#### GIGI WOLF, FEDERAL RESERVE BANK of KANSAS CITY

#### **LESSON DESCRIPTION:**

This lesson will introduce students to health care practices and services, as well as healthcare professions, including differences across geographic regions and income levels. Students will work collaboratively to craft a plan that promotes quality health care after hearing a story about the scarcity of health care in developing countries and analyzing global health care data. Students will learn about careers in the healthcare industry, including median wages, human capital needed, and the education requirements for each position. Extension opportunities will enable students to further evaluate health care-related information, present their recommendations orally, and/or opine solutions and views on specific areas of health care.

**GRADE LEVEL: 4-7** 

**CONCEPTS:** Healthcare, health care, scarcity, allocation, incentive, standard of living, low-to-moderate-income (LMI), median, human capital, productive capacity

#### **OBJECTIVES:**

Students will be able to:

- 1. Recognize how scarcity, low-to-moderate-income, and standard of living correlate to health care conditions.
- 2. Discover how education and training correlate to potential earnings.
- 3. Construct a visual interpretation of health care knowledge and experience.
- 4. Develop a plan promoting quality health care in collaborative groups.
- 5. Classify healthcare careers based on the minimum level of education required.
- 6. Interpret global health care data and information.
- 7. Summarize the human capital involved with various healthcare positions. (extension activity)
- 8. Analyze health care-related solutions to create a collective strategy. (extension activity)
- 9. Defend their views on various aspects of health care orally. (extension activity)

#### TIME REQUIRED:

Two 60-minute class periods

#### **MATERIALS:**

- Mimi's Village: And How Basic Health Care Transformed It by Katie Smith Milway (ISBN: 978-1554537228)
- Visual 1: Childhood Illnesses Word Cloud
- Visual 2: Healthcare vs. Health Care
- Visual 3: Mimi's Village Map and Glossary
- Visual 4: Education Requirement
- Visual 5: Healthcare Careers Activity Key
- Handout 1: Health Care Word Web, one for each student
- Handout 2: Global Perspectives on Health Care, one for each student
- Handout 3: Health Care Plan Outline, one for each student
- Handout 4: Our Health Care Plan, one for each group (if applicable)
- Handout 4: Our Health Care Plan Answer Key
- Handout 5: Healthcare Careers Activity Cards, cut apart
- Handout 6: Global Health Care Review, one for each student (extension activity)
- Handout 6: Global Health Care Review Answer Key (extension activity)



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- Handout 7: Reflections on Health Care, one for each student (extension activity, grades 6-7)
- Handout 7: Reflections on Health Care Answer Key (extension activity, grades 6-7)

#### PREPARATION:

- Get a copy of the book, Mimi's Village: And How Basic Health Care Transformed It by Katie Smith Milway.
- Use the formula noted after procedure 2 to determine the calculation in procedure 2.
- Make copies of Handouts 1, 2, and 3 for every student.
- Make copies of Handout 4 for each small group. (if applicable)
- Copy Handout 5: Healthcare Careers Activity Cards and cut apart (24 cards).
- Display Visual 4: Education Requirement around the classroom, each page as far apart as possible.
- Make copies of Handouts 6 and 7 for extension activities, one for every student.

#### PROCEDURE:

#### CLASS PERIOD ONE - HEALTH CARE STORY AND START OF HEALTH CARE PLAN

- 1. Tell students that according to a worldwide United Nations report, one child or youth died every 4.4 seconds in 2021 due to lack of quality health care.
- 2. Display Visual 1: Childhood Illnesses Word Cloud.
- 3. Invite students to count how many different illnesses they can find.
- 4. After about ten seconds, share that there are fifteen different illnesses in the word cloud and that they might be familiar to students because they have experienced or heard about them.
- 5. Ask students to stand if they have ever had a common cold.
- 6. Ask students to remain standing if they have ever had a fever.
- 7. Ask students to remain standing if they have ever had strep throat.
- 8. Ask students to remain standing if they have ever had the flu.
- 9. Ask students to remain standing if they have ever had COVID.
- 10. Ask those who are still standing (if none, ask the entire class) how they started to feel better or overcame those illnesses.
- 11. Display Visual 2: Healthcare vs. Health Care and read aloud the definitions at the top.
- 12. Distribute Handout 1: Health Care Word Web to each student.
- 13. Refer to Visual 2 again and ask students to look at the word web at the bottom of the page.
- 14. Tell students that they will use the handout to create a word web of their own that includes anything they already know about health care.
- 15. Remind students that **health care** (two words) is the effort or actions made by trained professionals to diagnose, treat, and help prevent disease, illness, injury, and other health issues versus **healthcare** (one word), which is an organized system or industry that provides health services, including medicine and other remedies, to individuals in a variety of work settings.
- 16. Explain that as they add what they have experienced or heard about health care, they should use the lines provided on the handout and add more lines as needed.
- 17. As an example, let students know that their word web can include:
  - Each type of medicine or remedy they have ever had.
  - Anything a parent or medical professional has done to help them feel better when sick.
  - All that doctors, nurses, or other medical professionals have done during a doctor visit.
  - Any preventative measures they have experienced to keep from getting sick, etc.
- 18. Give students about five minutes to start their word web.
- 19. Share that they will have more time to work on their word web as you read a story called *Mimi's Village*.
- 20. Explain that the story is about a girl who lives with her family in western Kenya, a country located in East Africa.
- 21. Display Visual 3: Mimi's Village Map and Glossary.



