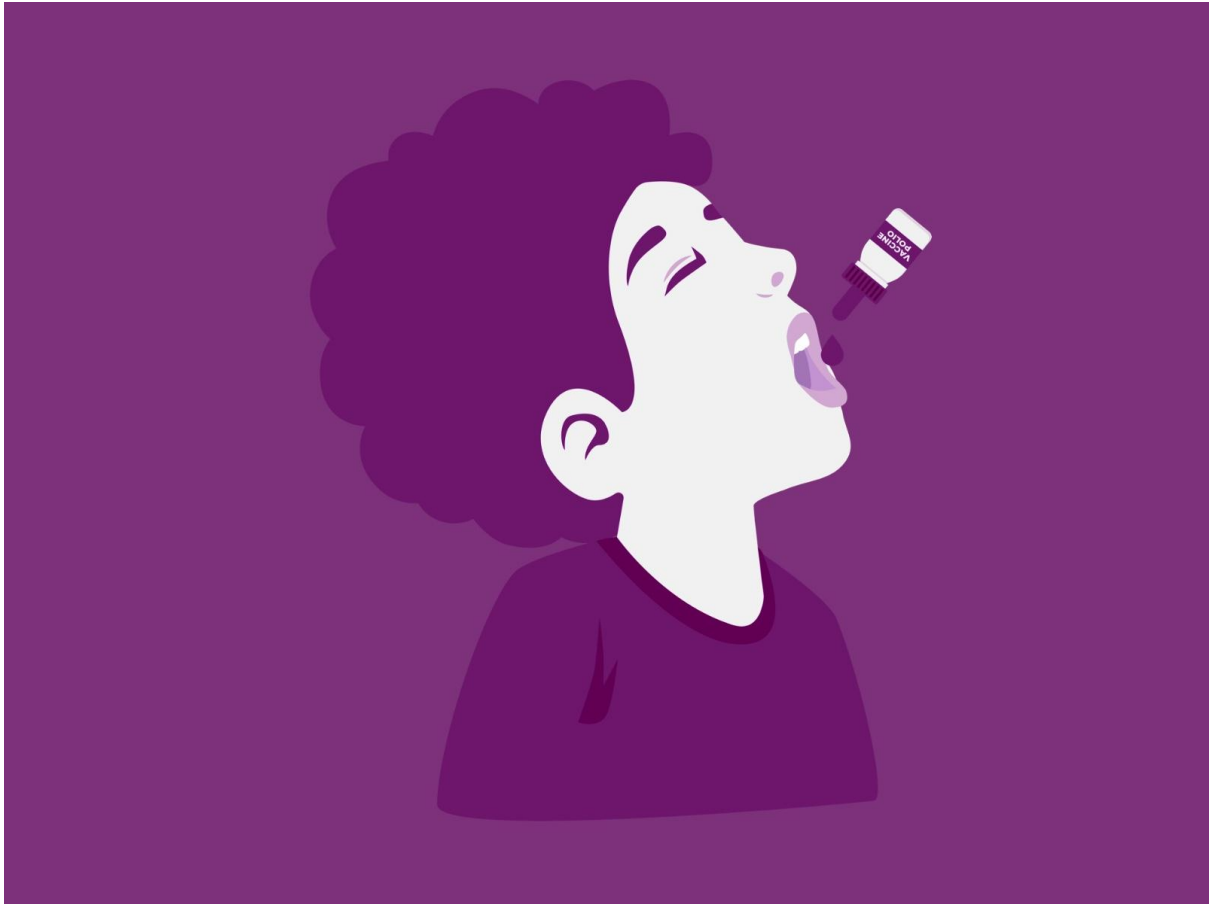


Progress in eradicating polio



Background

Polio is an infectious disease spread by a virus that is passed from person to person through infected fecal matter, food or water that has been contaminated with infected fecal matter, or occasionally from infected saliva. Roughly 70% of polio cases are asymptomatic, but in 0.5% (1 out of 200) of cases the virus attacks the central nervous system and causes paralysis or even death. It was once a feared disease around the globe, but through a large-scale and long-term public health effort the disease has disappeared from most human populations on earth.

The World Health Organization (WHO) began the Global Polio Eradication Initiative (GPEI) in 1988 with the goal of eradicating polio. At that time polio cases were still being recorded in 125 countries around the world. Several countries had already eradicated polio or were close to doing so at that time. Other countries still had relatively high rates of polio at that time.

The main tool used by the GPEI to eliminate polio was the oral polio vaccine (OPV). Around the world National Immunization Days were set up where children received two doses of the OPV 4-8 weeks apart. The GPEI also conducted a program to administer OPV doses specifically to children in areas where polio cases were still occurring. Outbreaks were tracked and special efforts were made to respond rapidly with vaccinations for all children under 5 years old in all areas with active outbreaks.

Use this dataset to explore what has happened in different locations around the world since the GPEI efforts began.

Dataset

These data were first published by the WHO and the United Nations in 2017. We accessed them through [Our World in Data](#) and created a subset with data from 13 different countries (plus the world average) for the purpose of this activity. The data are structured in such a way that each row in the dataset is an observation from a particular point in time (year) from a particular country. The observations are paired so that there is an early observation before the GPEI effort began in 1988 and another observation years later (typically 2015).

Variables

Country- This categorical variable indicates which country the observation was recorded for. There are 14 values of this categorical variable in this dataset.

Year- This numeric variable records the year that an observation was recorded. Each value represents a year.

1-year olds vaccinated (%)- This numeric variable is in units of % and was calculated by Our World in Data using WHO/UNICEF coverage rates, and UN Population Division (2019 Revision) population estimates.

Polio cases per million people- This numeric variable records the number of polio cases per million people in a given country. The Polio case data from the WHO (2017) were divided by the UN Population estimates (which were reported in thousands). The result was then divided by one thousand to obtain the number of polio cases per one million population.

Activity

- 1) [Make a graph](#) showing *Year* on the X-axis and *1-year olds vaccinated (%)* on the Y-axis. Paste your graph in here:

- 2) Now add the variable called *Country* as the '[Z' variable](#) using the control panel on the right. After that, click the *Connect the dots* check box above to connect the pairs of data points by *Country*. **What does this graph reveal to you?**

- 3) Now make a graph with *Polio cases per million people* on the Y-axis and *1-year olds vaccinated (%)* on the X-axis. Add the variable called *Country* as the '[Z' variable](#) using the control panel on the right and click the *Connect the dots* check box above to connect the pairs of data points by country.

Paste your graph here:

- 4) Make a claim about the progress of the GPEI efforts to eradicate polio that is supported by graph you made above in #3. Write your supported claim below..