framed as women are not being given the same space to operate. This can be both blatant and subtle. For example, not allowing a woman to get an education is blatant. Interrupting a woman when she is talking would be subtle. However, the system of patriarchy and oppression impacts everybody, not just women.

📌 Instructor Note:

- The handout explains what intersectionality is. You should attempt to clarify the concept as much as possible.

2. Lecture: What is intersectionality? (15 min)

This lecture builds on the prior activity and discussion to communicate the concept of intersectionality. This lecture will expand on its history, theory, and how to understand health through an intersectional framework.

1. Lecture on Intersectionality content
 - **PowerPoint: Intersectionality**
2. Lecture on intersectionality will focus on these themes:
 - History of intersectionality
 - Theoretical overview of intersectionality
 - Black feminism
 - Health and intersectionality
3. Students ask questions about the content.

SESSION 2

Intersectionality and Guinea Worm

PROCEDURE

3. Video: Public Health and Homelessness (15 min)

This activity and discussion will encourage students to consider why it is easier for people to think about a person's life and outcomes solely as a matter of personal effort, achievement, entitlement, or luck. It will help students understand that the opportunities a person gets have less to do with luck than they do with the combinations of personal and structural oppressions and disadvantages that they face. This is one aspect of inequality that intersectionality illustrates.

1. Have students watch the public health and homelessness video:
 - **Video: “Public Health and Homelessness”**
“Public Health and Homelessness.” Centers for Disease Control. Web.
<http://www2c.cdc.gov/podcasts/videowindow.asp?f=2844357&af=v>
 2. Facilitate a discussion around the video and students' reactions.
 3. Use the following questions to further discussion:
 - *Do you think that someone who is homeless has a higher chance of getting the flu? Why? What other factors connected to homelessness might influence it?*
 - *Are homeless people part of society? Why or why not?*
 - *Many people do not respond to homeless people with kindness, respect, or empathy. Why might that be?*
 - *Why do you think people might describe the condition of homelessness as a matter of “laziness” rather than looking at it as a matter of the social support system of a community failing to protect and care for its most vulnerable members?*
- i Instructor Note:**
- As an example, suggest that some homeless people might not feel safe or supported, might lack nutrition, and feel stigmatized. Becoming sick will stigmatize the homeless even further.

SESSION 2

Intersectionality and Guinea Worm

PROCEDURE

4. Video: Guinea worm (20 min)

The Guinea worm video will encourage students to think critically about the media's representation of disease, and to connect the representation of disease in the media to different cultural conceptions of disease.

1. Introduce Guinea worm with the following video:
 - **Video: Guinea Worm Disease Eradication**
Carter Center. "Guinea Worm Disease Eradication: Countdown to Zero."
YouTube, 24 Oct. 2013.
<http://YouTube.com/watch?v=oCB1A2gFvuU>
2. Ask students to share their responses to the video. This should be an open sharing of how the video made them feel.
3. Use the following questions to generate a discussion of how the video emphasizes the painfulness of Guinea worm disease to push forward its main argument—eradication:
 - *How is the disease represented in this video?*
 - *Are there other ways to represent a disease that isn't focused on pain?*
 - *Why do you think the producers of the video choose to represent the disease this way?*
 - *Does this video, with the emphasis on pain, leave room for different cultural understandings of disease?*

SESSION 2**Intersectionality and Guinea Worm****PROCEDURE****5. Lecture: Guinea Worm** (10 min)

This lecture should build on the prior video and discussion. This lecture will provide students with an in-depth understanding of the Guinea worm disease's life cycle and transmission.

1. Deliver content on Guinea worm:
 - **PowerPoint: Guinea worm**
2. Lecture on Guinea Worm will cover these themes:
 - Guinea worm disease profile
 - Contracting Guinea worm
 - Global statistics on Guinea worm
3. Students ask questions about the content.

SESSION 2 **Intersectionality and Guinea Worm**

PROCEDURE

Wrap-up (10 min)**Instagram Vocabulary Explanation** (5 min)

In order to do this activity with your class, you will need to create an Instagram account. Explain to students that one of the ongoing digital projects during this course is the creation of a visual dictionary of course vocabulary words. Students' photos and definitions will be uploaded to the class's Instagram account.

1. At the end of each class, students will receive a sheet of vocabulary words. These words will not be defined. It will be the students' job to come up with definitions based on course content and discussion.
2. Students will also be required to take a photo that corresponds with the definition they have created. They can think of each photo as a guide that will help their Instagram viewers connect the vocabulary word to the real world.
 - Tell students to be creative. These photos can be staged, abstract, candid, found items, landscape, etc.
 - Remind them that the photos must be their own!
 - Requirement: one post per week.

i Instructor Note:

- Have students focus their posts on the vocabulary terms. You may want to pick one keyword per session, provide students a handout of vocabulary words, or allow students to take pictures of whatever makes them think of something they learned in class, and then apply the vocabulary retroactively during the review.

Homework: Session 2 Writing Prompt (5 min)

1. Distribute the Session 2 Writing Prompt. Have students write a short, one-paragraph response.
 - How would you describe the Guinea worm epidemic and the efforts to eradicate the parasitic infection from an intersectional perspective? Think about the factors that impact who does and doesn't get infected, and what their treatment opportunities may or may not be. How does the intersection of different life factors affect those infected with the disease?

Name: _____ Date: _____

Intersectionality Word Search

Find and circle all the words hidden in the grid. Words are placed horizontally and vertically, both forwards and backwards.

C	N	E	H	R	I	E	D	U	C	A	T	I	O	N
S	O	P	E	C	O	N	K	I	R	B	L	M	N	O
P	I	A	B	E	N	I	F	P	L	I	A	C	E	W
E	T	H	N	I	C	I	T	Y	N	L	E	W	O	R
W	A	S	A	V	C	E	R	L	Y	I	N	M	G	Y
A	C	Y	T	I	L	A	N	O	I	T	A	N	B	T
A	O	D	D	O	A	G	S	K	I	Y	Z	K	O	I
S	L	O	G	N	S	G	E	D	T	O	P	F	D	L
L	C	B	E	A	S	K	I	N	T	O	N	E	Y	A
M	I	N	O	T	I	N	T	E	R	S	O	I	S	U
N	H	E	G	I	T	R	E	L	I	O	I	N	R	X
O	P	H	R	O	H	S	H	R	A	P	G	T	A	E
P	A	I	N	T	E	R	S	E	C	T	I	O	N	S
A	R	J	S	P	R	E	C	D	I	N	L	A	C	I
Q	G	L	E	R	E	D	M	N	R	T	E	N	E	D
X	O	P	N	A	R	L	S	E	C	A	R	T	C	B
N	E	T	P	C	U	V	E	G	T	D	M	A	L	C
E	G	A	Q	T	A	R	B	S	T	C	U	D	W	E

- ability
- age
- body shape
- class
- education
- ethnicity
- gender
- geographic location
- intersections
- nationality
- race
- religion
- sexuality
- skin tone

Name: **ANSWER KEY**

Date: _____

Intersectionality Word Search

Find and circle all the words hidden in the grid. Words are placed horizontally and vertically, both forwards and backwards.

C	N	E	H	R	I	E	D	U	C	A	T	I	O	N
S	O	P	E	C	O	N	K	I	R	B	L	M	N	O
P	I	A	B	E	N	I	F	P	L	I	A	C	E	W
E	T	H	N	I	C	I	T	Y	N	L	E	W	O	R
W	A	S	A	V	C	E	R	L	Y	I	N	M	G	Y
A	C	Y	T	I	L	A	N	O	I	T	A	N	B	T
A	O	D	D	O	A	G	S	K	I	Y	Z	K	O	I
S	L	O	G	N	S	G	E	D	T	O	P	F	D	L
L	C	B	E	A	S	K	I	N	T	O	N	E	Y	A
M	I	N	O	T	I	N	T	E	R	S	O	I	S	U
N	H	E	G	I	T	R	E	L	I	O	I	N	R	X
O	P	H	R	O	H	S	H	R	A	P	G	T	A	E
P	A	I	N	T	E	R	S	E	C	T	I	O	N	S
A	R	J	S	P	R	E	C	D	I	N	L	A	C	I
Q	G	L	E	R	E	D	M	N	R	T	E	N	E	D
X	O	P	N	A	R	L	S	E	C	A	R	T	C	B
N	E	T	P	C	U	V	E	G	T	D	M	A	L	C
E	G	A	Q	T	A	R	B	S	T	C	U	D	W	E

- ability
- age
- body shape
- class
- education
- ethnicity
- gender
- geographic location
- intersections
- nationality
- race
- religion
- sexuality
- skin tone

Name: _____

Date: _____

Instagram Vocabulary

One of the ongoing digital projects throughout this class is for us to create a visual dictionary of class vocabulary words. We will be creating this dictionary through Instagram!

How it works:

- At the end of each class, you will receive a sheet of vocabulary words. These words will not be defined; it will be your job to come up with the definitions based on class content and discussion.
- You will also be required to take a photo that corresponds with the definitions you created. You can think of each photo as a guide that will help our Instagram viewers connect the vocabulary word to the real world.
- Be creative! These photos can be staged, abstract, candid, found items, landscape, etc.
- The photos must be your own! These photos and definitions will be uploaded to our very own class Instagram.

Instagram: _____

Password: _____

Name: _____

Date: _____

Session 2 Writing Prompt

Write one paragraph responding to this prompt:

How would you describe the Guinea worm epidemic and the efforts to eradicate the parasitic infection, from an intersectional perspective? Think about the factors that impact those who do and don't get infected, and what their treatment opportunities may or may not be. How does the intersection of different life factors affect those infected with the disease?

SESSION 3

Bacteria, Viruses, and Parasites

What is the relationship between humans and the microbes that cause diseases?

INTRODUCTION

This session will introduce students to the foundational biomedical content for the course. This includes background on bacteria, viruses, parasites, zoonotic diseases, pathophysiology, and neglected tropical diseases. However, students will not consider this content in isolation, but will consider the influence of socioeconomics, culture, history, race, and identity.

LEARNING OBJECTIVES

Students will:

- differentiate between bacteria, viruses, and parasites from a microbiological as well as an epidemiological perspective,
- demonstrate an understanding of what a zoonotic disease is and why it presents a particular challenge for eradication,
- describe pathophysiology and the way in which a pathogen enters the body and produces a series of changes that are recognized as symptoms of a disease,
- investigate the role of economics in neglected tropical disease epidemics,
- contrast global and local perspectives on neglected tropical disease,
- explain the relationship between humans and the microbes that cause human disease through several ideological frameworks.

TIME FRAME

20 min	Warm-up: Homework Review Review Instagram; review homework.
20 min	1. Lecture: Bacteria, Viruses, and Parasites Instructor lecture on bacteria, virus, and parasite content.
35 min	2. Activity: Immunity vs. Pathogen Card Game Students play card game; instructor leads a discussion on card game.

continued on next page

SESSION 3 Bacteria, Viruses, and Parasites

**TIME FRAME
(CONTINUED)**

10 min	3. Lecture: Zoonotic Disease Instructor lectures on zoonotic disease content; Students watch related videos.
10 min	4. Lecture: Pathophysiology Instructor lectures on pathophysiology content.
10 min	5. Lecture: Neglected Tropical Diseases Instructor lectures on neglected tropical disease content.
15 min	Wrap-up: 3-2-1 3-2-1 activity; homework.

MATERIALS

- Immunity vs. Pathogen card game and Instructions** (one per group of four students)
- Scrap paper** (one per student)
- PowerPoint: Neglected Tropical Diseases**
- PowerPoint: Pathophysiology**
- PowerPoint: Zoonotic Disease**
- PowerPoint: Bacteria, Viruses, and Parasites**
- Article: "Misconceptions About Vaccines"** (one per student)
- Article: "Top 20 Questions About Vaccination"** (one per student)

**AUDIO-VISUAL
NEEDS**

- Speakers**
- Projector**
- Computer**

VOCABULARY

- eradication
- immunity
- pathogen and host relationships (as an umbrella term for all disease-causing agents)
- WHO, UNICEF, and other Non-Governmental Organizations (NGOs)
- pathophysiology
- zoonotic diseases
- neglected tropical diseases

SESSION 3

Bacteria, Viruses, and Parasites

PREPARATION

- Print and cut out the Immunity and Pathogen card decks on single-sided paper (two decks per group of four students: one immunity deck per two students, and one pathogen deck per two students).
- Familiarize yourself with the Immunity vs. Pathogen card game ahead of time to make explaining the game easier and to have a sense of the game experience. The card game can be found in this document:
 - **Bacteria, Viruses, and Fungi, Oh My!**
Horowitz, Lesli. “Bacteria, Viruses, and Fungi, Oh My!” Paper. American Association of Immunologists High School Teachers Summer Research Program.
http://aai.org/Education/Summer_Teachers/Docs/Archive/2013_Horowitz_Final.pdf
- Print all articles, handouts, and worksheets located in the Materials section before class.
- Review the content of the following PowerPoints before class.
 - <http://amnh.org/explore/politics-and-pathogens>
 - **PowerPoint: Bacteria, Viruses, and Parasites**
 - **PowerPoint: Zoonotic Diseases**
 - **PowerPoint: Pathophysiology**
 - **PowerPoint: Neglected Tropical Diseases**
- The following resources will provide you with background on the material presented in this session.
 - **Teacher Guide: Bacteria, Viruses, and Fungi, Oh My!**
Horowitz, Lesli. “Bacteria, Viruses, and Fungi, Oh My!” Paper. American Association of Immunologists High School Teachers Summer Research Program.
http://aai.org/Education/Summer_Teachers/Docs/Archive/2013_Horowitz_Final.pdf

SESSION 3**Bacteria, Viruses, and Parasites****PROCEDURE****Warm-up: Homework Review (20 min)****Review Instagram (5 min)**

1. Use the projector to display the Instagram account.
2. Review Instagram posts.
3. Connect Instagram posts to class content and/or vocabulary.
4. Ask students to explain their thinking behind a post, or comment on another student's post.

Review Homework (15 min)

1. Have students review the writing prompt and homework from last class:
 - How would you describe the Guinea worm epidemic and efforts to eradicate the parasitic infection, from an intersectional perspective? Think about the factors that impact who does and doesn't get infected, and what their treatment opportunities may or may not be. How does the intersection of different life factors affect those infected with the disease?
2. Have students ink out their names on their homework assignment, and then fold the paper.
3. Put all the folded papers into a container, and have students draw from it. They cannot draw their own response paper.
4. Have students read the responses they selected.
5. Ask students to share similarities and differences between their responses and the ones they read.

SESSION 3**Bacteria, Viruses, and Parasites****PROCEDURE****1. Lecture: Bacteria, Viruses, and Parasites (20 min)**

This lecture will introduce students to the biology of bacteria, viruses, and parasites. Students also will gain a general understanding of pathogens that will be applied in the activity that follows the lecture.

1. Lecture on the content of bacteria, viruses, and parasites.
 - **PowerPoint: Bacteria, Viruses, and Parasites**
2. The lecture on bacteria, viruses, and parasites will cover these themes:
 - Biological overview of pathogens
 - Types of pathogens
 - Biological overview of bacteria
 - Structure of bacteria
 - Pathogenic bacteria
 - Biological overview of viruses
 - Structure of viruses
 - Biological overview of parasites and helminths
3. Students ask questions about the content.

SESSION 3

Bacteria, Viruses, and Parasites

PROCEDURE

2. Activity: Immunity vs. Pathogen Card Game

(35 min)

The activity and discussion will encourage students to think critically about what is lacking when we discuss “healthy living” or “staying healthy.” They will begin to understand that health is not solely dependent on physical or biological factors, but is influenced by socioeconomics, culture, history, race, and identity.

1. Have students work in groups of four to play the Immunity vs. Pathogens card game. One pair will play as immunity and the other as pathogen.
 2. Pass out instructions and decks for the Immunity vs. Pathogen Card Game.
 - **Immunity vs. Pathogen Card Game:**
Horowitz, Lesli. “Bacteria, Viruses, and Fungi, Oh My!” Paper. American Association of Immunologists High School Teachers Summer Research Program.
http://aai.org/Education/Summer_Teachers/Docs/Archive/2013_Horowitz_Final.pdf
 3. Review the instructions with students.
 4. Pass out scrap paper so students can keep score.
 5. The game goes quickly so students should play multiple rounds.
 6. Facilitate a discussion around the card game. Use the following questions to guide the discussion:
 - *Who won the card game (pathogens or immunity), and why do you think they did?*
 - *Do you think this card game emulates the real world? Why or why not?*
 - *What is left out of this card game that can have a negative impact on health?*
The instructor should consider bringing up health misconceptions, stereotypes, stigma, and quality of health care in terms of infrastructure and mobility.
 - *How is health influenced by socioeconomics, culture, history, race, and identity?*
For example, one of the immunity cards is “nutrition,” and in the game play it reads, “I have been eating healthy balanced meals three times a day consisting of whole foods and not skipping.” The instructor may want to point this out to students, and ask how one’s access to whole foods and not skipping meals might alter if they lived in an area where these foods aren’t available or if they work multiple jobs.
- 📌 Instructor Note:**
- The Immunity vs. Pathogen card game is meant to be played one-on-one. Since students will be playing in pairs, ask them to share the main player role or to switch off between rounds. Encourage them to find ways to work together throughout.

SESSION 3

Bacteria, Viruses, and Parasites

PROCEDURE

3. Lecture: Zoonotic Diseases (10 min)

This lecture will provide students with an introduction to zoonotic diseases.

1. Lecture on zoonotic disease content.
 - **PowerPoint: Zoonotic Diseases**
2. The lecture on zoonotic disease will cover these themes:
 - Overview of zoonotic disease
 - Transmission of zoonotic diseases via direct contact, oral, and aerosol
 - viral evolution and optimal mammal reservoirs

i Instructor Note:

- The videos included in the PowerPoint lecture can help explain the political realities that create economic neglect in postcolonial tropical nations, and how these factors create acute risk of the emergence of neglected tropical disease. In a Global North context, the notion that infectious disease is endemic in poor regions because of perceived cultural or education flaws or defects can be dismantled for students. In a Global South context, this can affirm that histories of oppression that they may have experienced or witnessed, and have long-term impacts on the ability for people to easily secure health and well-being for themselves and their families. The video can spark conversation about understanding the multi-generational impact of oppressive systems, such as colonialism or slavery. Long-term health incomes, including long-term economic vulnerability, can make it difficult for postcolonial governments to provide basic health care to their citizens.
- Globalized health systems, like epidemiological surveillance, are difficult to maintain with smaller economies that rely greatly on foreign money from industries such as natural resource extraction and tourism. If more powerful economies structure agreements so that people in poorer nations are paid less, these postcolonial countries do not have the economic or political bargaining power to make sure they are compensated fairly. This is a form of underdevelopment; a weaker economy is kept weak in order for a stronger economy to conduct business inexpensively. This is to the favor of the stronger economy and at the expense of the weaker economy.
- Neglected tropical diseases emerge in underdeveloped countries because historical and contemporary economic exploitation makes it impossible to finance a health infrastructure that provides robust disease surveillance, as well as other parts of public development, including paved roads, basic sanitation and clean water access, safe and secure food supply, pest control, extensive access to post-secondary education, and job training and placement that enable stronger economies to eliminate most risk of widespread infectious disease outbreaks.