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- 22. Share that the map shows where Mimi lives and the glossary can help students better understand some of the words they will hear in the story that are part of Mimi's Bungoma culture, where people speak Swahili and Luyha languages.
- 23. Explain that in this part of the world and in other developing countries, there are usually low incomes per household and economies with little industry, instability, and low funding towards education, health care, etc.
- 24. Ask students what effect low funding might have on health care? (Answers will vary, but may include: doctors or medical professionals may not be trained or available; medical care may be too expensive for those who need it; lack of medicine could cause more sickness or illnesses to worsen, etc.)
- 25. Tell students that Mimi's village has a scarcity of health care.
- 26. Scarcity is when there is not enough of something for all who want it.
- 27. Explain that in the story there is an unequal allocation of health care.
- 28. **Allocation** refers to ways to distribute goods, services, or resources.
- 29. Invite students to listen as you read for examples of health care in the story and to add them to the word web handout.
- 30. Begin reading Mimi's Village: And How Basic Health Care Transformed It aloud.
- 31. Stop reading at the end of page 10 and ask the following questions:
  - What illness does Mimi's little sister have? (Answer: stomach ache; she is vomiting, etc.)
  - What type of health care does Nurse Tela provide? (Answer: she gives Nakkissi medicine through a dropper; she weighs babies; she gives expectant mothers vitamins; she recommends healthy habits; etc.)
  - What is scarce in Mimi's village? (Answer: clean water; medical clinic or professionals, medicine, etc.)
- 32. Ask students to continue listening for examples of health care as you read and to continue adding them to their word web handout.
- 33. Continue reading aloud until the end of page 25.
- 34. Ask students the following questions:
  - What was the allocation of healthcare professionals in the story? (Answer: they were not available in Mimi's village at first; Mimi's family had to walk a long distance to the nearest clinic/nurse until the end, etc.)
  - What were some examples of health care provided in the story? (Answer: Nurse Tela took children's pulses, checked their throat/tongue, weighed babies, provided vaccinations, and gave medicine; she used boiled water and clean blankets for birthing; she recommended washing vegetables and fruit in bleach water to disinfect them; she suggested adding bleach to sanitize drinking water; she promoted eating vegetables as part of a healthy diet; she gave them mosquito nets; etc.)
  - What is Mimi's dream at the end of the story? (Answer: to follow Nurse Tela's footsteps; to become a nurse or doctor or to work in the medical field)
- 35. Remind students that medical or health care services were not allocated in Mimi's village at the beginning of the story.
- 36. Explain that this gave Mimi and others in her village an incentive to get better access to health care.
- 37. **Incentives** are things that influence people's behavior.
- 38. Ask students what incentive Mimi had to choose the healthcare industry for her career? (Answer: she wanted to provide help to those in need like Nurse Tela; she wanted to offer medical services to her family and others around her; she wants to improve medical conditions in her village)
- 39. Explain that the standard of living in Mimi's village and other developing countries is lower than it is in the United States.
- 40. **Standard of living** is the measure of goods and services available to each person in a country or a measure of economic well-being.
- 41. Explain that when the standard of living is higher, the economic well-being of those living there is better.
- 42. Tell students that the standard of living in Mimi's village and other low-to-moderate-income (LMI) countries is lower than in the United States, so their economic well-being or access to jobs, average income, and availability of goods and services is lower than the U.S.
- 43. **Low-to-moderate-income (LMI)** countries are those where the household income is approximately 50-80% of the median income in that geographic area.
- 44. Tell students that the **median** is the middle number of a set of numbers or the number that divides data into two equal halves.
- 45. Share that Mimi's village in Kenya and other countries in Africa, especially those that are sub-Saharan or south of the Sahara Desert, are considered LMI.
- 46. Explain that according to the World Health Organization, each U.S. dollar invested in health care can bring 20 times the benefit in LMI countries.

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- 47. Ask students why they think a dollar goes further or can buy more in LMI countries. (Answers will vary, but may include: goods and services cost less in developing countries; there are not as many goods and services in LMI countries; it costs less to live in LMI countries: etc.)
- 48. Ask students to recall the story and respond to the following questions:
  - Other than health care, what other goods and services were not readily available in Mimi's country? (Answers will vary, but may include: transportation; foods that are not grown locally; clean water; insect repellent; etc.)
  - Do you think Mimi's village had quality health care? Why or why not? (Answers will vary)
- 49. Distribute Handout 2: Global Perspectives on Health Care, one to every student.
- 50. Divide students into small groups (preferably groups of three).
- 51. Ask groups to work together to review the handout and to use the information included to brainstorm what quality health care looks like.
- 52. Invite students to continue using their word web on Handout 1 to capture ideas from their group discussion, including the back of the page if necessary.

Teacher Note: To help remind students of their group's objective, write this question on the board or where all students can see it, "What should quality health care look like?"

- 53. Inform students that they will have about 10 minutes to discuss and take notes.
- 54. After about 10 minutes, distribute Handout 3: Health Care Plan Outline, one to every student.
- 55. Tell students they will continue to work with their group to create a written plan that summarizes their views on quality health care.
- 56. Explain that they will have time to work on their plan during class and will be responsible for finalizing one part individually and two parts (the introduction and conclusion) together.
- 57. Tell students that although each group member is responsible for writing one part of the final plan, all group members should brainstorm ideas for all sections.
- 58. Let students know that Handout 3 is for note taking and their final plan will be written separately.

Teacher Note: The final plans can be handwritten on Handout 4: Our Health Care Plan or typed, depending on teacher preference.

- 59. Read the instructions and guestions on handout 3 aloud.
- 60. Remind students that **incentives** are things that influence people's behavior and **allocation** is a way to distribute goods, services, or resources
- 61. Ask students to begin by identifying which group member will finalize sections 2, 3 and 4 of their plans and to write those names on Handout 3 on the space provided next to each section.
- 62. Allow students to work on their group's plan until there are a few minutes of class time left for closure.

#### **CLASS PERIOD ONE CLOSURE:**

- 63. Remind students to write the name of the person(s) responsible for each section of their plan on Handout 3.
- 64. Tell students to keep all their handouts and notes for the next class period.
- 65. Share that groups will finish their health care plans in the next class period.
- 66. Ask students the following questions:
  - What is the difference between healthcare (with one word) and health care (with two words)? (Answer: Healthcare (one word) is an organized system or industry that provides health services, including medicine and other remedies, to individuals in a variety of work settings, such as hospitals, clinics, offices, out-patient and birthing centers, laboratories, emergency facilities, nursing and patient homes, etc. and health care (two words) is the effort or actions made by trained and licensed professionals to diagnose, treat, and prevent disease, illness, injury, and a range of health-related issues with the goal of maintaining wellness, restoring health, and improving one's quality of life.)



