**Additional Resources**

The topic of Covid-19 and vaccinations is a large one and your students may have questions beyond the scope of the main objectives covered by this unit. Please use the following list of resources and websites to direct students to extend their learning into other related areas of interest.

You may also look at the [Academy’s website](https://www.nyas.org/landing/understanding-covid-19-and-global-pandemics/) where you will find links to our programming and resources focused on the pandemic. The page will be updated regularly with content from our conferences.

Current US vaccination efforts

* [CDC Covid Tracker](https://covid.cdc.gov/covid-data-tracker/#datatracker-home) (down to county resolution). Also includes latest [projections](https://covid.cdc.gov/covid-data-tracker/#forecasting_weeklydeaths) in terms of case load. There’s also an interesting tracker for [mobility](https://covid.cdc.gov/covid-data-tracker/#mobility) (i.e. how much people are moving) as well as a ‘[Pandemic Vulnerability Index](https://covid.cdc.gov/covid-data-tracker/#pandemic-vulnerability-index)’ - good to use for discussions about public health at a population level and the geographical variations across the US in terms of vulnerability.
* [How is Covid-19 vaccination efforts going in your state?](https://www.npr.org/sections/health-shots/2021/01/28/960901166/how-is-the-covid-19-vaccination-campaign-going-in-your-state) NPR
* Also see NPR articles regularly updated on [US infection numbers](https://www.npr.org/816707182) and [hospitalisation figures](https://www.npr.org/944379919).
* New York Times: [Latest map of cases and US count](https://www.nytimes.com/interactive/2020/us/coronavirus-us-cases.html)

Science ethics

* [Ethics thinking toolkit](https://www.sciencelearn.org.nz/resources/2363-ethics-thinking-toolkit) (from New Zealand resource but still applicable) - provides students (and teachers) with a framework to talk about ethics in science.
* Articles on [ethics](https://www.historyofvaccines.org/content/articles/ethical-issues-and-vaccines) from the History of Vaccines website.
* Video on [Stanford Prison Experiment](https://www.youtube.com/watch?v=L_LKzEqlPto) - can be used to discuss broader science ethics beyond those directly involved in vaccination.

Ethnicity

* [CDC figures](https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html) of hospitalisation and deaths by race/ethnicity (sensitive discussion/facilitation required when talking about health inequalities)
* Reported vaccine hesitancy in ethnic minority communities - [Washington Post article](https://www.washingtonpost.com/health/2020/11/23/covid-vaccine-hesitancy/) uncovering hesitancy in Black and Latino communities in particular.
* Article published in [*Journal of Community Health*](https://link.springer.com/article/10.1007/s10900-020-00958-x) assessing the degree of vaccine hesitancy in different demographic groups.
* Historical reasons for hesitancy, particularly in Black communities, include the Tuskegee Study (1932-1972) - [the CDC has a page](https://www.cdc.gov/tuskegee/index.html) detailing what happened, the consequences, and the changes made to prevent such a moral breach in ethics never happened again.

Other vaccine-preventable diseases

* [CDC list of vaccines](https://www.cdc.gov/vaccines/) currently on the US immunization schedule for different age groups.
* [Dataset from WHO monitoring vaccine-preventable diseases](https://apps.who.int/immunization_monitoring/globalsummary/countries?countrycriteria%5Bcountry%5D%5B%5D=DEU) (toggle different countries using the drop-down at the top).
* [WHO list](https://www.who.int/teams/immunization-vaccines-and-biologicals/diseases) of currently available vaccines and ‘pipeline’ vaccines (those in development).
* [Case study](https://www.cgdev.org/page/case-1-eradicating-smallpox) explaining the successful global eradication of smallpox from the Centre for Global Development.
* [Vaccines recommended by the CDC](https://wwwnc.cdc.gov/travel/destinations/list/) for travel to particular countries.

The history of vaccine science

* Fantastic website on the [history of vaccines](https://www.historyofvaccines.org/) created by The College of Physicians of Philadelphia, one of the oldest medical societies in the United States. Particular sections of note include: the interactive [timeline](https://www.historyofvaccines.org/timeline/all), educator resources (including [lesson plans on the scientific method](https://www.historyofvaccines.org/content/educators)), articles on [ethics](https://www.historyofvaccines.org/content/articles/ethical-issues-and-vaccines), and [interactive animations and games](https://www.historyofvaccines.org/content/pioneer-breakthroughs) (looking at famous figures in vaccination history as well as conceptualising ‘risk’).
* [BBC article](https://www.bbc.co.uk/news/uk-england-birmingham-45101091) on the ‘Last Smallpox victim’ (good article to remind students of the people behind the numbers we read in the news).
* [History of the CDC’s safety measures](https://www.cdc.gov/vaccinesafety/ensuringsafety/history/index.html) and how they’ve continued to monitor and improve safety of vaccines and the vaccination process through time.

International public health efforts

* See NPR article regularly updated on [global number of Covid-19 infections](https://www.npr.org/822491838) (using figures from John Hopkins).
* Different [policy responses](https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19) by different countries to Covid-19.
* Data collated from different countries by [Our World in Data](https://ourworldindata.org/policy-responses-covid) on a whole range of metrics related to Covid-19 responses (infection rate, mobility, school closures, public information campaigns).
* Good websites for vaccine safety information in different languages from [WHO](https://www.who.int/vaccine_safety/initiative/communication/network/approved_vaccine_safety_website/en/).