3. Students ask questions about content.

SESSION 3

Bacteria, Viruses, and Parasites

PROCEDURE

4. Lecture: Pathophysiology (10 min)

This lecture will provide students with an introduction to pathophysiology.

1. Lecture on pathophysiology content.
 - **PowerPoint: Pathophysiology**
2. The lecture on pathophysiology will cover these themes:
 - Homeostasis of a 'healthy' body
 - The disruption of homeostasis in a 'sick' body
 - The signs and symptoms of disease
 - How the cause of disease is determined
 - Overview of pathophysiology
3. Students ask questions about content.

5. Lecture: Neglected Tropical Diseases (10 min)

This lecture will introduce students to neglected tropical diseases.

4. Lecture on neglected tropical diseases.
 - **PowerPoint: Neglected Tropical Diseases**
5. The lecture of neglected tropical diseases will cover these themes:
 - Overview of neglected tropical diseases
 - Geography of neglected tropical diseases
 - Health consequences of neglected tropical diseases
 - Population affected by neglected tropical diseases
 - Social consequences of neglected tropical diseases (stigma)
 - Educational, labor, and economic consequences of neglected tropical diseases
 - Issues of neglected tropical diseases on a community, national, and international levels
 - Neglected tropical disease interactive map
6. Students ask questions about the content.

SESSION 3

Bacteria, Viruses, and Parasites

PROCEDURE

Wrap-up (15 min)**3-2-1** (10 min)

1. Have students write down three things they learned from the session, two things they found interesting, and one question they have.

i Instructor Note:

- If there is enough time, respond to questions. If not, collect the 3-2-1 write-ups and answer questions during free time in another class.

Homework: Vaccine Questions and Misconceptions (5 min)

1. Hand out two articles about vaccines:
 - **Article: “Misconceptions about Vaccines”**
“Misconceptions about Vaccines” from The History of Vaccines: An Educational Resource. The College of Physicians of Philadelphia. July 2014.
<http://historyofvaccines.org/content/articles/misconceptionsaboutvaccines>
 - **Article: Top 20 Questions about Vaccination**
“Top 20 Questions about Vaccination” from The History of Vaccines: An Educational Resource. The College of Physicians of Philadelphia. July 2014.
<http://historyofvaccines.org/content/articles/top20questionsabout-vaccination>
2. Have students read the articles and discuss them with a family member or friend, preferably someone from an older generation to bring an intergenerational element into the conversation.
3. Have students take notes on what they discussed after reading the articles and bring written responses to class.
4. Pose these questions to help students focus their notes:
 - *Was anyone surprised by anything they learned?*
 - *Did anyone learn anything new?*

SESSION 4

Vaccination and Health Infrastructure

Who has the power in public health—individuals or communities?

INTRODUCTION

This session introduces students to vaccination from a biological as well as an anthropological perspective. Students will explore what vaccines are, how they work, and the misunderstandings and myths that accompany them. Students will apply this perspective to the community level to better comprehend why certain populations are disregarded and why other populations benefit when it comes to disease prevention. Students will think about disease prevention versus disease treatment from the perspective of ethics and economics.

LEARNING OBJECTIVES

Students will:

- explore the history and culture of vaccines in the United States,
- demonstrate an understanding of how vaccines are produced and how they work,
- discuss myths associated with vaccination.

TIME FRAME

15 min	Warm-up: Homework Review Review Instagram; review homework.
40 min	1. Activity: Vaccine Animations Students watch animations; sticky-note comments and discuss.
15 min	2. Lecture: Vaccines Instructor lectures on vaccine content; students watch related video.
35 min	3. Activity: Illsville Computer Game Students play Illsville computer game; instructor facilitates a group discussion.
10 min	Wrap-up: Write a Commercial Students write an commerical about Illsville computer game; homework.

SESSION 4 Vaccination and Health Infrastructure

MATERIALS

- Laptops (one per two–three students)
- PowerPoint: Vaccines
- Website: “How Vaccines Are Made”
- Website: “History of the Immunization Schedule”
- Website: “Types of Vaccines”
- Website: “Herd Immunity”
- Website: Illsville Computer Game
- Handout: Writing Prompt Homework Day 4 (one per student)

AUDIO-VISUAL
NEEDS

- Speakers
- Projector
- Computer

VOCABULARY

- public health infrastructure
- formal and informal health care
- cultural situation and health narrative
- vaccines
- quarantine

PREPARATION

- The vaccine animations and the Illsville computer game require Shockwave Flash. The instructor should check the laptops to make sure they are up-to-date or install the most recent version.
- Review the PowerPoint content before class.
- **PowerPoint: Vaccines**
<http://amnh.org/explore/politics-and-pathogens>
- Review the websites prior to class.
 - **Website: How Vaccines Are Made**
“How Vaccines Are Made.” The College of Physicians of Philadelphia. *The History of Vaccines: An Educational Resource*. 2016. Web. <http://historyofvaccines.org/content/how-vaccines-are-made>
 - **Website: History of the Immunization Schedule**
“History of the Immunization Schedule.” The College of Physicians of Philadelphia. *The History of Vaccines: An Educational Resource*. 2016. Web. <http://historyofvaccines.org/content/history-immunization-schedule>
 - **Website: Types of Vaccines**
“Types of Vaccines.” The College of Physicians of Philadelphia.

SESSION 4 Vaccination and Health Infrastructure**PREPARATION**

(CONTINUED)

The History of Vaccines: An Educational Resource. 2016. Web.

<http://historyofvaccines.org/content/types-vaccines>

■ **Website: Herd Immunity**

“Herd Immunity.” The College of Physicians of Philadelphia.

The History of Vaccines: An Educational Resource. 2016. Web.

<http://historyofvaccines.org/content/herd-immunity-0>

- You may want to play the Illsville computer game and watch the vaccine animations to familiarize yourself with the content and game experience.

■ **Website: Illsville: Fight the Disease**

“Illsville: Fight the Disease.” The College of Physicians of Philadelphia.

The History of Vaccines: An Educational Resource. Online. 2016.

<http://historyofvaccines.org/content/illsville-fight-disease>

- The following resources will provide you with background on the material presented in this session.

■ **Website: The History of Vaccines**

The College of Physicians of Philadelphia.

The History of Vaccines: An Educational Resource. Online. 2016.

<http://historyofvaccines.org>

SESSION 4 **Vaccination and Health Infrastructure**

PROCEDURE

Warm-up (15 min)

Instagram Vocabulary Review (5 min)

1. Use the projector to display Instagram account.
2. Review Instagram posts.
3. Connect Instagram posts to class content.
4. Ask students to explain their thinking behind a post, or comment on another student's post.

Homework Review (15 min)

1. Remind students of their homework assignment.
 - Read the two articles “Top 20 Questions about Vaccines” and “Misconceptions about Vaccines,” and discuss them with a family member or friend.
2. Have students work with a partner to interview each other about what it was like to read the articles, discuss them with their family members, and what kind of conversation occurred.
3. Students should come up with questions to ask one another around this theme.
4. If there is time, students can share their experiences with the class.

SESSION 4 Vaccination and Health Infrastructure

PROCEDURE

1. Activity: Vaccine Animations (40 min)

In this activity, students explore and discuss what stands out to them about the history and production of vaccines.

1. Have students form small groups of three or four and explore the animations. Describe what groups are to do:
2. Each group will be given about 20 sticky notes.
3. As the students work through the animations together, they will use the sticky notes to write down:
 - interesting facts,
 - information that surprises them,
 - contradictions they discover.
4. Each interesting fact, surprising information, or contradiction should be written down on a sticky note. For example, a student discovers that viral vaccines begin with small amounts of a specific virus, or that vaccines have been available since the early 1800s, he or she may write each fact onto separate sticky notes.
5. Have students view the animations.
 - **Website: “How Vaccines Are Made”**
“How Vaccines Are Made.” The College of Physicians of Philadelphia.
The History of Vaccines: An Educational Resource. 2016. Web.
<http://historyofvaccines.org/content/how-vaccines-are-made>
 - **Website: “History of the Immunization Schedule”**
“History of the Immunization Schedule.” The College of Physicians of Philadelphia.
The History of Vaccines: An Educational Resource. 2016. Web.
<http://historyofvaccines.org/content/history-immunization-schedule>
 - **Website: “Types of Vaccines”**
“Types of Vaccines.” The College of Physicians of Philadelphia.
The History of Vaccines: An Educational Resource. 2016. Web.
<http://historyofvaccines.org/content/types-vaccines>
 - **Website: “Herd Immunity”**
“Herd Immunity.” The College of Physicians of Philadelphia.
The History of Vaccines: An Educational Resource. 2016. Web.
<http://historyofvaccines.org/content/herd-immunity-0>

SESSION 4 Vaccination and Health Infrastructure

PROCEDURE

1. Activity: Vaccine Animations (continued)

6. After the students are done, have them organize their sticky notes on the board or a wall into these three categories: interesting facts, surprising information, and contradictions.
7. Review the sticky notes, and have the students look for trends. For example, if a number of students were surprised to learn that vaccines have been around since the 1800s, you should inquire as to why they found this surprising, and how this new information changes their conception of vaccines.
8. Use these questions to further discussion:
 - *Did you learn anything new? Explain.*
 - *Where do we get information about vaccines?*
 - *How are vaccines discussed in school? Are they discussed? If not, do you think they should be?*

i Instructor Note:

- The sticky notes are meant to help guide discussion. The sticky notes provide insight into the students' thinking on vaccines, and the instructor should use the sticky notes to provide more information, provide corrections, or ask follow-up questions.

SESSION 4 **Vaccination and Health Infrastructure**

PROCEDURE

2. Lecture: Vaccines (15 min)

This lecture builds on the prior activity and discussion. Students should all have a general idea of how vaccines are made and work. This lecture should further clarify and expand on those themes by introducing cases studies, government standards, and social movements.

1. Lecture on vaccine content.
 - **PowerPoint: Vaccines**
2. Lecture on vaccine content will cover these themes:
 - Vaccination vs. inoculation
 - Live attenuated vaccines
 - Inactivated vaccines
 - Vaccine testing and approval
 - WHO standards
 - Overview of smallpox
 - Eradication of smallpox
 - Vaccine preservatives
 - Anti-vaccine movement
3. Students ask questions about the content.

SESSION 4 Vaccination and Health Infrastructure

PROCEDURE

3. Activity: Illsville Computer Game (35 min)

This activity will help students reflect on being in a position of power and examine the ethical issues that arise when the people in power must decide how to prevent the spread of an infectious disease. A central concept of this game articulates that when we don't see populations as people, we can lose sight of the impact our decisions have on the lives of individuals.

1. Have students form groups of two to three to play the Illsville Computer Game.
 - **Illsville Computer Game:**
"Illsville: Fight the Disease." The College of Physicians of Philadelphia. *The History of Vaccines: An Educational Resource*. 2016. Web.
<http://historyofvaccines.org/content/illsville-fight-disease>
2. Facilitate a discussion around the game and students' reactions.
3. Use the following questions to generate discussion:
 - *How does this game translate to the real world?*
 - *What type of community is this simulation meant to represent? What other types of community settings are not included?*
 - *How does the population density of a place impact both the spread of disease and the way people talk about and react to a disease outbreak?*
 - *Are all of the public service professionals and technologies in the game available in your community? If not, what is different in this simulation? Are there people that do jobs in a different way in your community than in the game?*
 - *How do you think a game that modeled a neglected tropical disease outbreak would be different than this game?*
 - *Would your decisions change if they were real people?*
 - *There were a lot of times when the game asks you to quarantine part of the population—what are the drawbacks to this?*
 - *People survive if you quarantine them, but are they happy?*
 - *By isolating sick people, are we saying that sick people are not part of the population?*

i Instructor Note:

- If laptops are unavailable, or if time is limited, the instructor can project the game and have students play it as a class.
- Students may realize when playing the game that if they quarantine sick individuals, fewer people die overall. At times this can seem like an easy decision because it is a game, but if the instructor encourages the students to think about each individual in their population as a real person with a family, friends, and a sense of self and identity, the question of disease prevention becomes more complicated.

SESSION 4 Vaccination and Health Infrastructure

PROCEDURE**Wrap-up** (15 min)**Write a Commercial** (10 min)

This activity will allow students to articulate what they took away from the Illsville computer game.

1. Working with a partner, have students write a one- to two-minute commercial to communicate to someone unfamiliar with the topic what they learned from playing the Illsville computer game.
2. When students are done, have them share their commercials with the class.

Homework Review (5 min)

1. Hand out the Writing Prompt Homework Session 4.
 - **Writing Prompt Session 4**
2. Ask students to write a one-paragraph response to the prompt:
 - Think about an Ebola vaccine for future disease prevention, using the concept of intersectionality. Keep in mind what you've learned about zoonoses and the difficulty of eradicating diseases with nonhuman reservoirs and vectors. Consider whom the vaccine would help and the potential ethical problems that might emerge, including ways in which people who are vulnerable to infection might also be vulnerable to other forms of oppression.

Name: _____

Date: _____

Session 4 Writing Prompt

Write a one-paragraph response to this prompt:

Think about an Ebola vaccine for future disease prevention using intersectionality. Keep in mind what we learned about zoonoses and the difficulty of eradicating diseases with nonhuman reservoirs and vectors. Think of whom the vaccine would help. Consider potential ethical problems that might emerge, including ways in which people who are vulnerable to infection might also be vulnerable to other forms of oppression. Many more women than men were infected with and died of Ebola during the 2014–2015 West African Ebola epidemic. Some estimates indicate that nearly 70% of the people who succumbed to Ebola infections were women, even though there is no difference between men’s and women’s immune systems’ ability to combat Ebola infections. The disparity can be attributed to greater exposure to the disease among women. Why do you think this was the case?

SESSION 5

Tropical Medicine and Postcolonial Theory

How is tropical medicine a product of colonial history, and what implications does that have for today?

INTRODUCTION

This session introduces students to postcolonial theory in order to better understand the historical context of the development of tropical medicine, and why neglected tropical diseases occur in areas once ruled by colonial empires. For students, this session will emphasize that to talk about neglected tropical disease is to talk about history, power, and culture.

LEARNING OBJECTIVES

Students will:

- engage with the history and legacy of tropical medicine,
- demonstrate an understanding of the basic foundation of postcolonial theory,
- demonstrate an understanding of the political and historical context in which disease occurs,
- explain how the effects of postcolonialism (political instability, social quarrels, and a lagging economy) interact with the public health of a community.

TIME FRAME

15 min	Warm-up: Homework Review Instagram review; turn and talk.
50 min	1. Visit: Countdown to Zero Online Exhibition Visit <i>Countdown to Zero</i> online exhibition; instructor facilitates discussion around exhibition visit.
15 min	2. Lecture: Tropical Medicine Instructor lectures on the tropical medicine content.
15 min	3. Think-Pair-Share: Tropical Medicine Think-pair-share: tropical medicine.

continued on next page

SESSION 5 Tropical Medicine and Postcolonial Theory

TIME FRAME
(CONTINUED)

15 min	4. Lecture and Video: Postcolonial Theory Instructor lectures on postcolonial theory; Students watch related videos.
5 min	5. Video: 60 Minutes: "Louis Farrakhan pwns Mike Wallace" Students watch video.
5 min	Wrap-up Homework.

MATERIALS

- PowerPoint: Tropical Medicine
- PowerPoint: Postcolonial Theory
- Video: "Louis Farrakhan pwns Mike Wallace"
- Video: "Kibera, Kenya"
- Video: "Answers from Kibera"
- Video: "Rural Health-care in America"
- Optional Video: "Health-care in Kibera"
- Handout: Writing Prompt Homework Session 5
- Laptops (one per every two students)

AUDIO-VISUAL NEEDS

- Speakers
- Projector
- Computer

VOCABULARY

- tropical medicine
- public health agenda/funding
- horizontal hygiene- or horizontal programs of public-health improvements that deal with living conditions across a broad spectrum of diseases (e.g., sanitary movement)
- vertical hygiene, or tropical hygiene-targeted single diseases designed to protect Europeans
- germ theory of diseases
- contagionism vs. anticontagionism
- vector-borne diseases
- "The Big Three" (HIV/AIDS, tuberculosis, malaria)
- postcolonial theory
- Global North/Global South
- hegemony

SESSION 5

Tropical Medicine and Postcolonial Theory

PREPARATION

- Review content in the PowerPoints before class.
<http://amnh.org/explore/politics-and-pathogens>
- View the following videos before class:
 - **Video: Louis Farrakhan pwns Mike Wallace**
60 Minutes: "Louis Farrakhan pwns Mike Wallace." YouTube, 22 Sept. 2010.
<http://www.youtube.com/watch?v=bvfEj7RobQ0>
 - **Video: Kibera, Kenya**
Kibera, Kenya (So Fly Productions) (1:18)
https://www.youtube.com/watch?v=Q3h_4g2uWh4
 - **Video: Answers from Kibera**
CDC Global Disease Detectives: Answers from Kibera (1:08)
<https://www.youtube.com/watch?v=SXt64daRIQ8>
 - **Video: Rural Health-care in America**
Life Support: Rural Health-care in America (2:55)
<https://www.youtube.com/watch?v=g872yS5OXY>
- The following resources provide background on the material presented in this session.
 - **Book Excerpt: "Points of Departure"**
Childs, Peter, and R.J. Patrick Williams. "Introduction: Points of Departure." *An Introduction to Postcolonial Theory*. New York: Prentice Hall/ Harvester Wheatsheaf, 1997, 1-25.
<http://www19.homepage.villanova.edu/silvia.nagyzekmi/teoria/childs%20postcolonial.pdf>
 - **Book: The Postcolonial Studies Reader**
The Postcolonial Studies Reader. Eds. Bill Ashcroft, Gareth Griffiths, and Helen Tiffin. New York: Routledge. 1995.
http://mohamedrabeea.com/books/book1_3985.pdf
- The following articles provide different perspectives on Louis Farrakhan:
 - **Article: "Hon. Minister Farrakhan"**
"National Representative of the Honorable Elijah Muhammad and the Nation of Islam." *Nation of Islam*. Web.
<http://noi.org/hon-minister-farrakhan/>
 - **Article: Louis Farrakhan Biography**
Biography.com Editors. "Louis Farrakhan Biography: Religious Figure, Civil Rights Activist (1993-)." *The Biography.com Website*. Web.
<http://biography.com/people/louis-farrakhan-9291850>
 - **Article: "Louis Farrakhan"**
"Louis Farrakhan." Southern Poverty Law Center. Web.
<http://splcenter.org/fighting-hate/extremist-files/individual/louis-farrakhan>

SESSION 5

Tropical Medicine and Postcolonial Theory

PROCEDURE

Warm-up: Homework and Instagram Review (15 min)**Review Instagram** (5 min)

1. Use the projector to display Instagram account.
2. Review Instagram posts.
3. Connect Instagram posts to class content.
4. Ask students to explain their thinking behind a post, or comment on another student's post.