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- How does the standard of living differ in LMI countries compared to developed nations such as the U.S.? (Answers will vary, but may include: it is less or lower; jobs are not as available or there are fewer types of jobs available; income is generally lower or less than the median; there are fewer goods and services available, etc.)
- Would a more equal allocation of health care benefit everyone, even those who are not living in LMI countries? (Answers will vary.)

#### CLASS PERIOD TWO - HEALTHCARE CAREERS AND FINALIZE HEALTH CARE PLAN

- 67. Ask students if quality health care is possible if there is a shortage of healthcare professionals. (Answers will vary.)
- 68. Remind students that in the story *Mimi's Village*, there was only one healthcare professional, Nurse Tela; but she began training others to provide basic health care services when she was away.
- 69. Display Visual 2 again and read aloud the definitions of healthcare (one word) versus health care (two words).
- 70. Explain that according to the Bureau of Labor Statistics, healthcare occupations overall are expected to grow 13 percent between 2021 and 2031, resulting in about two million new jobs during that decade. However, by 2030, the World Health Organization estimates that there will still be a shortage of healthcare workers, of about fifteen million, if every person across the globe has access to a full range of quality health care.
- 71. Ask students to name careers in the healthcare industry. (Answers will vary, but may include: doctor, nurse, dentist, pharmacist, optometrist, orthodontist, therapist, surgeon, etc.)
- 72. Ask students what skills or characteristics might be useful for healthcare workers to have. (Answers will vary, but may include: good communication skills, organizational skills, knowledge about different medicines, physical endurance, hand-eye coordination, ability to work long hours, being able to think critically, etc.)
- 73. Share that the skills and knowledge people receive through education, experience, and training is called **human capital**.
- 74. Explain that human capital needed for various healthcare jobs may be similar but can also differ depending on the position and responsibilities of that job.
- 75. Tell students that they are going to participate in an activity to learn more about the human capital needed for certain healthcare positions, specifically the level of education required, and job responsibilities.
- 76. Distribute Handout 5: Healthcare Careers Activity Cards, one card to each student.
- 77. Ask students to read their card and think about the minimum education level that would be required for that position or someone with those responsibilities.
- 78. Invite students to take the next 30 seconds to find the required education level for their position (Visual 4 posted around the room) and to stand in front of that sign.
- 79. Go around the room and count aloud how many students are standing next to each sign, starting with high school diploma up to doctorate/professional degree.
- 80. Tell students that there should be four jobs connected to each education level.
- 81. Ask students to rethink their choice and to switch if they have changed their mind.
- 82. Invite students to take the next 2-4 minutes to talk amongst themselves, sharing their position and responsibilities, to try to reach agreement on the four positions that are correctly matched to their education level.
- 83. Tell students they are allowed to switch one last time after they talk with their group.

Teacher Note: If there are more or less than four students standing next to each sign at this point, let them remain.

- 84. Display Visual 5: Healthcare Careers Activity Key and read the following aloud:
  - The positions that require a high school diploma are in red.
  - The positions that require some sort of certification or specialized training after high school are in orange.
  - The jobs that require an associate degree, which is typically two years of college, are in yellow.
  - The jobs that require a bachelor's degree, generally four years of college, are in green.
  - Careers that require a master's degree, usually two to three years more after a bachelor's, are in blue.
  - Careers that require another few years beyond a master's degree, also known as a doctorate or professional degree, are in purple.

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- 85. Invite one student near each sign to use Visual 5 to read aloud the four positions that match their education level (stating just the name of each job).
- 86. After all six groups have finished, ask students to raise their hand if they are standing next to the correct sign (using Visual 5 as a guide).
- 87. Ask students to keep their hand raised if they chose their required education level correctly from the start of the activity.
- 88. Invite students to retake their seats.
- 89. Share that according to the Bureau of Labor Statistics, the median wage for healthcare workers, such as registered nurses, physicians, surgeons, and dental hygienists, was \$75,040 annually in 2021.
- 90. Remind students that the **median** is the middle number of a set of numbers or the number that divides data into two equal halves.
- 91. Explain that the median wage for healthcare positions was higher than the median wage for all occupations combined, by about \$30,000 per year.
- 92. Ask students to look at Visual 5 again to find the annual median wage for the position on their card.
- 93. Tell students that the dollar figures in the second to last column from the right represent the annual median wage for that position.
- 94. Ask students to stand if their annual median wage is higher than \$75,000.
- 95. Ask students to remain standing if their position only requires an associate degree or less. (Answer: no one should remain standing because there are no positions that fit both criteria.)
- 96. Explain that the positions that earn \$75,000 per year or more require at least a master's degree, which again is equivalent to an additional two-three years after receiving a bachelor's degree, which usually takes about four years beyond high school.
- 97. Ask students to refer to Visual 5 again to respond to the following questions:
  - According to Visual 5, what level of education does one need to earn \$100,000 or more a year? (Answer: a master's degree or a professional/doctoral degree)
  - What is the highest earning position with an associate degree? What is the annual median wage? (Answer: Radiologic Technologist; \$61,980)
  - Why do you think this position earns more than some jobs that require a bachelor's degree, such as a dietician or lab technician? (Answers will vary, but may include: radiology involves more training/knowledge; the technology is more advanced; patients are involved, so extra training on their safety might be required; etc.)
  - Are any of the positions unnecessary in achieving quality health care? (Answers will vary)
- 98. Tell students to take out their handouts and notes from the previous class period.
- 99. Ask students to get into the same small groups they had previously and to continue working on their health care plan.
- 100. Give students until the last few minutes of class to finish their plan, including sharing when they have 10, 5, and 1 minute left.

