

## **Innovative Approaches to Healthcare in Mozambique and Beyond**

**GRADES:** 9-12

**TIME ALLOTMENT:** Two 45-minute class periods

### **OVERVIEW**

Using segments from the PBS program: *Wide Angle: Birth of a Surgeon*, students learn about limited health resources in Mozambique and innovative approaches taken in Mozambique and other countries to combat health problems. In the Introductory Activity, students learn about the lack of doctors and adequate medical care in rural Mozambique. In the Learning Activity, students reflect upon the importance of improving health care for women and learn about an innovative program to train midwives and nurses to perform surgeries. In the Culminating Activity, students explore the roles governments around the world have played in improving health care for their populations.

### **OBJECTIVES**

Students will be able to:

- Describe the existing rural health care in Mozambique.
- Discuss the program initiated in Mozambique to train nurses and midwives to perform surgeries.
- Describe the roles governments can play in improving health care.
- Describe a health policy or system in a country other than the United States, which has led to an increase in access to health care and/or reduced a health problem in a country or region.

### **LEARNING STANDARDS**

**New York State Standards:**

[www.nylearns.org/standards/standard\\_tree.asp?StandardID=6](http://www.nylearns.org/standards/standard_tree.asp?StandardID=6)

#### **Standard SS2: World History**

Students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments, and turning points in world history and examine the broad sweep of history from a variety of perspectives.

- **Key Idea:** SS2.4: The skills of historical analysis include the ability to investigate differing and competing interpretations of the theories of history, hypothesize about why interpretations change over time, explain the importance of historical evidence, and understand the concepts of change and continuity over time.

#### **Commencement:**

- **Performance Indicator SS2.C.4A:** Students identify historical problems, pose analytical questions or hypotheses, research analytical questions or test

- hypotheses, formulate conclusions or generalizations, raise new questions or issues for further investigation.
- **Performance Indicator** SS2.C.4D: Students analyze different interpretations of important events, issues, or developments in world history by studying the social, political, and economic context in which they were developed; by testing the data source for reliability and validity, credibility, authority, authenticity, and completeness; and by detecting bias, distortion of the facts, and propaganda by omission, suppression, or invention of facts.
  - **Key Idea** SS2.alt.1: Students will study world history, cultures and civilizations and the important contribution of individuals and groups.
    - **Performance Indicator** SS2.alt.1A: Students study and communicate about different world cultures and civilizations, focusing on their accomplishments, contributions, values, beliefs and traditions.
    - **Performance Indicator** SS2.alt.1D: Students explore the lifestyles, beliefs, traditions, rules and laws, and social/cultural needs and wants of people during different periods in history and in different parts of the world.
    - **Performance Indicator** SS2.alt.1F: Students utilize media to become aware of current events.

### **Standard SS5: Civics, Citizenship, and Government**

Students will use a variety of intellectual skills to demonstrate their understanding of the necessity for establishing governments; the governmental system of the United States and other nations; the United States Constitution; the basic civic values of American constitutional democracy; and the roles, rights, and responsibilities of citizenship, including avenues of participation.

- **Key Idea** SS5.1: The study of civics, citizenship, and government involves learning about political systems; the purposes of government and civic life; and the differing assumptions held by people across time and place regarding power, authority, governance, and law.

#### **Commencement**

- **Performance Indicator** SS5.C.1A: Students analyze how the values of a nation and international organizations affect the guarantee of human rights and make provisions for human needs.
- **Performance Indicator** SS5.C.1C: Students compare various political systems with that of the United States in terms of ideology, structure, function, institutions, decision-making processes, citizenship roles, and political culture.
- **Performance Indicator** SS5.C.1D: Students identify and analyze advantages and disadvantages of various governmental systems.
- **Key Idea** SS5.4: The study of civics and citizenship requires the ability to probe ideas and assumptions, ask and answer analytical questions, take a skeptical attitude toward questionable arguments, evaluate evidence, formulate rational conclusions, and develop and refine participatory skills.

- **Performance Indicator SS5.C.4E:** Students participate in school/classroom/ community activities that focus on an issue or problem.
- **Performance Indicator SS5.C.4F:** Students prepare a plan of action that defines an issue or problem, suggests alternative solutions or courses of action, evaluates the consequences for each alternative solution or course of action, prioritizes the solutions based on established criteria, and proposes an action plan to address the issue or to resolve the problem.