Turn and Talk: Homework Review (10 min)

1. Have students work with a partner to discuss their homework.
2. Students were required to write a one-paragraph response to the writing prompt:
 - Think about an Ebola vaccine for future disease prevention using intersectionality. Keep in mind what we learned about zoonoses and the difficulty of eradicating diseases with nonhuman reservoirs and vectors. Think of whom the vaccine would help. Consider potential ethical problems that might emerge, including ways in which people who are vulnerable to infection might also be vulnerable to other forms of oppression. Many more women than men were infected with and died of Ebola during the 2014–2015 West African Ebola epidemic. Some estimates indicate that nearly 70% of the people who succumbed to Ebola infections were women, even though there is no difference between men's and women's immune systems' ability to combat Ebola infections. The disparity can be attributed to greater exposure to the disease among women. Why do you think this was the case?

SESSION 5

Tropical Medicine and Postcolonial Theory

PROCEDURE

1. Activity: *Countdown to Zero* Online Exhibition

(45 min)

This activity will allow students to explore the *Countdown to Zero* online exhibition. Through this online exhibition, students will revisit content on Guinea worm, and be introduced to content related to smallpox, river blindness, polio, tuberculosis, lymphatic filariasis, malaria, Ebola, HIV/AIDS, influenza, and measles. Discussion will focus on the representation of these diseases through photography.

1. Students gather into pairs and distribute laptops.
2. Have students visit the *Countdown to Zero* online exhibition:
 - **Website: Countdown to Zero online exhibition**
<http://amnh.org/explore/countdown-to-zero>
3. Request that students closely explore a few of the diseases represented in the online exhibition. Students should take notes not only on content, but also on the visuals (photographs, maps, graphs) that accompany the content.
4. Facilitate a discussion around students' reactions and notes.
5. Sample of discussion questions and student responses:
 - *What did you think about the exhibition?*
 - **Student:** The cultural connection to disease was interesting.
 - **Student:** The measuring stick that showed how many tablets you would need to take based on your height.
 - **Student:** I was interested in the iron lung.
 - *Were there things that you didn't like, or think could be done better?*
 - *What do you think about the photos, map, and graphs used in the exhibition?*
 - **Student:** People remember images better sometimes: photos can help illustrate what is "really" going on.
 - **Student:** The photos give context to numbers and statistics and show the impact on real people.
 - **Student:** I think the the more pictures, the better.
 - **Student:** The exhibition shows the sickness and the person.
 - **Instructor:** It can be difficult because it is about balance—showing the reality of what it is like to deal with these diseases, but not solely focusing on suffering. We already have a lot of images that focus on suffering, but just like here, other places have a

SESSION 5

Tropical Medicine and Postcolonial Theory

PROCEDURE
(CONTINUED)

1. Activity: *Countdown to Zero* Online Exhibition (continued)

balance between good things and bad things. When you have a small space to tell a story, you want people to leave with a balance.

- *Why do you think it is difficult to show a balanced representation of disease?*
6. Ask students if they have questions about the exhibition.

2. Lecture: Tropical Medicine (15 min)

This lecture will introduce students to the history of tropical medicine. It will emphasize that the origin of tropical medicine is rooted in colonial empires. This lecture will prepare students for learning about postcolonial theory.

1. Lectures on tropical medicine content.
 - **PowerPoint: Tropical Medicine**
2. The lecture on tropical medicine will cover these themes:
 - History of tropical medicine from the 1890s to the 1970s
 - Early Europeans and disease
 - Miasma theory
 - Germ theory
 - Discipline of tropical medicine
 - Tropical diseases vs. familiar diseases
 - Implications of tropical medicine
 - Changes in tropical medicine
3. Students ask questions about the content.

SESSION 5

Tropical Medicine and Postcolonial Theory

PROCEDURE

3. Think-Pair-Share: Tropical Medicine (15 min)

This activity will encourage students to discuss the tropical medicine content as well as make connections to the postcolonial theory content.

1. Have students think about the question, pair up with another student to discuss it, and share their responses with the rest of the class.
 - **Question:** What do you think of the term tropical medicine? Is it relevant and useful for the 21st century? Do you think another term would be more appropriate or inclusive? Why or why not?

SESSION 5

Tropical Medicine and Postcolonial Theory

PROCEDURE

4. Lecture & Videos: Postcolonial Theory (25 min)

This lecture will introduce students to postcolonial theory. It will build on the previous tropical medicine lecture.

1. Lecture on postcolonial theory content
 - **PowerPoint: Postcolonial Theory**
2. Lecture on postcolonial theory will cover these themes:
 - Overview of colonialism
 - Political justifications given for the colonization of Africa and other parts of the world
 - Overview of postcolonial theory
 - Colonial legacy and postcolonial struggles
3. **Cross-Cultural Connection: Urban Kibera and Rural Appalachia in Context**

Watch three short videos about Kibera, the largest slum in Africa, situated on the edge of Nairobi. The first video is entirely image-based (1 min 18 sec) and gives a visual orientation to daily life in Kibera. The second video (1 min 8 sec) is a short feature produced by the American Centers for Disease Control and Prevention (CDC) that features the work of Kenyan health workers and residents of Kibera. The third video (2 mins 55 sec) is about a mobile health care clinic in rural Appalachia, a mountainous region in West Virginia with a long history of mining and rural poverty.

 - **Video: Kibera, Kenya** (So Fly Productions) (1 min 18 sec)
https://www.youtube.com/watch?v=Q3h_4g2uWh4
 - **Video: CDC Global Disease Detectives: Answers from Kibera** (1 min 08 sec)
<https://www.youtube.com/watch?v=SXt64daRIQ8>
 - **Video: Life Support: Rural Health-care in America** (2 min 55 sec)
<https://www.youtube.com/watch?v=g872yS5OXDY>
4. Facilitate a discussion around the videos. Use the following question to generate discussion:
 - *Do you see any commonalities between the residents of Kibera and Appalachia? If so, what are they?*
 - Answers might include strong senses of community and dignity in the face of economically difficult circumstances and the special health risks that residents in each community face due to long-term economic disadvantage. While residents in each place understand that economic disparity is a result of inequality in wealth accumulation and distribution, they are not interested in handouts. There is a strong sense of pride in these communities (recall the woman in the mobile health clinic who created doilies for her doctor to show her gratitude).

SESSION 5

Tropical Medicine and Postcolonial Theory

PROCEDURE

4. Lecture & Videos: Postcolonial Theory (continued)

i Instructor Note:

- It is important to make the point that when we talk about diseases of poverty and the historical cycles that make communities vulnerable to neglect, we need to remember that all societies and countries have people with more wealth and people with less wealth. These disparities almost always have impacts on health care access, disease susceptibility, and health outcomes. Wider economic disparities lead to wider health disparities. Images of poverty in rural Appalachia might be somewhat surprising to students, who may not know that some people in the U.S. are dealing with chronic poverty. In the U.S., as in other countries, there are many socioeconomic classes.
- While much of the conversation in the class focuses on postcolonial countries and former colonizing nations and economic disparities on an international level, it is very important to remember that postcolonial countries, including those in Africa and South America, have classes of economic, social, and political elites, and that former colonial powers, including the U.S. and Europe, have people who live in chronic, generational poverty. It is too simple to blame “rich” countries for “poor” countries’ problems. Throughout this class, we will learn more details about historical patterns that generate resource and wealth disparity within nations and worldwide.
- Discuss the strategies that are being employed by the community and public health care workers in each of these projects. In both Kibera and Appalachia, the health workers know that lack of access and transportation networks means that the health care needs to come to the residents rather than be situated in a stationary building that people may not have the means to access. In Kibera, the strategy is door-to-door visits, while in Appalachia the mobile clinic drives from community to community. Be sure to highlight the contributions of the female Kenyan health-care workers in the CDC video. Giving members of a community an opportunity to discuss sensitive health topics is vital to treating those who might feel forgotten or abandoned by governmental agencies. Discuss why different strategies work better in urban, suburban, or rural settings.
- Optionally, if there is an extended interest in Kibera, a fourth video may be shown:
 - **Optional Video: Health-care in Kibera**
Centers for Disease Control (CDC) Health-care in Kibera (3:33)
<https://www.youtube.com/watch?v=a7Z-E9JUC0k>

SESSION 5

Tropical Medicine and Postcolonial Theory

PROCEDURE

5. Video: 60 Minutes: "Louis Farrakhan pwns Mike Wallace" (5 min)

This video will illustrate that the history of colonialism has made it seem like corruption in Africa is identifiable and controllable, but when we turn that lens to America, it seems more difficult to pinpoint. Louis Farrakhan is saying there is no blameless society, we are all in the same boat. We can engage Minister Farrakhan's response to Mike Wallace, which powerfully defends young postcolonial African nations by contextualizing the corruption and destruction wrought by much older former colonial powers, including the United States. He does not endorse other political perspectives that are rightfully identified as problematic by contemporary audiences, including anti-Semitism. This is, in a way, not dissimilar from what we ask students to do in other lessons, with respect to critical analysis of institutions such as the World Health Organization and the limitations of inclusion of local efforts within global public health models. Students will only watch the video. A homework assignment and class discussion will follow in the next session.

1. Have students watch the video:

Video: 60 minutes: "Louis Farrakhan pwns Mike Wallace"

<http://YouTube.com/watch?v=bvfEj7RobQQ>

i Instructor Note:

- It is important to let students know that it is not necessary to agree with everything Louis Farrakhan says in the video in order to seriously consider his argument. You can mention that Minister Farrakhan is known as a reformer of the Nation of Islam, the religious and cultural organization.
- The Nation of Islam is viewed by some as having an important impact on the civil rights movement, such as its involvement in the Million Man March of African-American men in Washington, D.C., in 1995, but it is viewed by others, including the Southern Poverty Law Center, as a black supremacist hate group.
- Consider sharing this context with students, explaining that viewing a video like this does not imply endorsement of the Nation of Islam and its controversial platforms, but that it is important to view political and religious views in a historical context, in which Islamic philosophy was embraced as a form of liberation by African-American communities who had experienced generations of slavery, subjugation, and segregation.

SESSION 5

Tropical Medicine and Postcolonial Theory

PROCEDURE

Wrap-up (5 min)

Video Reflection (4 min)

This Wrap-up will allow students to share general impressions of the video.

1. Instructor should provide a few minutes to ask students to share their initial reactions and impressions of the video.
2. Instructor may want to use these questions to initiate discussion:
 - *What is your first reaction to the video?*
 - *How does the video make you feel?*

Homework: Session 5 Writing Prompt (1 min)

1. Hand out Session 5 Writing Prompt
2. Have students write a one-paragraph response to these questions:
 - Are the sentiments expressed in the Farrakhan interview new to you?
 - Does what is said in the video resonate with you? If yes, in what way? If no, explain why not.
 - Is the history of the United States that Louis Farrakhan describes difficult to reconcile for you? Why or why not?
 - Did anything trouble you or feel confusing or problematic? Why or why not?

Name: _____

Date: _____

Session 5 Writing Prompt

Write a one-paragraph response to these questions:

- Are the sentiments expressed in the video new to you?
- Does what is said in the video resonate with you? If yes, in what way?
If no, explain why not.
- Is the history of the United States that Louis Farrakhan illuminates difficult to reconcile for you? Why or why not?
- Did anything trouble you or feel confusing or problematic?
Why or why not?

SESSION 6

Health Economics

Cycles of poverty, exacerbating health problems, and health care challenges

INTRODUCTION

This session introduces students to the concept of social epidemiology, or the social factors that influence health and disease. Students will explore how various socioeconomic factors playing out on individual, household, community, national, and international levels interact. Students will begin to explore how different socioeconomic, cultural, and historical backgrounds impact a person’s access to social determinants of health.

LEARNING OBJECTIVES

Students will:

- describe the underlying socioeconomic causes of disease,
- identify the interconnection and interaction of the social determinants of health factors,
- demonstrate an understanding of health disparities and the impact of inequality on social determinants of health,
- demonstrate an understanding of qualitative and quantitative approaches to epidemiology and different factors that are measurable in these contexts.

TIME FRAME

20 min	Warm-up: Homework Review Review Instagram; review homework.
25 min	1. Mind Map: “Healthy Life” Student create a mind map for the concept of a “healthy life”; Students swap and compare their mind-maps.
15 min	2. Lecture and Video: Social Determinants of Health Instructor lectures on the social determinants of health; Students watch related video.
40 min	3. Teamwork Activity: Health Inequality Students will investigate and analyze issues related to health economics, particularly the broad and acute impacts of economic disparity on health outcomes for individuals, communities and countries over time.

continued on next page

SESSION 6 Health Economics

TIME FRAME

(CONTINUED)

- | | |
|--------|---|
| 15 min | 5. Video: "Paul Farmer: I Believe in Health Care as a Human Right"
Students will watch Paul Farmer videos followed by a discussion. |
| 5 min | Wrap-up: Ball Toss
One thing about today. |

MATERIALS

- Blank paper** (one per student)
- Worksheet: Multilevel Factor Analysis** (one per every two students)
- Markers** (different colors)
- Magazine: Global Health**
- Video: "What Is Health Equity?"**
- Video: "A doctor battles health inequality"**
- Video: "Paul Farmer: I Believe in Health Care as a Human Right"**
- Video: "10 Questions for Paul Farmer"**
- Ball** (an inflatable or bouncy rubber ball works best)

AUDIO-VISUAL NEEDS

- Speakers**
- Projector**
- Computer**

VOCABULARY

- social epidemiology
- social determinants of health
- stigma
- stereotype
- media content and tone

PREPARATION

- Review PowerPoint content before class.
- Review the videos before class:
 - **Video: What Is Health Equity? (3:24)**
Health Equity Institute. "What Is Health Equity?" YouTube, 2 December 2014.
<https://www.youtube.com/watch?v=ZPVwgnp3dAc>
 - **Video: A doctor battles health inequality (4:47)**
Harvard University. "A doctor battles health inequality" YouTube, 23 August 2016.
<https://www.youtube.com/watch?v=zLfEBB7QyAQ>

SESSION 6 Health Economics

PREPARATION

(CONTINUED)

- **Video: “Paul Farmer: I Believe in Health Care as a Human Right” (3:26)**
Partners in Health. “Paul Farmer: I Believe in Health Care as a Human Right.” YouTube, 21 May 2009.
<http://YouTube.com/watch?v=xJpZnUjtorl>
- **Video: 10 Questions for Paul Farmer (3:58)**
Time. “10 Questions for Paul Farmer.” YouTube, 2 May 2013.
<http://YouTube.com/watch?v=ZfbM8hjXwgo>
- Print all articles, handouts, and worksheets in the Materials section.
- **Magazine: Global Health, Issue 01**
Global Health. Winter 2009. Web.
<https://issuu.com/globalhealthcouncil/docs/gh-magazine-issue--1/?e=3822300/5761654>
- The following resources provide background on the material presented in this session.
 - **Article: “Anthropology speaks to medicine”**
Ramin, Brodice. “Anthropology speaks to medicine: The case of HIV/AIDS in Africa.” *McGill Journal of Medicine* (2007): 127-132.
<http://ncbi.nlm.nih.gov/pmc/articles/PMC2323482/>
 - **Article: “Why anthropologists join an Ebola outbreak team”**
Poom, Linda “Why anthropologists join an ebola outbreak team.” NPR. 7 April 2014. Web.
<http://npr.org/sections/health-shots/2014/04/02/298369305/why-anthropologists-join-an-ebola-outbreak-team>
 - **Article: “Paul Farmer”**
“Paul Farmer.” Academy of Achievement: A Museum of Living History. 4 Dec. 2013. Web.
<http://achievement.org/autodoc/page/far1bio-1>
 - **Article: “The Quest of Dr. Paul Farmer”**
“The Quest of Dr. Paul Farmer.” NPR All Things Considered. 20 Oct. 2003. Web.
<http://npr.org/templates/story/story.php?storyId=1472188>
 - **Article: Medical Anthropologist Dr. Paul Farmer**
“Medical Anthropologist Dr. Paul Farmer.” NPR Fresh Air. 25 Sept. 2003. Web.
<http://npr.org/templates/story/story.php?storyId=1446061>

SESSION 6

Health Economics

PROCEDURE

Warm-up: Homework and Instagram Review (20 min)**Review Instagram** (5 min)

1. Use projector to display Instagram account.
2. Review Instagram posts.
3. Connect Instagram posts to class content and/or vocabulary.
4. Ask students to explain their thinking behind a post, or comment on another student's post.

Review Homework: Louis Farrakhan Video (15 min)

1. Have students discuss their responses to the Farrakhan interview. Use the homework prompts to guide the discussion:
 - *Are the sentiments expressed by Farrakhan in the video new to you?*
 - *Does what is said in the video resonate with you? If yes, in what way? If no, explain why.*
 - *Is the history of the United States that Farrakhan illuminates difficult to reconcile for you? Why or why not?*
2. Use these questions to further the discussion:
 - *How is Farrakhan's reply a response to the history of colonialism?*
 - *What stereotypes of Africa are being perpetuated by the interviewer?*
 - *How do you think stereotypes keep certain groups powerful and others powerless?*

i Instructor Note:

- After the discussion, the instructor should tie students' comments back to postcolonial theory, colonialism, stereotypes of Africa, and the "How to Write about Africa" article.

SESSION 6

Health Economics

PROCEDURE

1. Activity: Mind-Map for a “Healthy Life” (25 min)

In this activity, students will reflect on the factors that they see contributing to healthy living, and begin to identify variations within these factors.