#### **CLASS PERIOD TWO CLOSURE:**

101. Collect final plans from groups.

102. Ask students to respond to the following:

- Name examples of building human capital in the story about Mimi's village. (Answer: Mimi's mother learning how to deliver babies; mothers learning to weigh babies and dispense medicine; Nurse Tela showing Ma how to make medicine Nakkissi needs to get better; families learning how to wash their vegetable and fruit to kill germs/disease; disinfecting water to make it safe for drinking; learning to cook new recipes that include vegetables and more nutrition; etc.)
- Define the median annual wage. (Answer: the middle number of a set of wages or the number that divides salary data into two equal halves)
- How do healthcare (with one word) and health care (with two words) differ? (Answer: Healthcare (one word) is an organized system or industry that provides health services, including medicine and other remedies, to individuals in a variety of work settings, such as hospitals, clinics, offices, out-patient and birthing centers, laboratories, emergency facilities, nursing and patient homes, etc. and health care (two words) is the efforts or actions made by trained and licensed professionals to diagnose, treat, and prevent disease, illness, injury, and a range of health-related issues with the goal of maintaining wellness, restoring health, and improving one's quality of life.)
- What incentives do future workers have to pursue a healthcare career? (Answers will vary, but may include: the potential to earn a good salary; the opportunity to help people; there will be such a great need that they won't have a hard time getting a job; having knowledge about quality health care that can benefit themselves and their families; etc.)

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#### ASSESSMENT:

• Use Handout 4: Our Health Care Plan Answer Key to review student work.

#### **EXTENSION ACTIVITIES:**

#### **ACTIVITY 1**

- Ask groups to present their final health care plan to the rest of the class.
- Use Handout 4: Our Health Care Plan Answer Key to evaluate group presentations.
- After all plans have been presented, have a class discussion about the similarities and differences between the plans.
- If desired, continue by having the class work together to formulate one "ideal" health care plan on the board/shared space that consists of the class's interpretation of the best parts of all groups' plans.

#### **ACTIVITY 2**

- Distribute Handout 2: Global Perspectives on Health Care and Handout 6: Global Health Care Review, one of each to every student.
- Ask students to complete Handout 6 individually or in small groups.
- Have students turn in their completed handouts for grading using Handout 6: Global Health Care Review Answer Key or use the
  answer key to review answers as a class with students grading their own or another student's work.

#### **ACTIVITY 3**

- For 6-7 grade students, distribute Handout 7: Reflections on Health Care, one to each student.
- Have students work individually or in small groups to select one of the questions on the handout to respond to orally.
- Give students approximately fifteen minutes to brainstorm responses and to prepare to present.
- Inform students that each presentation should be at least 1.5 minutes and no more than 3 minutes.
- If completed as a group, inform students that every group member must contribute to the oral presentation.
- Invite students/groups to share their question and present their response while being timed.
- Use Handout 7: Reflections on Health Care Answer Key to assess each student's/group's work.

#### **ACTIVITY 4**

- Have students go to the Bureau of Labor Statistics' Occupational Outlook Handbook to pick a healthcare position of their choice, other than those featured on Visual 5: Healthcare Careers Activity Key, https://www.bls.gov/ooh/healthcare/home.htm.
- Ask students to identify the median wage, job summary, and human capital (experience, training, and/or education) needed for their position, including actions/activities they could develop to improve their human capital for the job they choose.
- Tell students to share what they learned through a written summary, a presentation to the class, or verbally in a small group.
- Invite students to categorize themselves around the room using Visual 4: Education Requirement based on their research.

#### **COMMON CORE CONTENT STANDARDS:**

ELA-Reading for Literature

Key Ideas and Details

 Grade 4 - Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

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#### **ELA-Reading for Information**

Integration of Knowledge and Ideas

- Grade 4 Interpret information presented visually, orally, or quantitatively and explain how the information contributes to an understanding of the text in which it appears.
- Grade 5 Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.

#### **ELA-Writing**

#### Text Types and Purposes

- Grade 4 Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
- Grade 5 Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
- Grade 6 Write arguments to support claims with clear reasons and relevant evidence. (Extension activity)
- Grade 7 Write arguments to support claims with clear reasons and relevant evidence. (Extension activity)
- Grade 4 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- Grade 5 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- Grade 6 Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
- Grade 7 Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.

#### **ELA-Writing**

#### Production and Distribution of Writing

- Grade 4 Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.
- Grade 5 Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.
- Grade 6 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- Grade 7 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- Grade 4 With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.
- Grade 5 With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
- Grade 6 With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
- Grade 7 With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.

#### **ELA-Writing**

#### Research to Build and Present Knowledge

- Grade 4 Recall relevant information from experiences or gather relevant information from print and digital sources; take
  notes and categorize information and provide a list of sources.
- Grade 5 Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work and provide a list of sources.
- Grade 4 Draw evidence from literary or informational texts to support analysis, reflection, and research.



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- Grade 5 Draw evidence from literary or informational texts to support analysis, reflection, and research.
- Grade 6 Draw evidence from literary or informational texts to support analysis, reflection, and research.
- Grade 7 Draw evidence from literary or informational texts to support analysis, reflection, and research.

#### **ELA-Speaking and Listening**

#### Comprehension and Collaboration

- Grade 4 Engage effectively in a range of collaborative discussions with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.
- Grade 5 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
- Grade 6 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.
- Grade 7 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 7 topics, texts, and issues, building on others' ideas and expressing their own clearly.

#### **ELA-Language**

#### Conventions of Standard English

- Grade 4 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
- Grade 5 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
- Grade 6 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
- Grade 7 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
- Grade 4 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
- Grade 5 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
- Grade 6 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
- Grade 7 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