### **Alternate Standards**

- **Key Idea SS5.alt.1:** Students will study government, civic life, and values and citizenship.
  - **Performance Indicator SS5.alt.1A:** Students explore the basic purposes of government and the importance of civic life.
  - **Performance Indicator SS5.alt.1F:** Students identify basic rights that students have and those that they will acquire as they age.
  - **Performance Indicator SS5.alt.1G:** Students show a willingness to consider other points of view before drawing conclusions or making judgments.
  - **Performance Indicator SS5.alt.1H:** Students participate in activities that focus on a classroom, school, or community issue or problem.

### **National Standards:**

Standards available online at: [http://nchs.ucla.edu/standards/thinking5-12\\_toc.html](http://nchs.ucla.edu/standards/thinking5-12_toc.html)

### **Historical Thinking Standards for Grades 5-12**

- **Standard 3: Historical Analysis and Interpretation:** The student engages in historical analysis and interpretation. Therefore, the student is able to:
  - Compare and contrast differing sets of ideas, values, personalities, behaviors, and institutions by identifying likenesses and differences.
  - Consider multiple perspectives of various peoples in the past by demonstrating their differing motives, beliefs, interests, hopes, and fears.
  - Analyze cause-and-effect relationships bearing in mind multiple causation including (a) the importance of the individual in history; (b) the influence of ideas, human interests, and beliefs; and (c) the role of chance, the accidental and the irrational.
  - Draw comparisons across eras and regions in order to define enduring issues as well as large-scale or long-term developments that transcend regional and temporal boundaries.
  - Challenge arguments of historical inevitability by formulating examples of historical contingency, of how different choices could have led to different consequences.

- **Standard 5: Historical Issues-Analysis and Decision-Making:** The student engages in historical issues-analysis and decision-making. Therefore, the student is able to
  - Identify issues and problems in the past and analyze the interests, values, perspectives, and points of view of those involved in the situation.
  - Marshal evidence of antecedent circumstances and current factors contributing to contemporary problems and alternative courses of action.
  - Identify relevant historical antecedents and differentiate from those that are inappropriate and irrelevant to contemporary issues.
  - Evaluate alternative courses of action, keeping in mind the information available at the time, in terms of ethical considerations, the interests of those affected by the decision, and the long- and short-term consequences of each.
  - Formulate a position or course of action on an issue by identifying the nature of the problem, analyzing the underlying factors contributing to the problem, and choosing a plausible solution from a choice of carefully evaluated options.
  - Evaluate the implementation of a decision by analyzing the interests it served; estimating the position, power, and priority of each player involved; assessing the ethical dimensions of the decision; and evaluating its costs and benefits from a variety of perspectives.

### **National Standards in World History for Grades 5-12**

<http://nchs.ucla.edu/standards/world-standards5-12.html>

- **World History/Era 9 Standard 2A:** The student understands how population explosion and environmental change have altered conditions of life around the world. Therefore, the student is able to:
  - Describe the global proliferation of cities and the rise of the megalopolis and assess the impact of urbanization on family life, standards of living, class relations, and ethnic identity. [Analyze cause-and-effect relationships]
  - Assess why scientific, technological, and medical advances have improved living standards for many yet hunger, poverty, and epidemic disease have persisted. [Evaluate major debates among historians]
- **World History/ Era 9 Standard 2C:** The student understands how liberal democracy, market economies, and human rights movements have reshaped political and social life. Therefore, the student is able to analyze how feminist movements and social conditions have affected the lives of women in different parts of the world and compare women's progress toward social equality, economic opportunity, and political rights in various countries. [**Draw comparisons across regions**]
- **World History/ Era 9 Standard 2E:** The student understands major worldwide scientific and technological trends of the second half of the 20th century. Therefore, the student is able to assess the social and cultural implications of recent medical

successes such as development of antibiotics and vaccines and the conquest of smallpox. [**Interrogate historical data**]

- **World History/ Era 9/ Standard 3A:** The student understands major global trends since World War II. Therefore the student is able to:
  - Assess the degree to which both human rights and democratic ideals and practices have been advanced in the world during the 20th century. [Formulate historical questions]
  - Analyze causes of economic imbalances and social inequalities among the world's peoples and assess efforts made to close these gaps. [Employ quantitative analysis]

## **MEDIA RESOURCES**

**Wide Angle: *Birth of a Surgeon***, selected segments

[Rural Health Care in Mozambique](#)

[Solving the Doctor Shortage in Mozambique](#)

[Making Women's Health a Priority](#)