1. Distribute a blank sheet of paper to each student and describe the activity.
2. Have students write down “healthy life” in the middle of the paper, and create a mind-map of all the factors that lead to a healthy life.
3. As students draw their mind-map, ask them to draw connections between different factors. For example, if the two factors are “eating right” and “exercise,” the students could draw a line connecting the two. However, this will depend on what the students write down. There may be factors that don’t connect.
4. Facilitate a discussion around the mind-map activity and students’ responses.
5. On the board, create a mind-map from students’ responses.
6. Ask students to identify the factors they saw as connected, and why.
7. Have students swap maps and compare them to the maps they created.
8. Have students consider how their conception of a “healthy life” is specific to culture, class, and context. Have them think of examples of health standards that are likely specific to their circumstances but not necessarily in all cultural contexts. (e.g. the food pyramid.)
9. Ask students to share any factors and connections that are different from the ones they came up with.
10. Use the following question to generate discussion:
 - *What new connections and factors are you noticing? How do they differ from the factors and connections you have recognized in your life?*

SESSION 6

Health Economics

PROCEDURE

2. Lecture and Video: Social Determinants of Health (15 min)

This lecture will build on the previous activity and discussion. Students already understand how different factors connect and contribute to a healthy life. This lecture will provide students with a clearer definition of the social determinants of health that will be applied to the following activity.

1. Lecture on social determinants of health:
 - **PowerPoint: Social Determinants of Health**
2. The lecture on social determinants of health will cover these themes:
 - Overview of the social determinants of health
 - Case study: Ebola epidemic of 2014
3. **Cross-cultural Connection: Social Determinants of health in South Africa**

Use the two-minute video from the Department of Public Health in South Africa about Social Determinants of health to help frame the activity. Acknowledge similarities and differences in describing the standards of health and challenges based on the local context of where the class is being taught.

 - **Video: Social determinants of health in South Africa**
Social determinants of health in South Africa (1:51)
<https://www.youtube.com/watch?v=Ypi5fAd6Ho8>
4. Ask students how they think their peers in other countries might think differently about the material in the class. Give students a moment to reflect to themselves about how their lives, experiences, and ideas about health and wellness are shaped by their family, their peers, their countries, and their communities.
5. Students ask questions about the content.

SESSION 6

Health Economics

PROCEDURE

3. Teamwork Activity: Health Inequality (40 min)**Part I: Analysing Global Health Magazine**

This activity will give students the opportunity to investigate and analyze issues related to health economics, particularly the broad and acute impacts of economic disparity on health outcomes for individuals, communities, and countries over time.

1. Have the class break into four groups. Each group should either have internet access, or print pages from the e-file of the “Food Crisis” of “Global Health” magazine linked below:
 - **Global Health Magazine, Issue 01**
<https://issuu.com/globalhealthcouncil/docs/gh-magazine-issue-1/1?e=3822300/5761654>
2. Introduce the magazine “Global Health” from the Global Health Council to the class and bring up the 2009 issue “Food Crisis” on the class projector/screen as well as on the team screens or printed files.
3. As a class, start by looking at the three graphs on the “Screenshot” page (sixth page of file).
4. Have the teams look at the first graphic: “**How People Pay for Health Services**” (page 6) and give them a chance to absorb the radial graph. Explain how to read the data and use the key.

i Instructor Note:

- Some of the shades of green are very similar in the key and graph and this might be a bit difficult to discern for some students, especially those who are red-green colorblind. Point out that the order of the spending type “tree rings” are in the same order in each country slice. Point out that the length of each slice is different based on relative disparity of cost of services.
5. Ask students what stands out to them in this chart and let them share out to the class.
 6. After students have shared, point out several of the outlier/notable distributions.

i Instructor Note:

- If you are teaching this class in a country that has a widespread health insurance system, either public or private, your students might notice that very few countries represented in this chart (Czech Republic, Vietnam, South Africa, and Brazil) have health insurance as a significant contributor to defraying ‘out-of-pocket’ health care costs. Ask them what they think about health insurance and why they think it is or isn’t important.
- They might draw on recent news headlines or things they have heard their families discuss, so it might be useful to review current issues and news around health insurance in your local area before class.

SESSION 6

Health Economics

PROCEDURE

(CONTINUED)

3. Teamwork Activity: Health Inequality (continued)

7. Point out that the large tree ring in the Burkina Faso slice that represents “sold items” does not represent people selling things to make their incomes (which is covered by “current income”), but people selling their personal possessions to obtain enough money to cover a medical cost. Let them reflect on how this makes them feel and why they think this “tree ring” is so large for Burkina Faso.

i Instructor Note:

- To help guide student observations: Burkina Faso’s current health-care system is a mixture of successes and challenges. There are three major medical centers in the urban areas of the country that are regionally noted for their research on vector-borne diseases like malaria, but there is a severe lack of doctors (less than one doctor for every ten thousand people), particularly in rural regions. The government has invested in childhood immunizations and HIV/AIDS education, which has resulted in a reduction to approximately 1% of the population living with HIV/AIDS—a lower prevalence than in many other West African countries.
8. Finally, point out the “tree rings” for “borrow from family” and “borrow from others” and reflect on how communities and families find ways of coping with medical costs, particularly emergencies, by relying on the resilience of strong social bonds. Families and communities in places with resource scarcity and limited health-care infrastructure often have to find ways to provide for one another when they know that they will not be able to rely on the government to be able to provide for their health needs. Ask students how health-care outcomes may be different based on the various distributions and sizes of the rings for different countries in the chart.

i Instructor Note:

- The responsibilities of governments will be discussed in more depth in a future lesson.
9. As a class, while still sitting with their groups, have students look at the top graph, on page 7: “Major Refugee Hosting Countries End-2007”
 10. After reviewing how Syria is represented as a host country in the 2007 graph, explain the current Syrian refugee crisis. Start by asking, “What are some of the economic and public health challenges that you think might arise in countries hosting significant refugee populations?”

i Instructor Note:

- Students might talk about: communicable diseases in refugee camps with poor sanitation and closely cramped conditions; increases in childhood diseases due to lack of availability of vaccines; malnutrition and water access issues; lack of provision of care for chronic diseases such as diabetes; mental health issues including PTSD; increased reproductive health issues stemming from lack of maternal health care; STI education and prevention and a potential increase in sexual assault and violence.

SESSION 6

Health Economics

PROCEDURE
(CONTINUED)**3. Teamwork Activity: Health Inequality** (continued)

- Students might point out the economic strain on refugee-hosting countries and the question of “Who is responsible” for seeing to the health and safety of refugee populations—the country from which people are fleeing, host countries, international aid, or political organizations or private donors? There is no one answer to this question and every refugee situation is unique, and both conditions and financial support can vary significantly over the course of displacement due to political, cultural, economic, social, and even ecological factors.
 - It is important and particularly poignant to point out that the second largest population represented on the graph, which was made in 2009, is “Syrian Arab Republic,” which, as is pointed out on the graph footnote, includes persons from Afghanistan living in ‘refugee-like situations.’ Syria, the country that was host to the second largest refugee population, is now the epicenter of what is arguably the most pressing refugee crisis in the world in 2016, with upwards of 11 million people fleeing the country as of September 2016 and more than 460,000 casualties since the conflict began.
 - The rhetoric around refugee crises worldwide has become increasingly contentious; sentiment in conservative European and American political parties is to resist their governments accepting any (more) Syrian refugees. The reasons for this resistance are, broadly speaking, usually explained as either: 1) Islamophobic concerns about risk of violence or terrorism in refugee communities (although no terrorism has been linked to Syrian refugees in the United States or Europe), or 2) Concerns about excessive draws on national resources, particularly financial expenditures to support refugees as they settle into communities. Your students will likely have heard something about these issues and perspectives broadly either in their families or in their schools but they might not be very clear on the specifics of what is an ongoing severe and volatile humanitarian crisis.
 - Review the latest news of the situation prior to this class session so that you are prepared to answer student questions that may arise.
11. As a class, while still sitting with their groups, have students look at the bottom graph, on page 7, “2.6 Billion: People who did not use improved sanitation facilities.” Let students look up photos of the types of improved sanitation facilities mentioned in the graph if they are not familiar with them.

i Instructor Note:

- You may need to explain that the acronym “CEE/CIS” stands for “Central and Eastern Europe and Commonwealth of Independent States.”
- Students might be confused about the connotations of “did not use” in the title of the graph. This is not to imply that this number represents people who have access to improved sanitation (public sewers, septic systems, pour-flush latrines, simple pit latrines, and ventilated improved pit latrines) but chose not to use them, but rather does refer to a matter of access

SESSION 6

Health Economics

PROCEDURE
(CONTINUED)**3. Teamwork Activity: Health Inequality** (continued)

more so than of use. There are many reasons that people with improved sanitation facilities in their community might continue to practice open defecation, including to prevent latrines from overflowing, habit, local custom, distance from home, or inability to repair or maintain facilities. As of 2014, 2.4 million people worldwide still lack access to improved sanitation facilities. More than 940 million people practice “open defecation.” The World Health Organization has set a goal of eliminating open defecation in poor rural regions worldwide by 2030.

12. Ask students to create a list of the health issues associated with lack of sanitary means of elimination. Some of the most prevalent diseases associated with contact with human waste include diarrhea and intestinal worm infections but also typhoid, cholera, hepatitis, polio, and trachoma.
13. Ask students to consider gender-related issues associated with lack of access to improved sanitation facilities.

i Instructor Note:

- Students will likely focus on hygiene and menstruation.
 - Highlight other issues that relate to gender and sanitation access: lack of safe, private toilets can make women and girls vulnerable to violence and can interrupt girls’ education. For example, there are also often gendered divisions of labor in rural subsistence agricultural communities. Crop fields or domestic animal pastures are often at a distance from toilets that might exist closer to villages. Open defecation near agriculture can result in feces-borne diseases either within families or communities, or hundreds or thousands of miles away when produce is exported. In 2015, there was an outbreak in the United States of cyclosporiasis, a parasitic disease that causes diarrhea, that was traced to cilantro that was grown in Mexico in fields that had been contaminated with human feces.
14. Recap the discussions you’ve had about several intersecting and overlapping issues and challenges in global public health and economics: how people cope with the costs of health-care, the special needs of refugee populations, and sanitation access.
 15. As a class, you will watch two short videos that underscore the issues raised in class today.
 16. First, watch “What is Health Equity” by the Health Equity Institute.
This three-minute motion graphic video explains how social, economic, and environmental conditions can create health inequities and how these inequities can affect health disparities.
 - **Video: What is Health Equity** (3 min 24 sec)
<https://www.youtube.com/watch?v=ZPVwqnp3dAc>
 17. Then watch “A doctor battles health inequality.” In this video, Ebonie Woolcock, a Harvard Medical School instructor in obstetrics, gynecology, and reproductive biology, works today not

SESSION 6

Health Economics

PROCEDURE
(CONTINUED)**3. Teamwork Activity: Health Inequality** (continued)

far from where she grew up in Dorchester, Massachusetts.

- **Video: A doctor battles health inequality** (3 min 20 sec)
<https://www.youtube.com/watch?v=zLfEBB7QyAQ>

i Instructor Note:

- You might want to write on a board, if available, a few key phrases from this video to orient the conversation: “Health is more than just disease or illness. Health is how we treat others.” “Health inequities are related to social, economic, and environmental conditions.” “Health inequities are avoidable, unfair, and unjust.”
18. Have students reflect on what Doctor Woolcock says about generational poverty and equity versus equality.
 19. Ask students to discuss in pairs, some of the similarities and differences in the African, Asian, South American, CEE & CIS, Middle Eastern, and Pacific issues around health economics and access raised in the three paragraphs previously discussed from “Global Health Magazine” and then have them compare and contrast the issue raised about Dorchester by Doctor Woolcock in the video. Pay particular attention to the way social and political factors shape what care is available and how it is financed.
 20. Have pairs share out their findings.
 21. Emphasize that similar cycles of poverty exist in communities worldwide with serious impacts on health care availability and health outcomes, but that it is also important to pay attention to the specific histories and contemporary challenges of communities and countries.

SESSION 6

Health Economics

PROCEDURE

3. Teamwork Activity: Health Inequality (continued)**Part II: Resources, Funding & Innovation**

This activity will give students the opportunity to investigate and analyze issues related to health economics, particularly the broad and acute impacts of economic disparity on health outcomes for individuals, communities, and countries over time.

1. Have the class break into four groups. Each group should have either access to the internet, or printed pages from the e-file of the “Food Crisis” of “Global Health” magazine.
 - **Global Health Magazine, Issue 01**
<https://issuu.com/globalhealthcouncil/docs/gh-magazine-issue-1/1?e=3822300/5761654>
2. Re-introduce the magazine “Global Health” from the Global Health Council to the class and bring up the issue “Food Crisis” from 2009 to the class projector/screen as well as on the team screens or printed files
3. Start by reading the brief text on page 13, “**Can we feed the hungry?**” together as a class.
4. Assign to each group one of the following articles from within the magazine to read and discuss:
 - “**What does the financial global crisis mean for global health**” (pages 9-11)
 - “**Is the US Spending Money Wisely**” (pages 14-17)
 - “**Are there sustainable solutions to the nutritional crisis?**” (pages 18-20)
 - “**Big Pharma Bets on Emerging Economies**” (pages 22-24)
5. Give teams about 15 minutes to read, discuss, and formulate a summary of the article to share with the class. Let them know that they will have about two minutes to present an overview of their article to their peers.

i Instructor Note:

- As students present, make sure key points and definitions from their explanations are understood by the class. Writing notes on a board might help, particularly when explaining acronyms.
- Below are the key points for each article. If the students don’t bring them up on their own then the instructor should review.
- **“Financial Global Crisis” Article:**
 - Briefly explain the global financial crisis of 2008 if they are unfamiliar. Details are contained in the article.
 - Make sure to review the types of financial support discussed in the article, including government expenditures, non-governmental organization support, philanthropy, and public-private partnerships.

SESSION 6

Health Economics

PROCEDURE

3. Teamwork Activity: Health Inequality (continued)

- Explain that economic recessions impact both private and public investment in even something as essential as ensuring people are able to access health care.
- Review “R&D” (research and development) and how researching and developing innovative (and perhaps even cost-saving) health-care treatments is reduced in times of economic crisis or recession.
- Explain that countries with ongoing economic or political instability are at particular risk from acute medical crises during regional or global economic fluctuations.
- Highlight the impact of financial instability on vulnerable families who might have to cope with severe inflation and challenges to food security.
- Ensure that the students presenting mention the issues raised in the article about how economic crisis can cause difficult choices regarding what forms of health care to prioritize over others, such as the example of HIV/AIDS testing versus maternal health and cardiovascular illnesses due to often fraught calculations around risk, impact, and cost-effectiveness.
- Ask students if they agree or disagree with the conclusions of the article regarding how to reduce risk of exacerbating health issues in vulnerable populations in times of economic crisis. Do they think that public-private partnerships are more or less secure than all-public or all-private strategies of health-care and research financing?
- **“Is the U.S. Spending Money Wisely?” Article**
 - This article focuses on a hot topic in global public health and international aid and development fields: the benefits and problems of U.S. aiding developing countries through direct food dispersal (direct commodity distribution) versus long-term investment in facilitating self-sustainability.
 - Explain that every situation is different with respect to what will best support a population in need, but it is important to frame the conversation in the context of how climate change might contribute to and exacerbate food insecurity in decades to come due to: desertification, changing severe weather patterns leading to increased flooding, the loss of arable land from sea level rise, and wind damage and changing bloom and harvest seasons.
 - Make sure that students acknowledge that U.S. food aid programs started more than 50 years ago to ensure that surplus crops did not go to waste. An ongoing challenge with this approach to dealing with acute food crises is that it takes approximately four to six months to collect, pack, process, ship, and deliver large-scale grain donations to regions in need. In this amount of time, harvests may rebound, or cash-strapped nations may be forced to make unfavorable deals in order to buy more local foodstuffs at high cost.

SESSION 6

Health Economics

PROCEDURE

3. Teamwork Activity: Health Inequality (continued)

- Explain that countries are increasingly asking for aid in the form of cash donations in order to more immediately secure local food supplies from regional neighbors that can be accessed more quickly. The United States now earmarks approximately 2.5 billion USD for emergency-food-related aid each year.
- Emphasize the health impacts of malnutrition. Malnutrition in HIV positive individuals can hasten the onset of AIDS-related complications and make the disease far more difficult to manage with medication, if available. There is ongoing research as to whether cash or crop is more effective for distributing emergency aid. This is a condition that government funding, in this case, from the United States federal government, is playing a strong role in steering the direction of health and aid trends in global public health.
- Make sure students understand the organization acronyms that come up in the article, particularly United States Agency for International Development (USAID), which has analog agencies in countries around the world.
- **“Are there sustainable solutions to the nutritional crisis?” Article**
 - This article features several examples of successful public-private partnerships that have facilitated treating acute childhood malnutrition through the creation and distribution of therapeutic foods, particularly Plumpy’nut, a nutrient-dense paste, and Sprinkles, a micronutrient powder that fortifies immune systems in children impacted by chronic or acute malnutrition.
 - The article explains that prevention is the overall aim of nutrition aid, with key interventions occurring between conception and age two. Today, 178 million children experience nutritional deficiency. Expenditures in nutritional health globally lag behind other major health funding areas, with 300 million dollars going to nutrition support in 2008, versus six billion dollars spent on HIV/AIDS treatment.
 - The article covers the creation of GAIN (Global Alliance for Improved Nutrition), a public-private partnership launched at the United Nations in 2002 that works on tailoring strategies for combating malnutrition to the needs of partner countries, and lobbies for micronutrient fortification in food production, such as iodized salt.
 - The article discusses how these types of partnerships can help innovate creative distribution strategies that governments would not be able to implement on their own.
 - Ask students how they feel about these sorts of partnerships and if there are particular challenges or responsibilities that come with governments collaborating with private companies on health-care solutions.
 - Ask students if they can think of other health challenges that might be effectively addressed through this type of partnership.