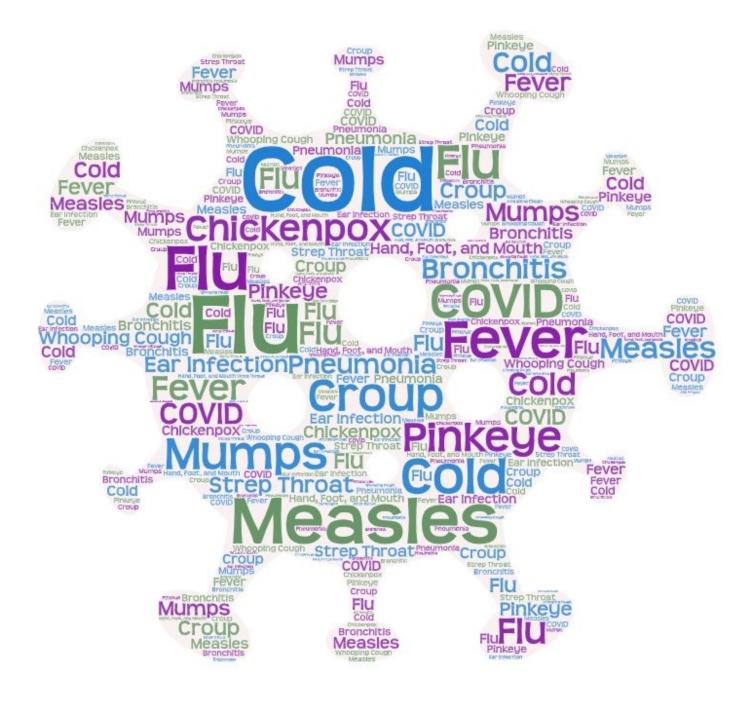
#### **VOLUNTARY NATIONAL ECONOMIC STANDARDS**

- Content Standard 1: Scarcity Productive resources are limited. Therefore, people cannot have all the goods and services
  they want; as a result, they must choose some things and give up others.
- Content Standard 3: Allocation Different methods can be used to allocate goods and services. People acting individually or
  collectively must choose which methods to use to allocate different kinds of goods and services.
- Content Standard 4: Incentives People usually respond predictably to positive and negative incentives.



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#### VISUAL 1: CHILDHOOD ILLNESSES WORD CLOUD



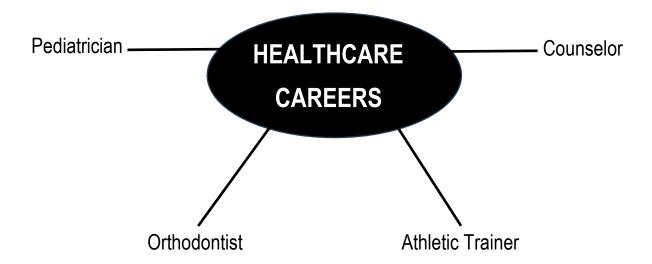


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#### VISUAL 2: HEALTHCARE VS. HEALTH CARE

**HEALTHCARE** – an organized system or industry that provides health services, including medicine and other remedies, to individuals in a variety of work settings, such as hospitals, clinics, offices, out-patient and birthing centers, laboratories, emergency facilities, nursing and patient homes, etc.

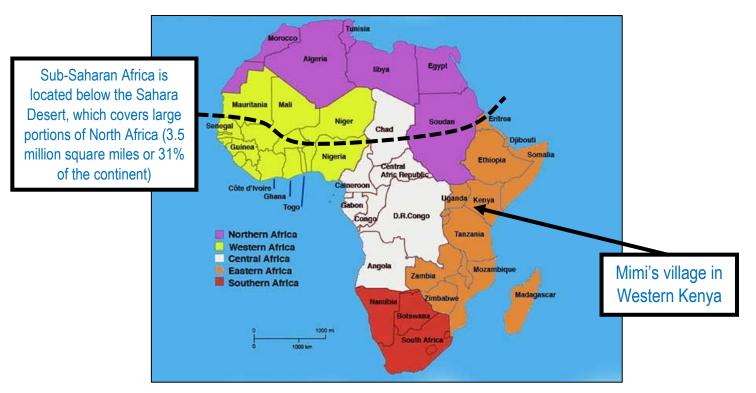
**HEALTH CARE** - the efforts or actions made by trained and licensed professionals to diagnose, treat, and prevent disease, illness, injury, and a range of health-related issues with the goal of maintaining wellness, restoring health, and improving one's quality of life.





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#### VISUAL 3: MIMI'S VILLAGE MAP AND GLOSSARY



#### **Glossary**

Dik-dik: a very small antelope

Irio: a dish made of mashed potatoes, peas, and corn

Kamabeka: a dance common to the Bungoma region

Kanga: Swahili word for a cloth wrap that has a border on all four sides

Karibu: Swahili word for welcome

Kitenge: Swahili word for a cloth wrap with a border only on one side

Litungu: harp-like instrument native to Western Kenya

Machete: broad, heavy knife used to cut grasses and shrubs, slaughter animals, and defend people

Maize: a type of corn

Malaria: a fever caused by a parasite that is carried by mosquitoes

Ugali: maize porridge



VISUAL 4: EDUCATION REQUIREMENT (PAGE 1 OF 6)

# HIGH SCHOOL DIPLOMA



VISUAL 4: EDUCATION REQUIREMENT (PAGE 2 OF 6)

# POST HIGH SCHOOL CERTIFICATE



VISUAL 4: EDUCATION REQUIREMENT (PAGE 3 OF 6)

# ASSOCIATE DEGREE



VISUAL 4: EDUCATION REQUIREMENT (PAGE 4 OF 6)

# BACHELOR'S DEGREE



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VISUAL 4: EDUCATION REQUIREMENT (PAGE 5 OF 6)

# MASTER'S DEGREE



VISUAL 4: EDUCATION REQUIREMENT (PAGE 6 OF 6)

# DOCTORATE/ PROFESSIONAL DEGREE



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#### VISUAL 5: HEALTHCARE CAREERS ACTIVITY KEY

