

Vaccine Inequity Will Prolong Pandemic

Activity Guide for Students: A Fair Shot

Directions:

In this activity, you will analyze a graph to determine how it is used to display and communicate information about inequities in vaccine access and distribution. As a class, you will discuss why there are inequities in global COVID-19 vaccination, and you will explain why such inequities endanger global recovery from the coronavirus. You will work in groups to research COVID-19 vaccine access and distribution in your local area, graph that data and identify potential inequities.

The setup

After reading the article *Science News* article "[Global inequity in COVID-19 vaccination is more than a moral problem](#)," analyze the graph in the section titled "Unequal distribution." Then use the graph to answer the following questions.

1. What is the title of the graph?
2. What type of graph is used to display the data?
3. How many variables are plotted on the graph and what are they?
4. What is shown on the x-axis, and what units are used?
5. What is shown on the y-axis, and what units are used? Explain how the units are distinguished in the bar graph.
6. What is the source of the data in the graph?
7. What initial questions do you have about the information displayed on the graph?
8. What comparisons are being made in the graph?

9. Summarize the trends between variables that are visible in the graph.

Class discussion

Discuss the answers to the following questions as a class.

1. Why is it important to distribute vaccines worldwide and vaccinate as many people in as many locations as possible?

2. In the article, public health policy expert Gavin Yamey says that “An outbreak anywhere can become an outbreak everywhere.” Explain what Yamey meant by this statement.

3. How do new coronavirus strains affect the vaccination strategy developed by public health experts?

4. How could inequitable vaccine distribution imperil global economic recovery from the pandemic?

5. What is the benefit of getting 60 to 90 percent of the total world population vaccinated as quickly as possible? What potential problems could occur if large populations remain without protection from the coronavirus?

Group research

As a group, select a state or region to investigate, such as your state or a group of nearby counties. Use Internet resources to research how the COVID-19 vaccines have been administered in your selected area. In addition to your state’s or county’s Department of Health, the following list contains resources that have tracked coronavirus vaccine access, distribution, and administration statistics, as well as general population and demographic information about the United States.

U.S. Centers for Disease Control and Prevention. [COVID Data Tracker](#).

U.S. Centers for Disease Control and Prevention. [COVID-19 Integrated County View](#).

U.S. Centers for Disease Control and Prevention. [Vaccinations in the US](#).

Johns Hopkins University. [Coronavirus Resource Center](#)

J. Holder. [Tracking Coronavirus Vaccinations Around the World](#). The New York Times.

U.S. Census Bureau. [National Demographic Information Quick Facts](#).

As you analyze the data you discover, look for evidence of inequity in the vaccine distribution and administration in your chosen area. Answer the following questions to guide your research and data analysis.

1. What area have you chosen to investigate?

2. Identify and list at least three resources that provide you with information about COVID-19 vaccinations in your chosen area.

3. What variables do the resources present data about with regard to COVID-19 vaccination? Possible variables include number of vaccines purchased, number of vaccines administered, percentage of population that has received at least one dose, number or percentage of people who are fully vaccinated, vaccination rates by race or ethnicity, vaccination rates by age or occupation, median income or percentage of households in poverty.

4. How are the data presented by each resource? Are the data presented as verbal statements, tables, charts, maps, graphs, infographics, or some other way.

Communicating information through graphs

As a group, construct a graph that displays the data you gathered in the previous section. Answer the following questions to guide the construction of your graph.

1. What relationship or trend do you want to investigate, or what comparison do you want to make visually? Record the variables you will show on your graph.

2. Construct a data set that organizes your data by variable so that it can be plotted on the graph. This can be done electronically by using spreadsheets or database software, or you can construct a table on another sheet of paper.

3. What type of graph will best display the data you have gathered? Explain why you have chosen this type of graph.

4. Set up your graph.

5. Which variable goes on each axis of your graph?

6. What are your axis labels?

7. What units will you use on each axis?

8. Does your graph need a key or legend? If so, what will it contain?

9. What will you title your graph?

10. How will you cite the source(s) for your data?

11. Construct your graph from the data you gathered. Write a short caption that summarizes the data and trends in your graph.

Class discussion

Present your graph to your teacher and to the class. Listen carefully as other groups present their graphs. Then, as a class, discuss the graphs and any trends evident from the graphed data.

1. Were there any common trends in the graphs presented to the class?

2. What does the graph indicate about equitable access to vaccines in your area or in the United States?

3. What might explain the trends you noted in how COVID-19 vaccines have been distributed or administered in your area or in the United States?



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