SESSION 6 Health Economics

PROCEDURE

3. Teamwork Activity: Health Inequality (continued)

- “Big Pharma Bets on Emerging Economies” Article
 - This article focuses on new strategies and approaches taken by large multinational drug companies to make their medications available and affordable in developing countries, many of which are impacted by a variety of ongoing health issues, including tropical diseases.
 - The article highlights a shift from focusing on philanthropic donations of medications to treat neglected diseases to strategic initiatives that make medications for chronic issues, including diabetes and HIV/AIDS, both more affordable and readily available for local populations. One pricing practice, called “Ramsey pricing,” ensures that in lower income countries, medication prices will only cover the cost of production of the medication, while the high prices charged in higher income countries cover the other costs associated with pharmaceutical research and development. A secondary market for drugs emerges, where the medications are purchased from low income countries and re-imported into higher income countries to be sold at a profit.
 - Explain that some countries, particularly China, are trying to incentivize low-cost production and research to lower drug costs for their populations. There are some drugs that are not subject to these variable price model systems, such as cancer medications, because they are so highly lucrative for the companies that they fiercely defend their patents.
 - Explain that the World Health Organization has stated that in many regions of the world, particularly Latin America and Asia, changing lifestyles are creating many of the same chronic health problems that are seen in Europe and the U.S., including heart disease, and that chronic condition medications are becoming more important than infectious disease medications in these regions.
 - Explain that some countries, such as Thailand and Brazil, have lost patience with pharmaceutical companies slow to adjust their price models and have started to refuse patent protection efforts.
 - Highlight that under pressure to meet global demands for medications in widely variable economic circumstances, many companies are experimenting with new price models, including “internal tiered pricing” where the prices charged for medications vary widely within a country based on individual income.
 - Ask students what they think the ethical obligations for pharmaceutical companies and governments are to patients/citizens and what type of pricing/access structures seem fair in upholding these ethical obligations.

SESSION 6

Health Economics

PROCEDURE

4. Video: Introduction to Paul Farmer (15 min)

These videos and the discussion will introduce Paul Farmer, the physician and medical anthropologist. The video content will contribute to students' understanding of Paul Farmer's "liberation theology" which emphasizes that one should recognize those who are suffering as well as the mechanisms that produce and promote that suffering. Students will also be introduced to the concept of "preferential treatment for the poor." The needs of the most vulnerable groups are first identified and health care needs are accessed from that vantage point.

1. Introduce the Paul Farmer videos by providing background information on him as a medical anthropologist and practicing physician.
2. Have students watch the videos:
 - **Video: "Paul Farmer: I Believe in Health Care as a Human Right"** (3:26)
Partners in Health. "Paul Farmer: I Believe in Health Care as a Human Right." YouTube, 21 May 2009.
<http://YouTube.com/watch?v=xJpZnUjtorl>
 - **Video: "10 Questions for Paul Farmer"** (3:58)
Time. "10 Questions for Paul Farmer." YouTube, 2 May. 2013.
<http://YouTube.com/watch?v=ZfbM8hjXwgo>
3. Facilitate a discussion focusing on the videos and students' responses.
4. Use these questions to generate discussion:
 - *Dr. Farmer's idea of "accompaniment" envisions patient care as a long-term project rather than a one-time treatment of a person or community. How is this idea applicable to our current models of patient care in the United States? In the world?*
 - *Can you name one public health project where accompaniment would make a difference in addressing the social determinants of health involved in the public health issue?*
 - *How does the humanitarian work that Paul Farmer is engaged in meet or fail to meet this goal?*

SESSION 6 Health Economics

PROCEDURE

Wrap-up (5 min)**Ball Toss: One Thing About Today** (5 min)

In this activity, students will begin to articulate the main themes of the course or the things the course has got them thinking about.

1. Tell students they will toss a ball to one another. When they catch the ball, they will say one thing that the class thus far has got them thinking about.
2. Once a student has spoken, he or she cannot be thrown the ball again.

i Instructor Notes:

- If possible, students can sit on top of their desks to throw the ball around. This way they can sit down after they've spoken.

Additional Resources: Medical Anthropological Readings

- You may recommend these books to students who are interested in learning more about Paul Farmer.
 - **Book: Infections and Inequalities**
Farmer, Paul. *Infections and Inequalities: The Modern Plagues*. Oakland: University of California Press, 2001.
 - **Book: Mountains Beyond Mountains**
Kidder, Tracy. *Mountains Beyond Mountains, The Quest of Dr. Paul Farmer, a Man Who Would Cure the World*. New York: Random House Reader's Circle, 2009.

SESSION 7

Human Rights and Health Care Access

Is human health a human right?

INTRODUCTION

This session introduces human rights as rights to which all humans are entitled. Students will become familiar with the United Nations’ Universal Declaration of Human Rights. As students identify what constitutes a human right, they will closely evaluate the idea of human health as a human right.

LEARNING OBJECTIVES

Students will:

- examine historical definitions of what is considered a human right by looking at examples from the United Nation’s Universal Declaration of Human Rights,
- differentiate between human right and socially endowed privilege,
- think critically about the limitations of human rights in local and international contexts.

TIME FRAME

5 min	Warm-up: Instagram Review Review Instagram.
30 min	1. Activity: Create Your Own Museum Exhibit Students will write a paragraph about something they think everyone should have access to; students will create a drawing illustrating their idea and display it along with their writing.
50 min	2. Activity: Introduction to Human Rights Students will differentiate between a human right and a privilege, followed by a class discussion.
30 min	3. Discussion: “The Story of Human Rights” Student will watch a video and read a handout about human rights, followed by a class discussion
5 min	Wrap-up Homework.

SESSION 7 **Human Rights and Health Care Access**

MATERIALS

- Index cards
- Tape
- Blank paper
- Markers
- Video: “The Story of Human Rights”
- Video: “Forced to Clean Human Waste in India”
- Handout: “Universal Declaration of Human Rights”
(one per student)
- Handout: World Health Organization (WHO) Leadership Priorities
(one per student)

**AUDIO-VISUAL
NEEDS**

- Speakers
- Projector
- Computer

VOCABULARY

- human rights
- Universal Declaration of Human Rights
- privilege
- United Nations

PREPARATION

- Introduction to Human Rights Activity: Prepare index cards by writing one of the examples on each card. Students will play this game in groups of four to five; the instructor will need to prepare enough cards for each group.
- If there is not enough time, you can hand out nine blank index cards to students, and have them write down examples:

Examples for Human Rights Activity:

- Leisure time
- Clean water
- Affordable housing
- Access to the internet
- Healthy food
- Ability to get an education
- Ability to get married
- Ability to practice your religion
- Ability to travel where you want

SESSION 7

Human Rights and Health Care Access

PREPARATION

(CONTINUED)

- Review the handouts.
 - **Image: Universal Declaration of Human Rights**
“Universal Declaration of Human Rights.” *School of Equality*. 2013. Web.
<http://schoolsofequality.com/the-universal-declaration-of-human-rights/>
- Watch the following videos:
 - **Video: Story of Human Rights** (9:51 min)
Ultralized. “Story of Human Rights.” YouTube, 26 Sept. 2009.
<http://YouTube.com/watch?v=oh3BbLk5UIQ>
 - **Video: Forced to Clean Human Waste in India**
Forced to Clean Human Waste in India (4:43 min)
https://www.youtube.com/watch?v=y3XfjbwqC_g
- Print out all handouts, worksheets, and articles in the Materials section.
- The following resources will provide background on the material presented in this session.
 - **Document: The Universal Declaration of Human Rights**
“The Universal Declaration of Human Rights.” *United Nations*. Web.
<http://un.org/en/universal-declaration-human-rights/>

SESSION 7

Human Rights and Health Care Access

PROCEDURE

Warm-up (35 min)

Review Instagram (5 min)

1. Use projector to display Instagram account.
2. Review Instagram posts.
3. Connect Instagram posts to class content and/or vocabulary.
4. Ask students to explain their thinking behind a post or comment on another student’s post.

Review Create Your Own Museum Exhibit (30 min)

This activity is an introduction to the concept of human rights. The activity and discussion will encourage students to start thinking about this concept in relation to themselves.

1. Call on students to identify rights they feel they have access to, and those they think all people should have access to. Then ask each student to choose one right and take five minutes to write a paragraph detailing why they think everyone should have access to it. Ask students to consider which rights are not accessible to all people, and assess why.
2. You may want to provide a few examples to help students focus their writing:
 - clean water
 - sanitary disposal of human waste
 - healthy food
3. Hand out markers and blank paper and have each student illustrate the main idea of his or her writing. (5 min)
4. Have students tape their illustrations on the wall along with their writing.
5. Allow students time to view the displays.
6. Use the following questions to guide the discussion:
 - *What ideas came to mind when you were first asked to think of a right you feel you have that others cannot easily access?*
 - *Why do you think everyone should have access to that right?*
 - *Which of the proposals impressed you? Why?*
 - *As you viewed the displays, did you notice similarities in the topics your class chose? Why do you think that was? For example, if half the class writes about clean water, ask why they think clean water is of greater focus than access to medication for river blindness?*

SESSION 7

Human Rights and Health Care Access

PROCEDURE

2. Activity: Introduction to Human Rights (50 min)

This activity will help students begin to understand what constitutes a human right.

1. Write “Human Rights” and “Privileges” on the board. Ask the students to define these two terms and write the definitions on the board.
2. Have students form groups of between three and five students. Hand out nine index cards with examples on them to each group. (See Preparation.) Have students divide the list into human rights and privileges.
3. Have each group present their findings. Answer any questions they may have.
4. Use the following questions to generate discussion:
 - Which ones did you group as rights and which ones did you group as privileges? Why?
 - Were there any you were confused about?
 - Did members of your group disagree about where any belonged?
 - Were there any that seemed completely obvious? Are there social contexts that you can imagine where they would not be so obvious?
5. **Cross-cultural connection:** Acknowledge and debate tensions between a “universal” human rights ideology and local/cultural norms that are in conflict with identified human rights. Watch the video on manual scavenging in India. Review the differences in the health risks encountered by men and women with this division of labor, and make the connection between this and the death rates of women in the West Africa 2014 Ebola crisis discussed in a previous class. Ask students what this type of labor brings to mind in a human rights context? Keep in mind that saying “people should stop manual scavenging” is not an answer that reflects realistic outcomes. Think about this not from the perspective of intervention, but from the perspective of governmental and non-governmental collaboration to help protect the rights of these workers.
 - **Video: Forced to Clean Human Waste in India** (4:43)
https://www.youtube.com/watch?v=y3XfjwqC_g

i Instructor Notes:

- Encourage the students to share their ideas with one another.
- The “human rights” and “privileges” definitions are not about getting students to come up with the correct definition; instead you should facilitate a conversation around students’ understanding of the definitions. These will be the definitions that students will refer to throughout the session, especially if they feel stuck. At the end of the session, you can come back to these definitions and ask students to reflect on them and make corrections, deletions, or additions.
- Explain that the term *privilege* is meant to refer to access and power that some individuals have as the basis of how they are viewed by society and that these privileges can be variable based on varying social contexts.

SESSION 7

Human Rights and Health Care Access

PROCEDURE

3. Discussion: The Story of Human Rights (30 min)

This activity will provide specific examples of concepts that have been enshrined as human rights under the Universal Declaration of Human Rights and will provide students with a history of human rights. Students should critically evaluate differences between formalized organizations of human rights versus the more informed framing used in discussion in class.

1. Hand out the Universal Declaration of Human Rights and play the “Story of Human Rights” video:
 - **Illustration: Universal Declaration of Human Rights**
Reddy, Gulika. “Universal Declaration of Human Rights.” School of Equality. 2013. Web. <http://schoolsofequality.com/the-universal-declaration-of-human-rights/>
 - **Video: “The Story of Human Rights”** (9:51 min).
“The Story of Human Rights.” YouTube, 26 Sept. 2009. <http://YouTube.com/watch?v=oh3BbLk5UIQ>
2. Clarify any questions students have about the video or about the Universal Declaration of Human Rights.
3. Use the following questions to generate discussion:
 - *Which human rights were mentioned that you hadn’t considered before?*
 - *Are there human rights that should be included in the document and video that were not? Which ones?*
 - *There is not a clause on the right to have medical services made available during a natural or man-made crisis. Why do you think this was not intentionally included?*

SESSION 7

Human Rights and Health Care Access

PROCEDURE

Wrap-up (5 min)**Homework: WHO Leadership Priorities** (5 min)

1. Distribute the WHO Leadership Priorities Handout to each student.
 - **Handout: Leadership Priorities**
“Leadership Priorities.” World Health Organization. Web.
http://who.int/about/resources_planning/WHO_GPW12_leadership_priorities.pdf
2. Instruct students to read the document and write comments.
3. You may want to pose questions to focus the students’ reading and comments:
 - *What is the role of the World Health Organization?*
 - *What are the six priorities of the WHO?*
 - *Can you think of an area of health or social well-being that should be on the diagram but isn’t?*
 - *How can these priorities meaningfully be put into practice?*

📌 Instructor Notes:

- This document will be used for an activity in Session 8, so this homework assignment will serve as an introduction to the activity.

📖 Additional Resources

- You may want to share the United Nations’ Universal Declaration of Human Rights documents with students who want more information on human rights.
 - **Document: The Universal Declaration of Human Rights**
“The Universal Declaration of Human Rights.” *United Nations*. Web.
<http://un.org/en/universal-declaration-human-rights/>

SESSION 8

Global Public Health

What are the implications of defining public health as a global project?

INTRODUCTION

This session introduces students to the concept of public health in a global context. By researching broad trends in global public health organizations and campaigns and focusing on the leadership priorities of the World Health Organization, students will gain an understanding of public health purposes and functions. Students will create their own non-governmental organization mission statement, combining global and local perspectives.

LEARNING OBJECTIVES

Students will:

- describe the function and professional standards of global health organizations,
- demonstrate an understanding of the efforts of public health organizations to prevent disease, promote health, and prolong life among the population,
- demonstrate an understanding of the functions of public health efforts to identify health problems, formulate policies, and ensure access to adequate health care,
- write a mission statement for a non-governmental organization (NGO).

TIME FRAME

5 min	Warm-up: Instagram Review Review Instagram.
40 min	1. Activity: Public Health Quick Search Students read public health handout; students quick search public health campaigns.
15 min	2. Lecture: Global Public Health Instructor lectures on global public health content; Students watch related video.
20 min	3. Discussion: WHO Leadership Priorities WHO Leadership Priorities handout; 3-2-1 activity.
40 min	4. Activity: Create Your Own NGO Students create their own NGO mission statement for three-minute presentations.
5 min	Wrap-up Free-write journal reflection.

SESSION 8 Global Public Health

MATERIALS

- Video: The Story of Ebola**
- Handout: WHO Leadership Priorities** (one per student)
- Handout: Public Health** (one per student)
- Laptops** (one per every two to three students)
- PowerPoint: Global Public Health**

AUDIO-VISUAL NEEDS

- Speakers**
- Projector**
- Computer**

VOCABULARY

- spatiotemporality
- enterprise
- triage
- personal protective equipment
- global public health
- non-governmental organization (NGO)

PREPARATION

- Review the content in the PowerPoint before class.
 - **PowerPoint: Global Public Health**
<http://amnh.org/explore/politics-and-pathogens>
- Print all handouts, articles, and worksheets in the Materials section.
- Review handouts before class.
 - **Handout: Leadership Priorities**
 “Leadership Priorities.” World Health Organization. Web.
http://who.int/about/resources_planning/WHO_GPW12_leadership_priorities.pdf
 - **Handout: Public Health**
 “Public Health.” World Health Organization. Web.
<http://who.int/trade/glossary/story076/en/>
- The following resources will provide you with background on the material presented in this session.
 - **Webpage: “About WHO”**
 “About WHO.” World Health Organization. Web.
<http://who.int/about/en/>

SESSION 8

Global Public Health

PROCEDURE

Warm-up: Instagram Review (5 min)**Review Instagram** (5 min)

1. Use projector to display Instagram account.
2. Review Instagram posts.
3. Connect Instagram posts to class content and/or vocabulary.
4. Ask students to explain their thinking behind a post or comment on another student's post.

1. Activity: Public Health Quick Search (40 min)

This activity will introduce students to the structure of public health campaigns and organizations.

1. Before beginning this activity, make sure laptops are available to students.
2. Distribute public health handout to students.
 - **Website: Public Health**
“Public Health.” World Health Organization. Web.
<http://who.int/trade/glossary/story076/en/>
3. Have students read the handout. Answer any questions students may have.
4. Direct students' attention to the public health campaigns listed.
5. Students will use the document and the public health campaigns to do a quick search of public health campaigns and organizations. Suggest students use the term *health campaign* when conducting their searches. For example: *clean water health campaign*.
6. Using laptops, have students google some of these public health campaigns.
7. Prompt students to focus on:
 - **The public health campaign:** What level does the campaign operate at? International? National? Local? How long has the campaign been active? Look for their advertising.

SESSION 8

Global Public Health

PROCEDURE
(CONTINUED)

1. Activity: Public Health Quick Search (continued)

- The organizations associated with the campaign: Find their mission statements, focus on how they represent themselves, look at whom they are partnered with, and look at how they represent people.
- 8. Students should take notes on anything they find interesting.
- 9. Facilitate a discussion around the activity and students' findings.
- 10. Allow students time to share what they have found.
- 11. Have them identify the differences and similarities among the campaigns.
- 12. Use these questions to further discussion:
 - *What do you notice about the organizations' mission statements?*
 - *What do the organizations hope to accomplish and why?*
 - *How do the groups plan to accomplish their goals?*

SESSION 8 **Global Public Health**

PROCEDURE

2. Lecture: Global Public Health (15 min)

This lecture will build on the previous activity and discussion. Students will already be familiar with global health organizations and campaigns. This lecture will provide more general terminology, goals, and functions of public health.

1. Lecture on global public health content
 - **PowerPoint: Global Public Health**
2. The lecture on global public health will cover these themes:
 - Public health history
 - Public health goals
 - Public health functions

3. Students ask questions about the content.

4. Cross-Cultural Connection: Ebola and Rights

Connect the previous class's work on gender and disease to the content in the Red Cross animated video, "The Story of Ebola" (from the PowerPoint). Discuss how a disease epidemic might create changes in affected peoples' ability to exercise things they view as their rights—the right to bury their dead, the right to cross borders, etc. Ask students how a public health emergency changes the understanding and valuing of individual rights versus community response to the emergency? Connect classroom discussion from the class about human rights to the ongoing conversation about global public health. Ultimately, who do you think should decide when global strategies are allowed to override local strategies? Does a community have the right to "opt out" of foreign assistance in an infectious disease outbreak?

SESSION 8

Global Public Health

PROCEDURE

3. Discussion: WHO Leadership Priorities (20 min)

This activity will help students understand the underlying organizational structure and priorities that guide the World Health Organization's work. Students will begin to build a critical framework for recognizing the Eurocentric bias of the World Health Organization's priorities, structure, and definitions.