Audiologist	Diagnoses, manages, and treats patients with hearing or balance issues	\$78,950	DOC
Chiropractor	Evaluates and treats patients' neuromusculoskeletal systems	\$75,000	DOC
Dentist	Diagnoses and treats problems with patients' teeth, gums, and mouth	\$163,220	DOC
Dietician	Plans and conducts food service or nutritional programs to promote healthy living	\$61,650	BACH
Genetic Counselor	Assesses clients' risk for inherited conditions, such as birth defects	\$80,150	MAS
Home Health Aide	Monitors the condition of people with disabilities or chronic illnesses and helps them with daily living activities	\$29,430	HS
Laboratory Technician	Performs medical laboratory tests for the diagnosis, treatment, and prevention of disease	\$57,800	BACH
Massage Therapist	Treat clients by applying pressure to manipulate the body's soft tissues and joints	\$46,910	CERT
Medical Records Specialist	Compiles, processes, and maintains patient files	\$46,660	CERT
Medical Registrar	Advises organizations on computerized healthcare systems and analyzes clinical data	\$55,560	ASSOC
Occupational Health and Safety Specialist	Collects data, analyzes, and designs improvements on work environments and procedures	\$74,870	BACH
Optician	Helps fit eyeglasses and contact lenses, following prescriptions	\$37,570	HS
Orderly	Transports patients and cleans treatment areas	\$30,290	HS
Paramedic	Assesses injuries and illnesses, provides emergency medical care, and may transport patients to medical facilities	\$36,930	CERT
Pharmacy Technician	Helps pharmacists dispense prescription medication	\$36,740	HS
Physical Therapist Aide	Helps patients regain movement and manage pain after injuries and illnesses with supervision	\$49,180	ASSOC
Physician Assistant	Examines, diagnoses, and treats patients with supervision	\$121,530	MAS
Podiatrist	Provides medical and surgical care for foot, ankle, and lower leg problems	\$145,840	DOC
Prosthetist	Designs and fabricates medical supportive devices and measures and fits patients for them	\$75,440	MAS
Radiologic Technologist	Performs diagnostic imaging examinations on patients	\$61,980	ASSOC
Registered Nurse	Provides and coordinates patient care and educates patients and the public about various health conditions	\$77,600	BACH
Speech-Language Pathologist	Assesses and treats people who have communication disorders	\$79,060	MAS
Surgical Assistant	Helps with surgical operations	\$48,510	CERT
Veterinary Technician	Conducts medical tests that help diagnose animals' injuries and illnesses	\$36,850	ASSOC

Education/Training Requirement: HS = High School Diploma; CERT = Post High School Certificate; ASSOC = Associate Degree; BACH = Bachelor's Degree; MAS = Master's Degree; DOC = Doctorate or Professional Degree



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#### HANDOUT 1: HEALTH CARE WORD WEB

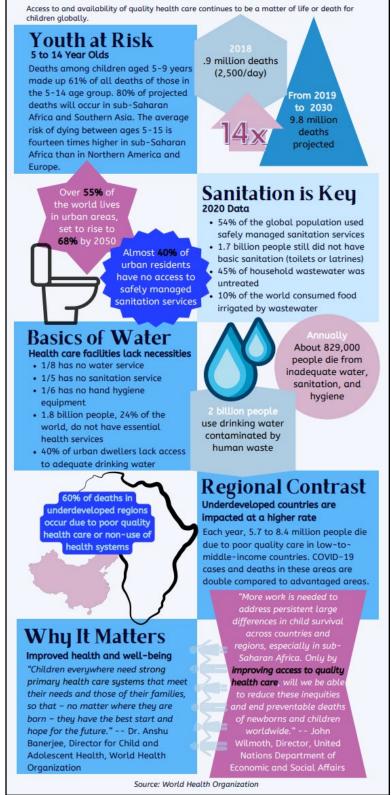




#### GIGI WOLF, FEDERAL RESERVE BANK of KANSAS CITY

#### HANDOUT 2: GLOBAL PERSPECTIVES ON HEALTH CARE

(PAGE 1 OF 2)





#### GIGI WOLF, FEDERAL RESERVE BANK of KANSAS CITY

# HANDOUT 2: GLOBAL PERSPECTIVES ON HEALTH CARE (PAGE 2 OF 2)

Basic health care includes educating people to prevent the spread of diseases and providing simple cures for common, treatable illnesses. Most importantly, it includes people being taught what to eat and drink and how to live to stay healthy. Basic health care can make a big difference in poor countries, where illnesses that are considered minor or even non-existent in other nations are some of the biggest killers. According to the World Health Organization, diarrhea causes 1 out of 5 deaths around the world and malaria kills one child in sub-Saharan Africa every 45 seconds.

Diseases such as tuberculosis, measles, and smallpox, which have been stamped out by vaccinations in many countries, continue to take lives in Africa and other parts of the developing world. In fact, every day, on average, 21,000 children under the age of five die, most of them from diseases that could have been prevented with basic health care.

According to the United Nations Children's Fund (UNICEF), there are four main threats to children's health in the developing world, including: lack of adequate food; diseases such as pneumonia, malaria, tuberculosis, and AIDS; lack of safe drinking water and basic sanitation, which can lead to diarrhea-related diseases; and poor health care of mothers, which often results in the poor health of their babies.

Country	Probability of Dying Ages 5 to 14	Malaria Caused Deaths
	(per every 1,000 children) in 2019	(per every 100,000 people) in 2019
Angola	16.50	42.95
Bangladesh	4.31	0.26
Cameroon	20.61	49.62
Central African Republic	23.40	97.82
Chad	23.83	77.86
Democratic Republic of the Congo	20.72	72.69
Ethiopia	6.65	7.36
Gambia	10.53	23.95
Ghana	10.67	39.10
Kenya	10.37	22.17
Madagascar	19.85	18.25
Mali	22.02	90.58
Mozambique	13.53	63.25
Namibia	13.03	0.72
Nigeria	19.82	92.19
Pakistan	7.55	0.25
Rwanda	14.02	24.49
Somalia	26.12	14.46
South Sudan	21.71	67.91
Sudan	7.10	15.44
Uganda	13.11	40.24
United States of America	1.16	0.00
Zambia	10.91	44.85
Zimbabwe	11.36	16.57

Excerpt from Mimi's Village: And How Basic Health Care Transformed It, page 28. Data source: World Health Organization.



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#### HANDOUT 3: HEALTH CARE PLAN OUTLINE (PAGE 1 OF 2)

Instructions: Work with your group to create a written plan using the questions outlined below. Each group member is responsible for finalizing one of the middle sections (2, 3, or 4) and all group members should finalize sections 1 (introduction) and 5 (conclusion). Note: if there are more than three group members, one member can be responsible for finalizing the introduction and all members can collaborate on the conclusion. The final plan should be written in complete sentences.