## **Websites:**

- **National Library of Medicine/ Against the Odds Exhibit**  
<http://apps.nlm.nih.gov/againsttheodds/exhibit/index.cfm>  
This site provides photos, information and video excerpts focusing on different health initiatives, including China's barefoot doctors program in the 1960s and 70s.
- **The United Nations Population Fund (UNFPA) Website**  
[www.unfpa.org/public/](http://www.unfpa.org/public/)  
This site provides a variety of statistics and other information related to the work of UNFPA, which "promotes the right of every woman, man and child to enjoy a life of health and equal opportunity." This site includes the following documents which could be helpful resources for this lesson:
  - **Joint statement on maternal and newborn health**  
[www.unfpa.org/webdav/site/global/shared/safemotherhood/docs/jointstatement\\_mnh.pdf](http://www.unfpa.org/webdav/site/global/shared/safemotherhood/docs/jointstatement_mnh.pdf)
  - **UNFPA Fact sheets (including Maternal Health section)**  
[www.unfpa.org/public/home/factsheets](http://www.unfpa.org/public/home/factsheets)
  - **The Maternal Health Thematic Fund Annual Report 2009**  
[www.unfpa.org/webdav/site/global/shared/documents/publications/2010/mhtf\\_annualreport\\_2009.pdf](http://www.unfpa.org/webdav/site/global/shared/documents/publications/2010/mhtf_annualreport_2009.pdf)

- **Wide Angle: Birth of a Surgeon Resources**  
[www.pbs.org/wnet/wideangle/episodes/birth-of-a-surgeon/resources/1666/](http://www.pbs.org/wnet/wideangle/episodes/birth-of-a-surgeon/resources/1666/)  
This page provides links to resources and information about Mozambique, child and maternal mortality and midwifery.
- **World Health Organization (WHO) Website**  
[www.who.int/en/](http://www.who.int/en/)  
This website features health-related information, data and statistics from countries throughout the world. The “Making Pregnancy Safer” section provides information related to efforts to decrease maternal and infant mortality:  
[www.afro.who.int/en/divisions-a-programmes/drh/making-pregnancy-safer.html](http://www.afro.who.int/en/divisions-a-programmes/drh/making-pregnancy-safer.html)

## **MATERIALS**

For the class:

- Computers with internet access
- Computer, projection screen and speakers (for class viewing of online/downloaded video segments)

## **BEFORE THE LESSON**

Prior to teaching this lesson, you will need to:

Preview all of the video segments and websites used in the lesson.

Download the video clips used in the lesson to your classroom computer(s) or prepare to watch them using your classroom’s Internet connection.

Bookmark all websites which you plan to use in the lesson on each computer in your classroom. Using a social bookmarking tool such as [del.icio.us](http://del.icio.us) or [diigo](http://diigo) (or an online bookmarking utility such as [portaportal](http://portaportal)) will allow you to organize all the links in a central location.

## **INTRODUCTORY ACTIVITY**

1. Ask students to think about facilities in their community which provide services for the public (for example, libraries, post offices, museums, community centers, schools, hospitals, etc.) Ask students to think about how their answers might differ if they lived in another part of the country or if they lived in another country. Ask students to think specifically about how far away the closest hospital is located. Ask students how that might vary from one place to the next. Let students know this lesson explores access to health facilities and life-saving health services and how they vary from country to country.

2. Let students know the first country they will be exploring is Mozambique. Ask students to locate Mozambique on a map. Introduce the video segment Rural Health Care in Mozambique. Explain: This segment from the PBS program **Wide Angle: Birth of a Surgeon** describes the healthcare at the Hospital Rural de Manjacaze, a rural hospital in Mozambique.
3. Before showing the segment, ask students to make predictions about healthcare conditions in the rural areas of Mozambique. Ask students to write down these predictions to review later.
4. As they view the segment, ask students to write down similarities and differences between the Manjacaze facility and the hospital(s) in their community.
5. Play Rural Health Care in Mozambique. After showing the segment, ask students to list some similarities between the Manjacaze facility and the hospital(s) in their community. (*Possible answers: The medical staff wears uniforms. They use gloves. There is a hospital administrator. The hospital performs surgeries.*) Ask students to describe how the Manjacaze hospital is different from their local hospital. (*Possible answers: The only way most people get to the hospital is by walking there, even when they live very far away. Some walk for several days to get to the hospital. The hospital is very small, there are no obstetricians and the staff reuses the gloves. The power is unreliable and goes out almost every day, causing the hospital to schedule surgeries in the morning when the power is more reliable. Relatives sit outside on the ground rather than on furniture and often sleep outside when waiting for patients.*)
6. Ask students to discuss how the conditions shown in the video compare with the predictions they made about healthcare conditions in the rural areas of Mozambique.