1. Students should already have the WHO Leadership Priorities handout, but you can distribute more if necessary.
 - **Infographic: Leadership Priorities**
"Leadership Priorities." World Health Organization. Web.
http://who.int/about/resources_planning/WHO_GPW12_leadership_priorities.pdf
2. Students should have already read the handout and responded to the homework questions. Give students five minutes to look over their responses.
3. Have students conduct a 3-2-1 of the WHO Leadership Goals handout. Have them write down three things they found out, two things they are unsure about, and one opinion they have of WHO and its leadership priorities.
4. Facilitate a discussion using students' responses to the activity. Use the following questions to generate discussion:
 - *What are the six priorities featured in the WHO leadership diagram?*
 - *How will areas where these diseases are prevalent be affected if WHO achieves its goals?*
 - *What do you think is missing from these goals?*
 - *Who and what is not visible or prioritized based on what we have talked about in class?*
 - *What is the role of the World Health Organization?*
 - *Can you think of an area of health that should be on the diagram but is not included?*

SESSION 8

Global Public Health

PROCEDURE

4. Activity: Create Your Own Non-Governmental Organization (40 min)

In this activity, students will apply the knowledge they have gathered from the two previous activities to develop their own non-governmental organization.

1. Have student work in groups of three to four to create their own NGO.
2. Groups should focus on:
 - creating a mission statement,
 - describing the population the NGO serves,
 - describing how the organization plans to accomplish its goals.
3. Groups should include as much detail as possible, particularly on how care will be delivered equitably to vulnerable populations.
4. Allow groups time to present their NGOs to the rest of the class. Allow three minutes for each presentation. If time remains, students should have time to ask questions and make comments on each others' presentations.

i Instructor Notes:

- While the focus should be on the mission statement, if there is time, encourage students to think about their organizations' finances, name, logo, staff structure, etc.

SESSION 8 **Global Public Health**

PROCEDURE

Wrap-up (5 min)**Free-Write Journal Reflection** (5 min)

This activity can be used as support for the final project. Students should use this time to critically reflect on the previous activity.

1. Student will free-write a response to the question:
 - If you had more time, what would you add, change, or do differently when planning your NGO?
2. If time remains, have students share their reflections with the class.
3. Use these questions to further the discussion:
 - *What difficulties did you experience creating your mission statement?*
 - *How did you decide on a population for your NGO to serve?*

i Instructor Notes:

- When introducing the final projects, you might want to prompt students to look back on this journal reflection for inspiration.

SESSION 9

Local Public Health and Ethnomedicine

What role can ethnomedical knowledge play in epidemic responses and other public health projects?

INTRODUCTION

This session will introduce students to the concept of ethnomedicine, and what it means to understand medical practices from an emic, or local, perspective. Students will apply these concepts to their own community by creating a photo campaign around a local issue.

LEARNING OBJECTIVES

Students will:

- define ethnomedicine,
- consider government responses to ethnomedical beliefs and practices,
- describe the concept of an epistemological system,
- provide reasons why global health organizations are met with resistance from local communities,
- apply dynamics of local public health organizations to an issue in their community.

TIME FRAME

5 min	Warm-up: Instagram Review Review Instagram.
20 min	1. Lecture and Video: Ethnomedicine Instructor lectures on ethnomedicine content; Students watch related video.
20 min	2. Think-Pair-Share: Ethnomedicine Think-pair-share on ethnomedicine question.
70 min	3. Activity: Create a Five-Photo Campaign Students will create a campaign around an issue using five photos; three-minute presentations.
5 min	4. Wrap-up Free-write journal reflection.

SESSION 9 **Local Public Health and Ethnomedicine**

MATERIALS

- Laptops** (one per every 2–3 students)
 - PowerPoint: Ethnomedicine**
 - Video: Making health care delivery culturally safe for Aboriginal people in urban centres**
-

AUDIO-VISUAL NEEDS

- Speakers**
 - Projector**
 - Computer**
-

VOCABULARY

- **ethnomedicine**
 - **epistemology**
 - **emic**
 - **etic**
 - **eurocentric**
 - **biomedicine**
-

PREPARATION

- Review content in the PowerPoint before class.
 - **PowerPoint: Ethnomedicine**
<http://amnh.org/explore/politics-and-pathogens>
- The following resources provide background on the material presented in this session.
 - **Article: Cultural Contexts of Ebola in Northern Uganda**
Hewlett, Barry, and Richard P. Amola. “Cultural Contexts of Ebola in Northern Uganda.” *Emerging Infectious Diseases* 2003.
http://wwwnc.cdc.gov/eid/article/9/10/02-0493_article

SESSION 9

Local Public Health and Ethnomedicine

PROCEDURE

Warm-up: Instagram Review (5 min)**Review Instagram** (5 min)

1. Use projector to display Instagram account.
2. Review Instagram posts.
3. Connect Instagram posts to class content and/or vocabulary.
4. Ask students to explain their thinking behind a post, or comment on another student's post.

1. Lecture and Video: Ethnomedicine (20 min)

The lecture will provide students with an introduction to ethnomedicine.

1. Lecture on ethnomedicine content.
 - **PowerPoint: Ethnomedicine**
 2. The lecture on ethnomedicine will cover these themes:
 - Overview of ethnomedicine
 - Definitions of emic and etic
 - Ethnomedicine in Africa
 - Ethnomedicine and eiomedicine
 - Ethnomedicine and globalization
 - Historical denigration of traditional medicine
- 📌 Instructor Notes:**
- The animation about the history of herbal medicine (from the PowerPoint) should appeal to students of diverse backgrounds because of its dynamic visuals and non-Eurocentric approach to explaining the history and diffusion of herbal medical practice from ancient Egypt to contemporary post/industrial manufacture.
3. Ask students if they were surprised by where and when any of the technologies described in the video were invented.
 4. Students ask questions about the content.

SESSION 9

Local Public Health and Ethnomedicine

PROCEDURE

2. Think-Pair-Share: Ethnomedicine (20 min)

This activity will allow students to make connections between ethnomedicinal practices and global public health.

1. Have students conduct a think-pair-share: Each student will think about the question on his or her own, pair up with another student to share thoughts, then present their responses aloud to the class.
 - **Question:** The efforts of WHO and many other relief agencies are often met with resistance. How do you think this resistance happens? How do you feel about it? What role does ethnomedicine play in creating this resistance? Do you think a better understanding of ethnomedicine might lessen it?
2. **Cross-cultural connection: “Making health care delivery culturally safe for Aboriginal people in urban centres”**

This video is about making public health safe for Aboriginal populations in Vancouver by involving indigenous community health leaders in the creation of policy and practice. Have students utilize this video as a real-life example of a collaboration between an indigenous community and a health care agency.

 - **Video: “Making health care delivery culturally safe for Aboriginal people in urban centres”** (5 min 13 sec)
<https://www.youtube.com/watch?v=a2tOddj6ypk>
3. Use the following questions to guide discussion:
 - *The efforts of WHO and many other relief agencies are often met with resistance. Why do you think this resistance happens? How do you feel about it?*
 - *What role does ethnomedicine play in creating this resistance? Do you think a better understanding of ethnomedicine might lessen it?*
 - *Think about long-term resistances versus resistance during public health emergencies? How could collaborations between indigenous healers and public health agencies work in both contexts? What types of challenges would be encountered in each of these scenarios?*

SESSION 9

Local Public Health and Ethnomedicine

PROCEDURE
(CONTINUED)**3. Activity: Create a Five-Photo Campaign** (70 min)

In this activity, students choose five photos to visually represent a campaign of their choosing. They will be encouraged to think carefully and critically about the images they present. Have students think back to the *Countdown to Zero* exhibition and the importance of balancing images. It can be tricky for the students to create a balanced representation of the issues because they might want to use photos that will grab people's attention and raise awareness, yet they don't want to minimize the humanity of the local population that is dealing with the issue.

1. Have students work with a partner.
2. Distribute laptops to students (one for every pair).
3. Prompt students to think about an issue in their community that they want to raise awareness about and create a campaign around.
4. Tell students they will pick five images to use in their campaign. They will use the laptops to explore images, and paste them into a document or presentation format.
5. Allow partners three minutes each to present their campaigns to the rest of the class. As they display the images, students should explain why they chose each image.
6. Allow students time to ask questions and make comments on their peers' presentations.
7. If time remains, use the following questions to further the discussion.
 - *Was it difficult to find images that you felt fairly represented the issue? Why or why not?*
 - *Did you and your partner end up making any compromises when deciding on your images? Explain what they were.*
 - *If you were able to include more images, would you?*
 - *What is the impact of having five images versus 15 or more? What is lost; what is gained?*

i Instructor Notes:

- The issue the students pick do not have to be health-related. The instructor can encourage students to think about issues happening in their school, such as bullying, dress code, etc.

SESSION 9**Local Public Health and Ethnomedicine**

PROCEDURE

(CONTINUED)

Wrap-up (5 min)**Free-Write Journal Reflection** (5 min)

This activity can be used as support for the final project. Students should use this time to critically reflect on the previous activity.

1. Have students free-write a response to this question:

- If you had more time, what would you add, change, or do differently when choosing the photos for your campaign?

📌 Instructor Notes:

- When introducing the final projects, prompt students to look back on this journal reflection for inspiration.

SESSION 10

Media and Health

How does the media shape our understanding of neglected tropical diseases?

INTRODUCTION

In this session, students will examine how the media represents infectious diseases. Students will analyze images, statistics, graphs, and animation, as well as word choice and phrasing, to critique the ways that visual and print media illustrate and describe disease, the experience of suffering, and the process of eradication.

LEARNING OBJECTIVES

Students will:

- identify the role the media plays in shaping personal and social understandings of infectious diseases,
- contrast community, international, and national media representations on neglected tropical diseases,
- examine how a poor concept of social determinants of health, and underlying causes of health disparity, cause fear, misconception and stereotypes in both the media and in the health care profession.

TIME FRAME

5 min	Warm-up: Instagram Review Review Instagram.
40 min	1. Video Discussion: River Blindness Media Analysis Students watch three videos on river blindness; instructor leads a discussion on videos.
50 min	2. Discussion: Infectious Disease Print Media Analysis Students will read and critique three articles about infectious diseases; instructor will lead a discussion on articles.
20 min	3. Activity: Final Project Instructor introduces final project; provide time for students to work on project and ask questions.
5 min	4. Wrap-up Go over homework expectations.

SESSION 10 **Media and Health**

MATERIALS

- Video: “Neglected Tropical Disease”** (3:40)
- Video: “Why Not? Treating River Blindness and Other Neglected Tropical Diseases”** (4:02)
- Video: “River Blindness–Tanzania”** (5:39)
- Article: “An Extinction to Celebrate”**
- Article: “Africa nears Eradication of Polio”**
- Article: “Why Polio Just Became a Global Health Crisis—and a Global Governance Crisis”**
- Handouts: Three-Round Media Analysis** (one set per group of students)
- Handout: Final Project**

AUDIO-VISUAL NEEDS

- Speakers**
- Projector**
- Computer**

VOCABULARY

- **Media**

PREPARATION

- Watch the videos and read the articles to gather examples for facilitating discussion.
 - Video: “Neglected Tropical Disease” (3:40)
Kumekucha Kenya. “Neglected Tropical Diseases.” YouTube, 20 Nov. 2011.
<http://YouTube.com/watch?v=952jT4GbTrQ>
 - Video: “Treating River Blindness and Other Neglected Tropical Diseases”(4:02)
World Bank. “Treating River Blindness and other Neglected Tropical Diseases.”
YouTube, 30 June. 2014.
<http://YouTube.com/watch?v=6WDETrcqNFA>
 - Video: “River Blindness–Tanzania” (5:39)
Journeyman Pictures. “River Blindness–Tanzania.” YouTube, 2 Nov. 2004.
<http://YouTube.com/watch?v=PIJ8UYDAF3M>
 - Article: “An Extinction to Celebrate”
Siddall, Mark. “An Extinction to Celebrate.” The New Yorker. 27 June. 2013. Web.
<http://newyorker.com/tech/elements/an-extinction-to-celebrate>
 - Article: “Africa Nears Eradication of Polio”
St. Fleur, Nicholas. “Africa Mears Eradication of Polio.” The Atlantic. 21 Nov. 2014. Web.
<http://theatlantic.com/health/archive/2014/11/africa-nears-eradication-of-polio/383060/>

SESSION 10 **Media and Health**

PREPARATION

(CONTINUED)

- Article: “Why Polio Just Became a Global Health Crisis—and a Global Governance Crisis.”
Hills, Rachel. “Why Polio Just Became a Global Health Crisis—and a Global Governance Crisis.” The Atlantic. 29 May. 2012. Web.
<http://theatlantic.com/international/archive/2012/05/why-polio-just-became-a-global-health-crisis-and-a-global-governance-crisis/257761/>

- The following resources will provide you with background on the material presented in this session.

- Document: Eliminating River Blindness
“Eliminating River Blindness.” World Health Organization. Web.
http://who.int/tdr/publications/documents/elimin_riverblind.pdf

SESSION 10 **Media and Health**

PROCEDURE

Warm-up: Instagram Review (5 min)**Review Instagram** (5 min)

1. Use projector to display Instagram account.
2. Review Instagram posts.
3. Connect Instagram posts to class content and/or vocabulary.
4. Ask students to explain their thinking behind a post, or comment on another student's post.

1. Video Discussion: River Blindness Media Analysis (40 min)

This activity will help students recognize the distinction between local and global public health, and to think critically about media's influence on social perceptions. Furthermore, students will be encouraged to think about different "types" of knowledge. These different types of knowledge may be community-based, language/communication-related, local healing practices, lab or pharmaceutical developments, or of an epidemiological nature.

1. Students will watch three videos that illustrate different perspectives about river blindness from a national, international, and community level.
 - **National Perspective:**
Video: "Neglected Tropical Diseases" (3:40)
Kumekucha Kenya. "Neglected Tropical Diseases." YouTube, 20 Nov. 2011.
<http://YouTube.com/watch?v=952jT4GbTrQ>
 - **International Perspective:**
Video: "Treating River Blindness and Other Neglected Tropical Diseases"(4:02)
World Bank. "Treating River Blindness and Other Neglected Tropical Diseases."
YouTube, 30 June. 2014.
<http://YouTube.com/watch?v=6WDETCrqnFA>
 - **Community Perspective:**
Video: "River Blindness-Tanzania" (5:39)
Journeyman Pictures. "River Blindness—Tanzania." YouTube, 2 Nov. 2004.
<http://YouTube.com/watch?v=PIJ8UYDAF3M>

SESSION 10

Media and Health

PROCEDURE

(CONTINUED)

1. Video Discussion: River Blindness Media Analysis (continued)

2. Before watching, the instructor will prompt the students to take notes and consider these questions:

- *How is river blindness portrayed in each video?*
- *What is the purpose of each video??*
- *How are people portrayed?*
- *How does each video position communities? How does each video present the eradication of the disease?*
- *What does each video say about human rights?*

3. Review the above questions with students before they watch the videos.

Use these questions to further the discussion:

- *Each video presents information on the eradication of the disease. Who or what does each video suggest is responsible for the eradication of the disease? Are there any misrepresentations or contradictions you notice among the different videos?*
Point out that the World Bank video says the drug “works like a miracle” and that it “stopped people from going blind.” While the drug does work, the Kenyan Health Industry video emphasizes that the individual has to take the drug for 15 years (the life span of the worm).
- *Are there different expectations about the outcome of eradication and how these efforts will be financed?*
- *What types of expertise does each video suggest is necessary for eradication efforts? Is that expertise largely local or international for each video?*
- *How would you describe the three videos and their different outlooks on river blindness?*
Point out that the World Bank looks at river blindness on an international scale, and highlights what is being done and the program’s effectiveness. One of the ways this is conveyed is through an animation that illustrates the rapid rate in which river blindness is declining. The medical anthropology video looks at river blindness on a more local/ community scale and this video complicates the idea that river blindness is rapidly declining. Rather it illustrates why some people in local communities are opposed to the medication or to the way it is distributed.
- *If the purpose of creating media is to inform the public, why do you think the Kenya Health Industry and the World Bank have created media that is optimistic in tone?*

i Instructor Notes:

- Watch the videos before class in order to explain, in a sentence or two, who produced each one so students are clear on the individuals and organizations responsible (see Preparation).

SESSION 10 **Media and Health**PROCEDURE
(CONTINUED)**1. Video Discussion: River Blindness Media Analysis** (continued)

- Highlight the historical context of the global-local public health divide as well as how that divide is represented in the media. What is the focus of the video: the needs and perspectives of people living close to the epicenter of an epidemic, or the potential for the disease to become a global threat? Which perspective leads public health messaging? Who does a disease “belong” to? Can this concept cause conflict?
- Ask who is depicted as cultivating each of these “types” of knowledge. How much power and respect do these knowledges afford the individuals and communities who possess them? What type of knowledge might you expect a local community to have about a disease that is deeply impacting them that a large international organization responding to an epidemic might not have? Vice versa: What type of knowledge might a large organization have that a local community might not be able to easily access? Does this help us to see and define two different ways of relating to and understanding the impact a disease has on global and local scales?

SESSION 10 **Media and Health**

PROCEDURE

2. Discussion: Infectious Disease Print-Media Analysis (50 min)

This activity and discussion will help students critically analyze articles to assess the “politics of language choice” that occurs when media is describing the pathogen, and how people and organizations are attempting to limit the spread of the pathogen.

1. Explain the procedure to students.
2. Have students work in teams to explore three articles:
 - **Article: “An Extinction to Celebrate”**
Siddall, Mark. “An Extinction to Celebrate.” *The New Yorker*. 27 June. 2013. Web.
<http://newyorker.com/tech/elements/an-extinction-to-celebrate>
 - **Article: “Africa Nears Eradication of Polio”**
St. Fleur, Nicholas. “Africa Nears Eradication of Polio.” *The Atlantic*. 21 Nov. 2014. Web.
<http://theatlantic.com/health/archive/2014/11/africa-nears-eradication-of-polio/383060/>
 - **Article: “Why Polio Just Became a Global Health Crisis—and a Global Governance Crisis.”**
Hills, Rachel. “Why Polio Just Became a Global Health Crisis—and a Global Governance Crisis.” *The Atlantic*. 29 May. 2012. Web.
<http://theatlantic.com/international/archive/2012/05/why-polio-just-became-a-global-health-crisis-and-a-global-governance-crisis/257761/>
3. Explain that there will be three 10-minute rounds. Each team will review one article per round.
4. Each round will have a specific focus:
 - **Round 1:** List the terms used in the article that imply that the pathogen is alive or has motivation to do harm. If time allows, create a list of words that do not have the connotation that the pathogen is alive.
 - **Round 2:** List the terms that describe human efforts to control the pathogen. Note the terms that imply fighting or war.
 - **Round 3:** Make a list categorizing the description of the impacts of eradication efforts under the headings “global impact” and “local impacts.”
5. Hand out the Three-Round Media Analysis worksheets to guide students through each round.
 - **Three-Round Media Analysis worksheets**

SESSION 10 **Media and Health**PROCEDURE
(CONTINUED)**2. Discussion: Infectious Disease Print-Media Analysis** (continued)

6. Call on students to suggest words and phrases that stood out in each round, and write them on the board.
7. Use the following questions to generate discussion:
 - *Where is the person?*
 - *Did this terminology surprise you?*
 - *Do you think it is problematic?*
 - *Do you think one is more important than the other in terms of global and local health care?*

i Instructor Notes:

- Since students have not read these articles before it may be helpful to encourage students to read the questions first and then skim the articles.
- If you feel the students cannot complete the activity in the 30 minutes allotted, you may want to assign the articles for homework prior to the discussion.