1.	INTRODUCTION	Member(s) Responsible
	What is the main purpose or central idea of your plan?	
	What key points are included in your plan?	
2.	<b>QUALITY HEALTH CARE COMPOSITION</b> What 5-7 things should quality health care include?	Member Responsible
•		
•		
•		
•		
•		
•		

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#### HANDOUT 3: HEALTH CARE PLAN OUTLINE (PAGE 2 OF 2)

3.	<b>QUALITY HEALTH CARE INCENTIVES</b> What are 3-5 incentives for offering quality health care?	Member Responsible
•		
•		
•		
_		
•		
4.	QUALITY HEALTH CARE ALLOCATION What are 2-3 ways quality health care could be allocated	Member Responsible more equally?
•		
•		
•		
5.	CONCLUSION Why should others consider your plan?	Member(s) Responsible



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HANDOUT 4: OUR HEALTH CARE PLAN (PAGE 1 OF 5)

**INTRODUCTION** 

Member(s) Responsible \_\_\_\_\_

HANDOUT 4: OUR HEALTH CARE PLAN (PAGE 2 OF 5)

QUALITY HEALTH CARE COMPOSITION Member Responsible \_\_\_\_\_

HANDOUT 4: OUR HEALTH CARE PLAN (PAGE 3 OF 5)

**QUALITY HEALTH CARE INCENTIVES** 

Member Responsible \_\_\_\_\_

HANDOUT 4: OUR HEALTH CARE PLAN (PAGE 4 OF 5)

QUALITY HEALTH CARE ALLOCATION Member Responsible \_\_\_\_\_

HANDOUT 4: OUR HEALTH CARE PLAN (PAGE 5 OF 5)

CONCLUSION

Member(s) Responsible \_\_\_\_\_

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#### HANDOUT 4: OUR HEALTH CARE PLAN ANSWER KEY

#### INTRODUCTION

What is the main purpose or central idea of your plan? (Answers will vary) What key points are included in your plan? (Answers will vary)

#### **QUALITY HEALTH CARE COMPOSITION**

What 5-7 things should quality health care include?

(Answers will vary, but may include: easy access to those who need it; cost effective or low cost; not overcrowded; care that is focused on what people most need in that region; care that is timely, like having current vaccinations and immunizations; care that is dignified, respectful, and free from discrimination; care that is connected with clean water and sanitation and has safe waste disposal; care that is reliable and convenient; care that is offered by trained healthcare professionals; care that is available before, during, and after childbirth for newborns and mothers; care that includes treatment and prevention measures; etc.)

#### **QUALITY HEALTH CARE INCENTIVES**

What are 3-5 incentives for offering quality health care?

(Answers will vary, but may include: potential reduction of illnesses; less need for medical care; healthier people who live longer and are more productive; less money spent on health-related issues; being able to reduce the spread of easily treatable diseases; lessening the impact of poor living conditions or a lower standard of living; promoting best practices and education; etc.)

#### **QUALITY HEALTH CARE ALLOCATION**

What are 2-3 ways quality health care could be allocated more equally?

(Answers will vary, but may include: more funding going toward health care facilities' staffing and materials; widespread education about options; government involvement; more health care clinics in areas that are more populated; financial help for those who cannot afford it; lower cost medications/treatment options; offering as many self-directed treatments/preventions as possible; more safety in all work environments; promotion of healthy lifestyle choices; transportation to medical facilities for those who need it; clean water and basic sanitation at all facilities; more research into types of specialized care needed for different ethnic/cultural groups; etc.)

#### CONCLUSION

Why should others consider your plan? (Answers will vary)



#### $\mathbb{MIMI}^{9}\mathbb{S}$ $\mathbb{VILL}\mathbb{AGE}$ book by Katie Smith Milway, ISBN: 978-1554537228

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# HANDOUT 5: HEALTHCARE CAREERS ACTIVITY CARDS (PAGE 1 OF 2)

Audiologist	Orderly
Diagnoses, manages, and treats patients with hearing or balance issues	Transports patients and cleans treatment areas
Chiropractor	Paramedic
Evaluates and treats patients' neuromusculoskeletal systems	Assesses injuries and illnesses, provides emergency medical care, and may transport patients to medical facilities
Dentist	Pharmacy Technician
Diagnoses and treats problems with patients' teeth, gums, and mouth	Helps pharmacists dispense prescription medication
Dietician	Physical Therapist Aide
Plans and conducts food service or nutritional programs to promote healthy living	Helps patients regain movement and manage pain after injuries and illnesses with supervision
Genetic Counselor	Physician Assistant
Assesses clients' risk for inherited conditions, such as birth defects	Examines, diagnoses, and treats patients with supervision
Home Health Aide	Podiatrist
Monitors the condition of people with disabilities or chronic illnesses and helps them with daily living activities	Provides medical and surgical care for foot, ankle, and lower leg problems



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# HANDOUT 5: HEALTHCARE CAREERS ACTIVITY CARDS (PAGE 2 OF 2)

Laboratory Technician	Prosthetist
Performs medical laboratory tests for the diagnosis, treatment, and prevention of disease	Designs and fabricates medical supportive devices and measures and fits patients for them
Massage Therapist	Radiologic Technologist
Treat clients by applying pressure to manipulate the body's soft tissues and joints	Performs diagnostic imaging examinations on patients
Medical Records Specialist	Registered Nurse
Compiles, processes, and maintains patient files	Provides and coordinates patient care and educates patients and the public about various health conditions
Medical Registrar	Speech-Language Pathologist
Advises organizations on computerized healthcare systems and analyzes clinical data	Assesses and treats people who have communication disorders
Occupational Health	Surgical Assistant
and Safety Specialist Collects data, analyzes, and designs improvements on work environments and procedures	Helps with surgical operations
Optician	Veterinary Technician
Helps fit eyeglasses and contact lenses, following prescriptions	Conducts medical tests that help diagnose animals' injuries and illnesses



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#### HANDOUT 6: GLOBAL HEALTH CARE REVIEW

Instructions: Use Handout 2: Global Perspectives on Health Care to respond to the following. Use the back of the page if needed.