## LEARNING ACTIVITY

1. Discuss the role of an obstetrician in a hospital. (*An obstetrician is a doctor who delivers babies and performs cesareans and other necessary procedures before, during and following childbirth.*) Ask students how many obstetricians were in the Manjacaze hospital? (*Zero.*) Remind students that the hospital serves more than 175,000 people. Ask students what problems the lack of an obstetrician might cause. (*There is no one qualified to perform necessary surgeries and deal with complications during childbirth.*)
2. Let students know Mozambique is a country with a very high rate of death during childbirth and there are very few obstetricians who work outside of Maputo, the capital city. Ask students to brainstorm ways the country could solve this problem of

having a shortage of qualified people to perform necessary lifesaving surgeries during childbirth. Write down the students' responses.

3. Ask students to view the next video segment to find out how a woman's risk of dying during pregnancy and delivery in Mozambique compares to women in developed countries (such as the US) and what Mozambique is doing to decrease the death rate.
4. Play Solving the Doctor Shortage in Mozambique. After showing the video segment, ask students what a woman's risk of dying in pregnancy and delivery in Mozambique is compared to women in developed countries such as the US. (*Women in Mozambique have a 160 times greater risk of dying from complications related to pregnancy and giving birth than women in the developed world.*) Ask students to describe how Mozambique is trying to combat this problem. (*The government is training midwives and nurses to perform cesareans, hysterectomies and other lifesaving surgeries.*)
5. Ask students what they think about the initiative in Mozambique to train midwives and nurses to do surgeries originally performed only by doctors.
6. Let students know in the next segment they will watch Aaron Brown interview Dr. Margaret Chan, the Director-General of the World Health Organization (WHO), about the Mozambique effort. Ask students to view the next segment to find out what she thinks of this approach.
7. Play Making Women's Health a Priority. After playing the segment, ask students to summarize Dr. Chan's view about Mozambique's approach to solving the doctor shortage by training midwives to perform surgeries. (*She thinks it is a good idea, since it is a practical way to get more people trained to handle complications which arise during childbirth. She believes it is important to try creative, "out of the box" solutions to existing problems.*)
8. Ask students which populations Dr. Chan feels are the most important ones to target for improved health care and why she feels that way. (*She believes it is most important to improve health care for residents of sub-Saharan Africa and women. She says sub-Saharan Africa has about 25% of the world's disease burden, but only about 3% of the world's health manpower and is need of 1 million doctors. She mentions one woman dies from complications from pregnancy and childbirth every minute. She believes maternal mortality rate is a sensitive indicator for whether a country's health system is working.*)
9. Discuss what Dr. Chan says needs to happen in order for health care to improve. (*She says governments need to be held accountable for providing services and that W.H.O- the World Health Organization- cannot replace the government. She*

*believes the government must be supported with technical know-how and capacity building and resources to improve the health of women.)*

10. Ask students what they think about Dr. Chan's view that it is important to focus on improving women's health care, in order to better the health conditions for everyone.

### **CULMINATING ACTIVITY**

1. Remind students about what Dr. Chan said in the previous clip about governments' roles in providing for the health of their citizens:  
*"The government should be held accountable for providing services. W.H.O (the World Health Organization) cannot replace the government. Not at all. The government must be made aware of their situation. They must be supported with technical know-how, with capacity building and with the resources to improve the health of women."*
2. Explain that the Universal Declaration of Human Rights, adopted by the United Nations in 1948, states everyone has the right to medical care. It states (Article 25):  
*"(1) Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control. (2) Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection."* (To view the Universal Declaration of Human Rights, go to: [www.un.org/en/documents/udhr/index.shtml](http://www.un.org/en/documents/udhr/index.shtml).)
3. Let students know about the Declaration of Alma-Ata (1978), created by the International Conference on Primary Health Care (in what is now Almaty, Kazakhstan), which states governments have a responsibility for the health of their people. The Declaration states: *"Governments have a responsibility for the health of their people which can be fulfilled only by the provision of adequate health and social measures. A main social target of governments, international organizations and the whole world community in the coming decades should be the attainment by all peoples of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life. Primary health care is the key to attaining this target as part of development in the spirit of social justice."* (For more details, go to: [www.who.int/hpr/NPH/docs/declaration\\_almaata.pdf](http://www.who.int/hpr/NPH/docs/declaration_almaata.pdf).)
4. Ask students to brainstorm things governments could do to improve the health of their citizens. Write down all answers.
5. Let students know they will select a country for their final project and research efforts its government has taken within the past 200 years to improve the health of

its citizens. Ask each student or small group of students to pick one country to research and write about. Instruct students to write reports, which include the following:

- The name of the country
- The health problem(s) it was facing
- The actions the government took to improve the situation
- The role of non-profit organizations or other non-governmental organizations to help in this effort
- The results/impact of those actions

Here are some possible countries for students to research:

- Costa Rica
- New Zealand
- Oman
- People’s Republic of China (“barefoot doctors”)
- Sri-Lanka
- Sweden
- Tanzania
- Venezuela

6. Ask students to present the findings of their research, highlighting how government actions have impacted the country’s health. *Possible topics to include in the discussion:*

- **Costa Rica-** *Costa Rica’s 1949 constitution abolished its national army, which made it possible for increased funding and attention to go towards education, health and other social programs. As a result of the General Health Law of 1973, all health treatment services became controlled by the national social security program. (For more details, go to: [www.cehat.org/rthc/paper5.htm](http://www.cehat.org/rthc/paper5.htm))*
- **New Zealand-** *New Zealand was one of the first countries to provide universal health care. Its hospitals are public and treat citizens and permanent residents free of charge.*
- **Oman-** *The Ministry of Health provides universal healthcare automatically to all citizens and to expatriates working in the public sector. The life expectancy in Oman as of 2007 was 71.6 and an infant mortality rate of 9 per 1000 live births. (For more details, go to: [http://en.wikipedia.org/wiki/Health\\_care\\_system](http://en.wikipedia.org/wiki/Health_care_system) )*
- **People’s Republic of China-** *In 1965 the Chinese government began training thousands of young farmers to provide basic health care in rural areas. These medical workers, known as “barefoot doctors,” spent half the working day providing health care and the rest of the time farming. By the 1970s, over one million people had been trained as “barefoot doctors.” Private medicine has now replaced the barefoot doctors. For more information go to: Explore the following online exhibit:*

[http://apps.nlm.nih.gov/againsttheodds/exhibit/community\\_health/serving\\_community.cfm](http://apps.nlm.nih.gov/againsttheodds/exhibit/community_health/serving_community.cfm)

- **Sri Lanka**- Sri Lanka reduced maternal deaths from 500 to 60 maternal deaths per 100,000 live births in 1950 to 60 per 100,000 in 2007. For more details, go to: [www.givewell.org/international/technical/programs/maternal-mortality](http://www.givewell.org/international/technical/programs/maternal-mortality)
- **Sweden**- A national effort to train midwives to use medical instruments and work independently of doctors was launched in Sweden in the 19<sup>th</sup> Century. The trained midwives played a critical role in decreasing maternal mortality in the country. Sweden is now one of the safest countries in the world for women to give birth. For more details, view: <http://ajph.aphapublications.org/cgi/content/full/94/8/1312>  
The producer and director of *Birth of a Surgeon* (both from Sweden) discuss their reasons for creating the film and compare the history of combating maternal mortality in Sweden with the current situation in Mozambique at: [www.pbs.org/wnet/wideangle/episodes/birth-of-a-surgeon/video-filmmaker-notes/1752/](http://www.pbs.org/wnet/wideangle/episodes/birth-of-a-surgeon/video-filmmaker-notes/1752/)
- **Tanzania**- Between 1999 and 2007 access to health services improved in Tanzania (especially among the poorest Tanzanians) and infant mortality dropped from 99 deaths per 1000 live births to 58 and under-five mortality dropped from 146 deaths per 1000 live births to 91. For more details, go to: [www.reliefweb.int/rw/rwb.nsf/db900sid/EGUA-87QSLC?OpenDocument](http://www.reliefweb.int/rw/rwb.nsf/db900sid/EGUA-87QSLC?OpenDocument) (Relief Web/ Learning from Maternal and Child Health Successes in Africa)
- **Venezuela**- Healthcare in Venezuela improved dramatically between 1940 and 1990, due in large part to government efforts. Life expectancy increased from 43 years to 70 years and the death rate decreased sharply. (For more info., go to: [www.mapsofworld.com/venezuela/health-care](http://www.mapsofworld.com/venezuela/health-care) )

7. Lead a discussion about how governments' decisions impact the health of their people. Ask students to reflect upon what they have learned from the international examples.
8. *Optional*: Ask students to find out more about health care and access to health care in the US and to compare it to the international examples discussed during the lesson.