SESSION 10 **Media and Health**

PROCEDURE

3. Activity: Introduce Final Project (20 min)

This activity will be devoted to explaining the final project, providing time and space for students to ask questions about the project, and start working on it.

1. Distribute the Final Project handout
 - **Final Project handout**
2. Review the Final Project handout with students and answer any questions they might have. Allow students time to begin working on their final project.
 - **Final Project handout:**
 - Students will create one PowerPoint slide.
 - The presentation will be five minutes long (for a class of 20 students)
 - Students can choose one of the following options:
 - **Create a local non-governmental organization (NGO):** On one slide, explain your plan for a local NGO. Create a mission statement, describe the population the NGO will serve, and lay out your plan for reaching that population. Explain how your NGO will be financed.
 - **Create a global non-governmental organization (NGO):** On one slide, explain your plan for the global NGO. Create a mission statement, describe who the NGO will serve (countries/populations), and your plan for reaching those countries or populations. Explain how your NGO will be financed.
 - **Create an exhibit:** On one slide, explain how you would create an exhibit which would educate people on one of the topics presented in class. Include visuals and text (labels).

Wrap-up (5 min)**Homework: Work on Final Project** (5 min)

1. Have students continue working on their final projects at home.

(continued)

Three-Round Media Analysis

ROUND 1: It's Alive!!! (Wait, or Is It?)

2. As a group, review together what you've highlighted and write down words or phrases from the article that you think indicate or imply that the pathogen is somehow an enemy of humans and its intent is to do harm or "evil."

3. If you have time, discuss two ways to describe an infectious disease in a human body that do not imply that the pathogen is evil or intent on doing bodily harm.

(continued)

Three Round Media Analysis

ROUND 2: Superheroes and Supervillains: Disease Edition

2. As a group, review together what you've highlighted and write down words or phrases from the article that describe strategies for eradicating disease and how they are similar to strategies used in war.

3. If you have time, think of two ways to describe an effort to stop an infectious disease in human populations that do not use war/combat terminology.

(continued)

Three-Round Media Analysis

ROUND 3: It's a Small World After All (or Is It?)

2. As a group, review together what you highlighted and write down words or phrases from the article that indicate that the eradication efforts are local or community/small scale.

3. Compare the way the articles contrast global and local efforts and impacts. Is one type of impact treated as more significant than the other? If so, what in the articles make you think that?

Name: _____

Date: _____

Final Project

You can choose from three options to present on:

- **Design a local NGO.** On one slide, explain your plan for a local NGO. Write a mission statement in which you identify the goals of the NGO. Identify the population the NGO will assist. Describe how you plan to meet your goals and how you will evaluate the effectiveness of the NGO's efforts. Finally, identify how your NGO will be financed.
- **Design a global NGO.** On one slide, explain your plan for the global NGO. Write a mission statement in which you identify the goals of the NGO. Identify the population the NGO will assist. Describe how you plan to meet your goals and how you will evaluate the effectiveness of the NGO's efforts. Finally, identify how your NGO will be financed.
- **Create an exhibit.** On one slide, explain how you would create an exhibit to educate people on one of the topics you learned about in this course. Make sure to include visuals and text (labels).

SESSION 11

Disease, Art, and Discussing Challenges

Why does disease and illness show up in art, and how can it help us empathize and understand disease more holistically?

INTRODUCTION

In this session, students will explore the relationship between art and disease. Students will be introduced to the artwork of Keith Haring and Werner Horvath and will watch a music video about Ebola by Groundzero. Students will investigate and reflect on what art communicates about disease, whether it be suffering, information, or awareness.

LEARNING OBJECTIVES

Students will:

- demonstrate an understanding of how infectious disease and art are related and interconnected.
- identify how art allows us to express and articulate aspects about the human condition, including suffering, vulnerability, hope, and anger that might otherwise be difficult to communicate directly.
- reflect on the artists’ intentions for creating the artworks.

TIME FRAME

5 min	Warm-up: Instagram Review Review Instagram.
15 min	1. Quick Write: Art Reflection Students explore three different works of art about disease; students write journal reflections.
25 min	2. Activity: Jigsaw Readings Students will read different articles and explain them to one another.
25 min	3. Video Discussion: Keith Haring Students will watch videos about Keith Haring’s art projects; instructor will lead a discussion around videos.

continued on next page

SESSION 11 Disease, Art, and Discussing Challenges

TIMEFRAME (CONTINUED)

25 min	4. Video Discussion: Ebola Music Students watch Ebola music video; instructor leads a discussion around the video.
15 min	5. Think-Pair-Share: Artistic Expression Think-pair-share about art and disease.
10 min	Wrap-up Instructor checks in on final project; time for students to ask questions.

MATERIALS

- | | |
|--|---|
| <ul style="list-style-type: none"> <input type="checkbox"/> Video: “Ebola Rap Song by GROUNDZERO” (4:07) <input type="checkbox"/> Article: Werner Horvath: “Art meets Science: Tropical Diseases” <input type="checkbox"/> Article: “WHO Artwork donated by Mr. Favre-Mossier” <input type="checkbox"/> Video: “We the Youth” (5:31) | <ul style="list-style-type: none"> <input type="checkbox"/> Video: “An American Visual Artist and Social Activist” (1:26) <input type="checkbox"/> Image: Keith Haring “Ignorance = Fear” <input type="checkbox"/> Article: “Thou Shalt Be a Bit Rude” <input type="checkbox"/> Article: “Liberia–Spreading the Word About Ebola Through Music” |
|--|---|

AUDIO-VISUAL NEEDS

- Speakers**
- Projector**
- Computer**

VOCABULARY

- **Art Therapy**

PREPARATION

- Conduct background research on Keith Haring to share with students
 - It is important to explain that Keith Haring was creating this art at a time when AIDS/HIV was being neglected by society and in politics. He created art as a way to raise awareness.
 - It may be necessary to explain some of the symbolism behind Haring’s work. For example, his cartoon drawings were meant to be a template into which we can put ourselves or others.

SESSION 11 Disease, Art, and Discussing Challenges

PREPARATION

(CONTINUED)

- You may want to review videos and articles prior to class.
 - **Video: “Ebola Rap Song by GROUNDZERO”** (4:07)
Ihiama, Kingsley. “Ebola Rap Song by GROUNDZERO.” YouTube. 20 Oct. 2014.
<http://YouTube.com/watch?v=utqGiUiOPVc>
 - **Image: Art meets Science: Tropical Diseases**
Horvath, Werner. “Art meet Science: Tropical Diseases.” Web.
<http://horvath.members.1012.at/tropen.html>
 - **Article: “Artwork donated by Mr. Favre-Mossier”**
“Artwork donated by Mr. Favre-Mossier.” World Health Organization. Web.
http://who.int/neglected_diseases/painter_donation_chagas_paintings/en/
 - **Video: “Keith Haring—We the Youth”** (5:31)
Brandywine Workshop. “Keith Haring—We the Youth.” 11 July. 2011. Web.
<http://YouTube.com/watch?v=AegOxiceHeM>
 - **Video: “Keith Haring—An American Visual Artist & Social Activist”** (1:26)
Antoinmuthu, Rajamanickam. “Keith Haring—An American Visual Artist & Social Activist.”
3 May. 2012. Web.
<http://YouTube.com/watch?v=SDs7cUAynOk>
 - **Article: “Thou Shalt Be a Bit Rude”**
Lutyens, Dominique. “Thou Shalt be a Bit Rude.” The Keith Haring Foundation.
June. 2001. Web.
http://haring.com/!/selected_writing/thou-shalt-be-a-bit-rude#.VqcjSfkrLIU
 - **Article: “Liberia: Spreading the Word About Ebola Through Music”**
“Liberia: Spreading the Word About Ebola Through Music.” World Health Organization.
August. 2014. Web.
<http://who.int/features/2014/ebola-through-music/en/>
 - **Image: “Ignorance=Fear”**
Haring, Keith. “Ignorance=Fear.” Web.
<http://haring.com/!/wp-content/uploads/2012/12/ignorancefear.jpg>
- The following resources provide background on the material presented in this session.
 - **Article: “The Connection Between Art, Healing, and Public Health”**
Struckey, Heather L., and Jeremy Nobel. “The Connection Between Art, Healing, and Public
Health: A Review of Current Literature.” American Journal of Public Health 2010: 254-263.
<http://ncbi.nlm.nih.gov/pmc/articles/PMC2804629/>

SESSION 11

Disease, Art, and Discussing Challenges

PROCEDURE

Warm-up: Instagram Review (5 min)**Review Instagram** (5 min)

1. Use projector to display Instagram account.
2. Review Instagram posts.
3. Connect Instagram posts to class content and/or vocabulary.
4. Ask students to explain their thinking behind a post or comment on another student's post.

1. Quick Write: Art Reflection (15 min)

Introduce students to different examples of art that focuses on disease. Students should also begin to think about art as a medium that can communicate suffering, stigma, intersectional identities, and postcolonial histories.

1. Share the work of three different artists with students:
 - **Image: “Art Meets Science: Tropical Diseases”**
Horvath, Werner. “Art meet Science: Tropical Diseases.” Web.
<http://horvath.members.1012.at/tropen.html>
 - **Article: “Artwork Donated by Mr. Favre-Mossier”**
“Artwork donated by Mr. Favre-Mossier.” World Health Organization. Web.
http://who.int/neglected_diseases/painter_donation_chagas_paintings/en/
 - **Image: “Ignorance = Fear”**
Haring, Keith “Ignorance = Fear”
<http://haring.com/!/wp-content/uploads/2012/12/ignorancefear.jpg>
2. Have students choose one work of art to reflect on in their journal.
3. Pose the question:
 - “What idea/message do you think the artists are trying to get across to the viewer? Why is this idea important?”

📌 Instructor Notes:

- If possible, provide some background information on the artists and their work.

SESSION 11

Disease, Art, and Discussing Challenges

PROCEDURE

2. Activity: Jigsaw Readings (25 min)

In this activity, students will explore and discuss artists' motivations, the music/visual divide, and differences between the United States and West African representations of art and disease.

1. Distribute the two articles to students:
 - **Article: “Thou Shalt Be a Bit Rude”**
Lutyens, Dominique. “Thou Shalt Be a Bit Rude.” The Keith Haring Foundation. June 2001. Web.
http://haring.com/!/selected_writing/thou-shalt-be-a-bit-rude#.VqcjSfkrLIU
 - **Article: “Liberia: Spreading the Word About Ebola through Music”**
“Liberia: Spreading the Word About Ebola Through Music.” World Health Organization. August 2014. Web.
<http://who.int/features/2014/ebola-through-music/en/>
2. Divide the class into two groups. Have one group read “Thou Shalt Be a Bit Rude” and the other group “Spreading the Word About Ebola Through Music.”
3. After students are done, have each student pair up with a student from the other group.
4. Ask students to discuss the artists: Keith Haring and Charles Yegba.
 - *What motivated these individuals to create their art?*
5. Ask students to discuss the music/visual divide:
 - *How are music and visual art different in their ability to communicate illness, suffering, and disease?*
6. Ask students to discuss the divide between the United States and West Africa:
 - *How are these artists and their work represented in the articles?*
7. Answer any questions students have about what they read.

SESSION 11

Disease, Art, and Discussing Challenges

PROCEDURE

3. Video Discussion: Keith Haring (25 min)

Students will become more aware of the intersection of art, disease, and activism.

1. Students will watch videos about Keith Haring art projects.
 - **Video: “Keith Haring—We the Youth”** (5:31)
Brandywine Workshop. “Keith Haring—We the Youth.” 11 July 2011. Web.
<http://YouTube.com/watch?v=AegOxiceHeM>
 - **Video: “Keith Haring—An American Visual Artist & Social Activist”** (1:26)
Antoinmuthu, Rajamanickam. “Keith Haring—An American Visual Artst and Social Activist.”
3 May 2012. Web.
<http://YouTube.com/watch?v=SDs7cUAynOk>
2. Facilitate a discussion around the videos and students’ reactions.
3. Use the following questions to generate discussion:
 - *Does it make sense to you to turn suffering and/or pain into art?*
 - *Why do you think these videos are being shown in a class about infectious disease?*
 - *What are some words, thoughts, ideas that come to mind?*
 - **Student:** Global awareness.
 - **Student:** How he utilized the community, the local aspect of his art.
 - **Instructor:** *This is actually one of the goals of medical anthropology, to use local knowledge to help deal with infectious diseases.*

i Instructor Notes:

- Provide some personal background on Keith Haring before showing the videos.

SESSION 11

Disease, Art, and Discussing Challenges

PROCEDURE

4. Video Discussion: Ebola Music (25 min)

This activity will illustrate that art has the capacity to communicate information and dispel rumors about disease through a culturally contingent context.

1. Students will watch the video:

- **Video: “Ebola Rap Song by GROUNDZERO”** (4:07)
Ihiama, Kingsley. “Ebola Rap Song by GROUNDZERO.” YouTube. 20 Oct 2014.
<http://YouTube.com/watch?v=utqGiUiOPVc>
- **Video: Keith Haring—An American Visual Artist and Social Activist”** (1:26)
Brandywine Workshop. “Keith Haring—We the Youth.” 11 July 2011. Web.
<http://YouTube.com/watch?v=AegOxiceHeM>

2. Facilitate a discussion around the video and student’s responses.

3. Use the following questions to generate discussion:

- *What rumors about Ebola were dealt with in this video?*
 - **Student:** Ebola is airborne.
 - **Student:** Salt and bitter herbs will cure people.
 - **Student:** The song mentioned not to touch dead bodies because after a person has died the disease can still infect others.
 - **Instructor:** *This is an issue when there are no supplies for the disposal of dead bodies in a culturally appropriate way.*
- *Is there anything you think the rap focused on a lot and wondered why?*
 - **Student:** They focused on salt and bitter herbs a lot.
 - **Instructor:** *This was a treatment being invented on the spot, which is different from traditional medicine that has been used for a long time.*
 - **Student:** It mentioned that “Ebola is real” a lot.
 - **Instructor:** *This is why they mention be careful what you post on social media, because often when people were taken to the hospital and died, their family would not get to see the body. There was a communication breakdown; people disappeared, and rumors spread.*
- *What is significant about including all this culturally specific information into the song?*
- *How would you compare this song to the other art we’ve talked about in class today?*

SESSION 11

Disease, Art, and Discussing Challenges

PROCEDURE

5. Think-Pair-Share: Artistic Expression (15 min)

In this activity, students will interpret examples of art and disease with varied goals: expressive, social justice, and informative. They will continue to think about what the medium of art communicates about disease that is difficult to express otherwise.

1. Working with a partner, have students conduct a think-pair-share: Have them come up with their own response to the question and pair up with another student to discuss it.
2. Give partners time to share their responses with the rest of the class.
3. Pose this question:
 - *Why do you think artistic expression of disease is so pervasive?*

Wrap-up (10 min)**Check-In Final Project** (10 min)

1. Use this time to check in with students and answer any questions they have about their final projects.

SESSION 12

Presentations and Reflections

How has your understanding of disease and health changed?

INTRODUCTION

In this session, students will present their final projects. For the final projects, students will pull from the major themes of the course and apply them to independent research they have conducted on an issue of their choice. Students will also reflect on the course, the themes, and changes in their conceptions of disease and health.

LEARNING OBJECTIVES

Students will:

- practice presentation skills,
- articulate major concepts of the course through independent research and critical thinking,
- reflect on their relationship to the course concepts.

TIME FRAME

10 min	Warm-up Students share three main concepts they learned from the course.
100 min	Presentations Students present on final projects.
10 min	Wrap-up Free-write: student reflect on class.

AUDIO-VISUAL NEEDS

- Speakers**
- Projector**
- Computer**

SESSION 12 Presentations and Reflections

PROCEDURE

Warm-up (10 min)**Be the Educator** (10 min)

Students should be able to articulate the impact the course has had on them. This will also be an opportunity to hear their peers' thoughts on the course.

1. Have students form groups of three or four.
2. Have groups discuss what they think were the three main take-aways of the course.
3. Each group will be asked to share one of the take-aways with the class.

Presentations (100 min)

1. Have students present their final projects.
 - Students were asked to create one PowerPoint slide.
 - Each presentation is five minutes long (for a class of 20 students). These five minutes will include time for students to ask questions and make comments on their peers' presentations.
 - Students were to choose from three options to present on:
 - **Design a local non-governmental organization (NGO):** On one slide, explain your plan for a local NGO. Create a mission statement, describe the population the NGO will serve, and your plan for reaching that population. Explain how your NGO will be financed.
 - **Design a global non-governmental organization (NGO):** On one slide, explain the plan for the global NGO. Create a mission statement, describe the countries or populations the NGO will serve, and share your plan for reaching those countries or populations. Explain how your NGO will be financed.
 - **Create an exhibit:** On one slide, explain how you would create an exhibit to educate people on one of the topics presented in class. Make sure to include text (labels) and visuals.

SESSION 12 Presentations and Reflections

PROCEDURE**End-of-Class Journal Reflection (10 min)**

Students will write on a personal, introspective level about how they plan to carry the knowledge they have gained in this class forward and apply it to their everyday life. The knowledge students gain in the course is not meant to stay in the classroom, but is meant to be applied to students' daily lives and perception of the world around them. This activity allows students to meditate on how they will navigate this endeavor.

1. Have students free-write a reflection of their time in the class.
2. Encourage students to write about what they learned during the course, and how they will apply this knowledge to their everyday life and further endeavors.
3. This free-write will not be shared with the class nor read by the instructor.