- 1. Where are 80 percent of 5-to-14-year-olds projected to die?
- 2. The percentage of people who live in urban areas is expected to rise by how much from now to 2050?
- 3. What percent of the global population used unsafely managed sanitation services?
- 4. Which is higher, the number of people who have no water service or who have no sanitation service?
- 5. Do you agree with the two quotes at the bottom of the infographic? Why or why not?
- 6. Why do you think people in underdeveloped countries choose not to use health systems available to them?
- 7. In what way(s) have vaccinations impacted health care?
- 8. Of the four main threats to children's health identified by UNICEF, which is the worst and why?
- 9. In the table, which country has the highest probability of child deaths ages 5 to 14? Which has the highest number of malaria-caused deaths?
- 10. According to the data, how do you think health care in the United States differs from other countries?
- 11. Based on the information provided, which country is worse off when it comes to health care and why?



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#### HANDOUT 6: GLOBAL HEALTH CARE REVIEW ANSWER KEY

- 1. Where are 80 percent of 5-to-14-year-olds projected to die? Answer: Sub-Saharan Africa and Southern Asia
- 2. The percentage of people who live in urban areas is expected to rise by how much between now and 2050? *Answer:* 13% (68% minus 55%)
- 3. What percent of the global population used <u>unsafely</u> managed sanitation services? Answer: 46% (100% minus 54%)
- 4. Which is higher, the number of people who have no water service or who have no sanitation service? *Answer: No sanitation service (1/5 is greater than 1/8)*
- 5. Do you agree with the two quotes at the bottom of the infographic? Why or why not? *Answers will vary.*
- 6. Why do you think people in underdeveloped countries choose not to use health systems available to them?

  Answers will vary, but may include: they do not have a way to get to or access health services; they are afraid of healthcare providers; they are not aware of what is available; they cannot afford health services; they are too sick to get to health care facilities; etc.
- 7. In what way(s) have vaccinations impacted health care?

  Answers will vary, but may include: they have helped to prevent/cure certain diseases in developed countries; they have cured diseases like tuberculosis, measles, and smallpox in places; they have reduced illnesses; etc.
- 8. Of the four main threats to children's health identified by UNICEF, which is the worst and why?

  Answers will vary, but may include: lack of food because people could starve or die from malnutrition; diseases because they can kill people if untreated; lack of safe water and sanitation because they can cause illness; poor health care of mothers and babies because they cannot birth more babies if sick or babies do not live long if they are ill, etc.
- 9. In the table, which country has the highest probability of child deaths ages 5 to 14? Which has the highest number of malaria-caused deaths?

  Answer: Somalia has the highest probability of death for 5–14-year-olds; Central African Republic has the highest number of malaria-related deaths
- 10. According to the data, how do you think health care in the United States differs from other countries?

  Answers will vary, but may include: there is better health care in the U.S.; health care is more accessible in the U.S.; health care services are more readily available in the U.S.; etc.
- 11. Based on the information provided, which country is worse off when it comes to health care and why?

  Answers will vary, but may include: Central African Republic, Chad, Democratic Republic of the Congo, Mali, Nigeria, Somalia, or South Sudan because of the number of probably youth deaths and cases of malaria-related deaths; countries with large numbers likely have more illness and/or less access to quality health care; etc.



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#### HANDOUT 7: REFLECTIONS ON HEALTH CARE

Instructions: Choose one of the questions below and prepare a verbal response that is 1.5 to 3 minutes in length.

#### **Question Options:**

1. What can individuals do to improve their own health and well-b	beina	?
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2.	If more funding were	allocated towards	quality health	care, how would	you recommend it	be used?
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3. Is health care a right or a privilege? Why or why not?

4. **Productive capacity** is the maximum output an economy can produce with the current level of available resources. How can health care affect the productive capacity of a community or country?

5. What effect can environmental issues have on health care?

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### HANDOUT 7: REFLECTIONS ON HEALTH CARE ANSWER KEY

#### 1. What can individuals do to improve their own health and well-being?

Answers will vary, but may include: exercise/stay physically fit; eat healthy foods; avoid obesity; avoid addictive substances like smoking, drugs, etc.; get medical help when needed/don't ignore when they feel sick; stay up to date on vaccinations and shots; get screened or regular checkups; take medicine when it's prescribed; follow rehabilitation plan when given; monitor blood pressure and heart rate, etc.; prioritize mental health as well as physical; etc.

#### 2. If more funding were allocated towards quality health care, how would you recommend it be used?

Answers will vary, but may include: towards marketing to promote healthier habits; to help people fight obesity or addictions; to help LMI countries get more access/availability to health care; to pay for vaccinations or medicine; to provide tools to help individuals with self-care; to treat those who cannot afford to pay; to offer more education about healthy choices to youth; to improve the water supply and sanitation issues in developing countries; to increase pay for healthcare workers; to provide transport assistance for those in need; etc.

#### 3. Is health care a right or a privilege? Why or why not?

Answers will vary, but may include: everyone has a right to safe, accessible, affordable health care because healthier people lead to a more productive society; health care should be available to everyone, no matter their income, race, ethnicity, age, where they live, etc.; health care is a privilege because it is not provided for everyone; etc.

**4.** Productive capacity is the maximum output an economy can produce with the current level of available resources. **How can health care affect the productive capacity of a community or country?**Answers will vary, but may include: improved health care in developing countries would enable people to spend less time and effort fighting illness or trying to get clean water or sanitation; better health care can lead to less money spent on sickness and more energy on working and producing goods and services; when people are healthy, they can more consistently contribute to society; children who are healthy can stay in school; etc.

#### 5. What effect can environmental issues have on health care?

Answers will vary, but may include: changes in climate/air quality/weather might make people more prone to sickness; gas and other pollutants can cause illness; unclean water or poor sanitation makes people in developing countries more susceptible to disease; natural disasters can cause injuries; too many people in an area can lead to scarcity of health care resources; etc.

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