Resources

Session 1: Disease and Illness

- Allison, Paul. “TTT #451 Reading Ta-Nehisi Coates, ‘Letter to My Son.’” *Teachers Teaching Teachers*. YouTube, 15 July 2015. Web.
<http://YouTube.com/watch?v=7RMZ138KzoM>
- Bennett, Brit. “Ta-Nehisi Coates and the Generation Waking Up.” *The New Yorker* 15 July 2015.
<http://newyorker.com/culture/cultural-comment/ta-nehisi-coates-and-a-generation-waking-up>
- Kaplan-Myrth, Nili. “Interpreting people as they interpret themselves: Narratives in medical anthropology and family medicine.” *Cam Fam Physicians* (2007): 1268-1269.
<http://ncbi.nlm.nih.gov/pmc/articles/PMC1949239/>
- Kleinman, Arthur, Leon Eisenberg, and Byron Good. “Culture, Illness, and Care: Clinical Lessons from Anthropologic and Cross-Cultural Research.” *Annals of Internal Medicine* (1978): 251-258
<http://in.bgu.ac.il/en/fohs/communityhealth/Family/Documents/ShlavB/culture%20illness%20and%20care.pdf>
- National Book. “Yona Harvey reads for Ta-Nehisi Coates at the 2015 National Book Awards Finalists Reading” National Book Foundation and the Creative Writing MFA Program. YouTube, 1 Dec. 2015. Web.
<http://YouTube.com/watch?v=rqgiRqVVe8>
- Schweizer, Harold. “To Give Suffering a Language.” *Literature & Medicine* (1995): 210-221.
http://muse.jhu.edu/journals/literature_and_medicine/summary/v014/14.2schweizer.html
- Beck, Julie. “The Diseases You Only Get if You Believe in Them” *The Atlantic*. 22 April 2016.
<http://www.theatlantic.com/health/archive/2016/04/the-diseases-you-only-get-if-you-believe-in-them/479367/>
- Bure, Frank. “The Geography of Madness: Penis Thieves, Voodoo Death and the Search for the Meaning of the World’s Strangest Syndromes” Melville House Publishing. 2016. Print.
<http://www.indiebound.org/book/9781612193724>

Session 2: Intersectionality and Guinea worm

- “An introduction to the intersectional approach.” *Ontario Human Rights Commission*. Web.
<http://ohrc.on.ca/en/intersectional-approach-discrimination-addressing-multiple-grounds-human-rights-claims/introduction-intersectional-approach#fn6>
- “Intersectionality.” *Geek Feminism Wiki*. Web.
<http://geekfeminism.wikia.com/wiki/Intersectionality>
- “Issues of Poverty.” *Teaching Tolerance: A Project of the Southern Poverty Law Center*. Web.
<http://tolerance.org/lesson/issues-poverty>
- Kinder, Molly. “Reducing Guinea Worm in Asia and Sub-Saharan Africa.” *Center for Global Development* (n.d.). Web.
<http://cgdev.org/page/case-11-reducing-Guinea-worm-asia-and-sub-saharan-africa>

Resources

Session 2: Intersectionality and Guinea worm (continued)

- “Kimberlé W. Crenshaw.” Faculty Profiles. *University of California, Los Angeles. Law.* Web.
<http://law.ucla.edu/faculty/faculty-profiles/kimberle-w-crenshaw/>
- Mason, Nicole. “Leading at the intersections: An Introduction to the intersectional approach Model for Policy and Social Change.” Women of Color Policy Network, NYU/Wagner. Web.
<http://intergroupresources.com/rc/Intersectionality%20primer%20-%20Women%20of%20Color%20Policy%20Network.pdf>
- Miller, Angela. “Games People Play: A Quick Guide to Intersectionality Theory.” University of Houston-Clear Lake, 2010.
<http://socialpsychology.org/action/pdf/2012intersect-handout.pdf>
- Simpson, Joanna. “Everyone Belong: A toolkit for applying intersectionality.” *Canadian Research Institute for the Advancement of Women (CRIAOW)*. May 2009. Web.
http://criaw-icref.ca/sites/criaw/files/Everyone_Belongs_e.pdf
- Van Mens-Verhulst, Janneke, and Lorraine Radtke. “Socio-cultural inequities in health research: What does the intersectionality framework offer?” *Intersectional Health Research*. Web.
<http://vanmens.info/verhulst/en/wp-content/Intersectional%20health%20research.pdf>

Session 3: Bacteria, Viruses, and Parasites

- Aagaard-Hansen, Jens, and Claire Lise Chaignat. “Neglected tropical diseases: Equity and social determinants.” Web.
http://who.int/neglected_diseases/Social_determinants_NTD.pdf
- “About Parasites.” Centers for Disease Control and Prevention. 5 March 2014. Web.
<http://cdc.gov/parasites/about.html#worms>
- Alsan, Marcella M., *et al.* “Poverty, Global Health and Infectious Disease: Lessons from Haiti and Rwanda.” *Infectious Disease Clinics of North America* (2011): 611-622.
<http://ncbi.nlm.nih.gov/pmc/articles/PMC3168775/>
- Feasey, Nick. “Neglected Tropical Diseases.” *British Medical Bulletin* (2010): 179-200.
<http://bmb.oxfordjournals.org/content/93/1/179.full>
- Horowitz, Lesli. “Bacteria, Viruses, and Fungi, Oh My!” Paper. American Association of Immunologists High School Teachers Summer Research Program.
http://aai.org/Education/Summer_Teachers/Docs/Archive/2013_Horowitz_Final.pdf
- “Introduction to Bacteria, Viruses, Fungi, and Parasites.” *Microchem Laboratory*. 2015. Web.
http://antimicrobialtestlaboratories.com/bacteria_viruses_fungi_and_parasites.htm
- “Introduction to pathophysiology.” *Nurses.indb*. Web.
<http://mheducation.co.uk/openup/chapters/9780335242238.pdf>

Resources

Session 3: Bacteria, Viruses, and Parasites (continued)

- May, Clint. “Transmission Routes of Zoonotic Diseases.” *The Center for Food Security and Public Health, Iowa State University*. Web.
http://cfsph.iastate.edu/Zoonoses/assets/English/zoonotic_dz_transmission.pdf
- McDonald, Marian C. “Neglected Tropical and Zoonotic Diseases and Their Impact on Women and Children’s Health.” *Center for Disease Control and Prevention*. 2011. Web.
<http://ncbi.nlm.nih.gov/books/NBK62515/>
- “Neglected Tropical Diseases.” *National Institute of Allergy and Infectious Diseases (NIH)*. 6 May 2015. Web.
<http://niaid.nih.gov/topics/tropicaldiseases/pages/default.aspx>
- “Neglected Tropical Diseases.” *World Health Organization*. Web.
http://who.int/neglected_diseases/diseases/en/
- Norris, Jeremiah. “Social and Economic Impact Review on Neglected Tropical Diseases.” *Hudson Institute’s Center for Science in Public Policy*. Nov. 2012.
http://globalnetwork.org/sites/default/files/Social%20and%20Economic%20Impact%20Review%20on%20Neglected%20Tropical%20Diseases%20Hudson%20Institute%20and%20Sabin%20Institute%20November%202012_1.pdf
- Pidwirny, Michael. “Tropical Moist Climates—A Climate Type.” *The Encyclopedia of Earth*. 12 Jan. 2011. Web.
<http://eearth.org/view/article/162264/>
- Skolnik, Richard and Ambareen Ahmed. “Ending the neglect of neglected tropical diseases.” *Population Reference Bureau*. Feb. 2010. Web.
<http://prb.org/pdf10/neglectedtropicaldiseases.pdf>
- “The U.S. Government and Global Neglected Tropical Diseases.” *The Henry J. Kaiser Family Foundation*. 23 April 2015. Web.
<http://kff.org/global-health-policy/fact-sheet/the-u-s-government-and-global-neglected-tropical-diseases/>
- “Vector-borne exposure.” *The Center for Food Security and Public Health, Iowa State University*. Web.
http://cfsph.iastate.edu/Infection_Control/Routes/vector-borne.php
- “Viruses.” *Microbiology Online*. Web.
<http://microbiologyonline.org.uk/about-microbiology/introducing-microbes/viruses>
- “Why are some tropical diseases called ‘neglected?’” *World Health Organization*. Web.
<http://who.int/features/qa/58/en/>
- “Working to overcome the global impact of neglected tropical diseases.” *World Health Organization*. 2010. Web.
http://apps.who.int/iris/bitstream/10665/44440/1/9789241564090_eng.pdf
- “Zoonotic Disease.” *Centers for Disease Control and Prevention*. 18 Oct. 2013. Web.
<http://cdc.gov/onehealth/zoonotic-diseases.html>

Resources

Session 4: Vaccination of Health Infrastructure

- “History of Anti-Vaccination Movement.” *The History of Vaccines: An Educational Resource*. College of Physicians of Philadelphia. Web.
<http://historyofvaccines.org/content/articles/history-anti-vaccination-movements>
- “National Regulatory Authorities.” World Health Organization. Web.
http://who.int/immunization_standards/national_regulatory_authorities/en/
- Riedel, Stefan. “Edward Jenner and the History of Smallpox and Vaccination.” *Baylor University Medical Center* (2005): 21-25.
<http://ncbi.nlm.nih.gov/pmc/articles/PMC1200696/>
- The College of Physicians of Philadelphia. *The History of Vaccines*. (n.d.) Web.
<http://historyofvaccines.org/>
- “Thimerosal in Vaccines.” *U.S Food and Drug Administration*. Web. 2015.
<http://fda.gov/BiologicsBloodVaccines/SafetyAvailability/VaccineSafety/UCM096228#pres>
- Understanding Vaccines: What they are and how they work. U.S. Department of Health and Human Services. Web. 2008.
<http://niaid.nih.gov/topics/vaccines/documents/undvacc.pdf>
- “Vaccine quality.” World Health Organization. Web.
http://who.int/immunization_standards/vaccine_quality/en/

Session 5: Tropical Medicine and Postcolonial Theory

- “About Postcolonial Studies.” Postcolonial Studies at Emory. 2014. Web.
<http://scholarblogs.emory.edu/postcolonialstudies/about-postcolonial-studies/>
- Biography.com Editors. “Louis Farrakhan Biography: Religious Figure, Civil Rights Activist (1993-)”. *The Biography.com Website*. Web.
<http://biography.com/people/louis-farrakhan-9291850>
- Childs, Peter and R.J. Patrick Williams. “Introduction: Points of Departure” *An Introduction to Postcolonial Theory*. New York: Prentice Hall/ Harvester Wheatsheaf. 1997. Print. Pp. 1-25.
<http://www19.homepage.villanova.edu/silvia.nagyzekmi/teoria/childs%20postcolonial.pdf>
- “Colonialism.” Stanford Encyclopedia of Philosophy. 2012. Web.
<http://plato.stanford.edu/entries/colonialism/>
- “Colonialism and International Medicine.” Harvard University Open Collections Program. 2016.
<http://ocp.hul.harvard.edu/contagion/colonialism.html>

Resources

Session 5: Tropical Medicine and Postcolonial Theory (continued)

- “Herbs and Empires: A Brief History of Malaria and Drug” NPR. YouTube, 17 Dec. 2012.
<http://YouTube.com/watch?v=IrNL27eWKOI>
- Hoyt, Kendall. “How WWII spurred vaccine innovation.” *The Conversation*. Web. 8 May. 2015.
<http://medicalxpress.com/news/2015-05-world-war-ii-spurred-vaccine.html>
- “Louis Farrakhan” Southern Poverty Law Center. Web.
<https://splcenter.org/fighting-hate/extremist-files/individual/louis-farrakhan>
- “LSTM, Ronald Ross and Malaria: A brief History.” Liverpool Science of Tropical Medicine. Web.
<http://lstmed.ac.uk/sites/default/files/content/publications/attachments/LSTM%20Ronald%20Ross%20and%20Malaria.pdf>
- “National Representative of the Honorable Elijah Muhammad and the Nation of Islam” *Nation of Islam*. Web.
<http://noi.org/hon-minister-farrakhan/>
- “The Farrakhan Phenomenon: Race, Reaction, and the Paranoid Style in American Politics by Robert Singh” Georgetown University Press. (book description) Web.
<http://press.georgetown.edu/book/georgetown/farrakhan-phenomenon>
- “The History and Culture of Tropical Medicine.” Web.
<http://ses.library.usyd.edu.au/bitstream/2123/1972/4/Cameron-Smith04.pdf>
- *The Postcolonial Studies Reader*. Eds. Bill Ashcroft, Gareth Griffiths, and Helen Tiffin. New York: Routledge. 1995.
http://mohamedrabeea.com/books/book1_3985.pdf
- “Tropical Medicine and Imperial Seminar Notes.” University of Warwick. Web.
http://www2.warwick.ac.uk/fac/arts/history/students/modules/foul_matters/yr3_timetable/tropicalmedicineandimperialismseminarnotes

Session 6: Health Economics

- Bausch, Daniel G. and Lara Scharz. “Outbreak of Ebola Virus disease in Guinea: Where Ecology meets economy.”
Plos Neglected Tropical Diseases. Web. 31 July. 2014.
<http://journals.plos.org/plosntds/article?id=10.1371/journal.pntd.0003056>
- Gholipour, Bahar. “How the Ebola outbreak became the deadliest in History.”
Livescience. Web, 31 July. 2014.
<http://livescience.com/47140-ebola-outbreak-causes.html>

Resources

Session 6: Health Economics (continued)

- Global Health Magazine. Issue 01. Winter 2009. Web.
<https://issuu.com/globalhealthcouncil/docs/gh-magazine-issue-1/1?e=3822300/5761654>
- “Medical Anthropologist Dr. Paul Farmer. NPR-Fresh Air. Web, 25 Sept. 2003. Web.
<http://npr.org/templates/story/story.php?storyId=1446061>
- “Paul Farmer, M.D.” Academy of Achievement: A Museum of Living History. Online. 4 Dec. 2013. Web.
<http://achievement.org/autodoc/page/far1bio-1>
- Poon, Linda “Why Anthropologists Join an Ebola Outbreak Team.” NPR. 7 April 2014. Web.
<http://npr.org/sections/health-shots/2014/04/02/298369305/why-anthropologists-join-an-ebola-outbreak-team>
- Ramin, Brodie. “Anthropology speaks to medicine: The case of HIV/AIDS in Africa.” *McGill Journal of Medicine* (2007): 127-132.
<http://ncbi.nlm.nih.gov/pmc/articles/PMC2323482/>
- “The Quest of Dr. Paul Farmer.” NPR All Things Considered. 20 Oct. 2003. Web.
<http://npr.org/templates/story/story.php?storyId=1472188>

Session 7: Human Rights and Standards of Health and Wellness

- The Universal Declaration of Human Rights.” United Nations. Web.
<http://un.org/en/universal-declaration-human-rights/>

Session 8: Global Public Health

- “About WHO.” World Health Organization. Web.
<http://who.int/about/en/>
- Beaglehole, Robert, and Ruth Bonita. “What is global health?” *Global Health Action*.
<http://ncbi.nlm.nih.gov/pmc/articles/PMC2852240/>
- Halpin, Helen Ann, Maria M. Morales-Suárez-Varela, and José M. Martin-Moreno. “Chronic Disease Prevention and the New Public Health.” *Public Health Reviews*. Web.
http://publichealthreviews.eu/upload/pdf_files/7/08_Chronic.pdf
- “Public Health Interventions with Definitions.” *Minnesota Department of Health’ Section of Public Health Nursing*. Web. March 2001.
http://health.state.mn.us/divs/opi/cd/phn/docs/0103wheel_definitions.pdf

Resources

Session 9: Local Public Health and Ethnomedicine

- Brown, Justin. “Human African Trypanosomiasis: Ethnomedical and Biomedical Relationships.” *The Canadian Student Journal of Anthropology* (2000).
<http://journals.mcmaster.ca/nexus/article/view/168/135>
- Hewlett, Barry, and Richard P. Amola. “Cultural Contexts of Ebola in Northern Uganda.” *Emerging Infectious Diseases* (2003).
http://wwwnc.cdc.gov/eid/article/9/10/02-0493_article
- Morris, Michael W. “Views from Inside and Outside: Integrating Emic and Etic insights about Culture and Justice Judgment.” *Academy of Management Review* (1999): 781-796.
http://columbia.edu/~da358/publications/etic_emic.pdf
- Quinlan, Marsha B. “Ethnomedicine.” *A Companion to Medical Anthropology*. Eds., Merrill Singer and Pamela I. Erickson. Maiden, MA: Wiley-Blackwell. 2011.
http://libarts.wsu.edu/anthro/pdf/Quinlan%202011_Ethnomedicine.pdf
- Stauba, Peter O., et al. “Classifying Diseases and Remedies in Ethnomedicine and Ethnopharmacology.” *Journal of Ethnopharmacology*. Sept. 2015. Web.
http://researchgate.net/profile/Caroline_Weckerle/publication/281540522_Classifying_Diseases_and_Remedies_in_Ethnomedicine_and_Ethnopharmacology/links/560d1d1808ae9755d9734a3f.pdf
- Tabona, Shoko. “Karanga Traditional Medicine and Healing.” *African Journal of Traditional, Complementary, and Alternative Medicines* 2007: 501-509.
<http://ncbi.nlm.nih.gov/pmc/articles/PMC2816505/>

Session 10: Health and Media

- “Eliminating River Blindness.” World Health Organization. Web.
http://who.int/tdr/publications/documents/elimin_riverblind.pdf

Session 11: Disease, Art, and Discussing Challenges

- Struckey, Heather L. and Jeremy Nobel. “The Connection Between Art, Healing, and Public Health: A Review of Current Literature.” *American Journal of Public Health*. (2010): 254-263.
<http://ncbi.nlm.nih.gov/pmc/articles/PMC2804629/>

Resources

General Overview

- Alemu, Kassahun, et al. "Spatiotemporal clusters of malaria cases at village level, northwest Ethiopia." *Malaria Journal*. 6 June 2014.
<http://malariajournal.com/content/13/1/223>
- Bonenberger, Marc, et al. "What do District Health Managers Use Their Working Time For? A Case Study of Three Districts." *PLOS One*. 11 June 2015.
<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0130633>
- "Infection Control for Viral Haemorrhagic Fevers in the African Health Care System." *Centers for Disease Control and Prevention*. 1998. Web.
<http://who.int/csr/resources/publications/ebola/whoemcesr982sec1-4.pdf>

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One of the intentions with this curriculum is that it might be tailored to a wide array of students across a variety of settings and provide a useful foundation for localized adaptations. For questions, support, or feedback pertaining to the content of this curriculum, particularly with respect to adaptations that support the needs and perspectives of students outside of the United States and Western Europe, please contact:

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