



CoviDB

CoviDB Speaker Series on COVID-19

COVID-19 and Global Health: Facts and Myths

A Guide for Teachers and Students



Featured Speaker:
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Dr. Piya Sorcar is the Founder and CEO of TeachAids, a Lecturer at Stanford's Graduate School of Education, and an Adjunct Affiliate at Stanford's School of Medicine. She leads a team of world experts in medicine, public health, and education to develop software that solves numerous persistent problems in global health education. She holds a Ph.D. in Learning Sciences and Technology Design from Stanford University.

The purpose of this guide is (1) to provide information to review prior to the viewing of the interview; (2) to suggest guiding questions to consider while viewing the interview; and (3) to recommend debriefing activities.

Information to review prior to the viewing of the interview

This interview introduces the basics of COVID-19 and focuses on five topics. For teachers' information, each topic is listed below with a summary of the question asked by Dr. Sorcar. During the interview, important terminology is used. A list of the terms and definitions is included on the next two pages. A review of the terms and definitions is recommended prior to the viewing of the interview.

Topic 1: Transmission—We've seen a number of illnesses throughout history like SARS and HIV. What's different about this virus and how it behaves?

Topic 2: Testing—Testing has been a challenge since the beginning of this crisis. We've made some progress with scientists working around the clock. Could you walk us through the history of this, where you are, and where you are going?

Topic 3: Misconceptions—At TeachAids, we are incredibly careful about combating myths and providing accurate information. What are some of the biggest misconceptions you can help clarify?

Topic 4: Predictions—You've been on the front lines of this crisis. What are some of your predictions of the future state of our world?

Topic 5: Hope and Conclusion—We've been talking a lot about science and facts. And, we know that "sheltering-in-place" has been difficult for us all. It's impacted so many people physically as well as psychologically. Are there insights you could share as concluding thoughts?

Definitions

Airborne diseases—illnesses spread by tiny (microparticles) pathogens in the air

Antibodies—a blood protein produced in response to and counteracting a specific antigen. Antibodies combine chemically with substances which the body recognizes as alien, such as bacteria, viruses, and foreign substances in the blood.

Antigen—a toxin or other foreign substance which induces an immune response in the body, especially the production of antibodies

Asymptomatic—(of a condition or a person) producing or showing no symptom

Coronavirus—a common type of virus, some of which can infect humans, typically leading to an upper respiratory infection. The current pandemic is caused by a novel (new) coronavirus.

Coronavirus disease 2019 (COVID-19)—an infectious disease caused by severe acute respiratory syndrome coronavirus (SARS-Cov-2). “CO” stands for “corona,” “VI” for “virus,” and “D” for “disease.” Sometimes referred to as novel (new) coronavirus.

Human immunodeficiency virus—or HIV is the virus that can lead to acquired immunodeficiency syndrome or AIDS if not treated

Immunity—the ability of an organism to resist a particular infection or toxin by the action of specific antibodies or sensitized white blood cells

Incubation period—the period between exposure to an infection and the appearance of the first symptoms

Mutation—the changing of the structure of a gene, resulting in a variant form that may be transmitted to subsequent generations

Personal protective equipment—or PPE refers to protective covering, e.g., surgical masks, surgical and isolation gowns

Polymerase chain reaction—PCR is a method widely used in molecular biology to rapidly make millions to billions of copies of a specific DNA sample, allowing scientists to take a very small sample of DNA and amplify it to a large enough amount to study in detail. PCR and antibody testing are the dominant ways that global healthcare systems are testing people for COVID-19.

Serological test—Serological tests measure the amount of antibodies or proteins present in the blood after the body has responded to an infection like COVID-19.

Severe acute respiratory syndrome—or SARS is a viral respiratory illness caused by a coronavirus

Vaccine—a substance used to stimulate the production of antibodies and provide immunity against one or several diseases, prepared from the causative agent of a disease, its products, or a synthetic substitute, treated to act as an antigen without inducing the disease

Guiding questions to consider while viewing the interview

For teachers who share this interview with a class, consider dividing the class into five small groups and distributing one set of questions (below) to each group.

Topic 1—What are the characteristics of COVID-19 that make this disease unique, confusing, and difficult to deal with? Why is the rate of mutation of COVID-19 significant?

Topic 2—What are some of the challenges of extensive testing, extensive contact tracing, and isolation of those who are infected? What are some tests that are currently being used to test for COVID-19? What are some of the challenges associated with these tests?

Topic 3—How have some of the misconceptions of COVID-19 changed over time? What are some of the reasons why? What is the connection of wearing masks to COVID-19?

Topic 4—Who are the groups at higher risk for serious reactions disease to COVID-19? How has the pandemic affected others, such as students? How might our lifestyles (including workstyles) change if and when the pandemic is past us? How might health care system models change? How might local policymaking be impacted? How might supply chains be impacted?

Topic 5—What does Dr. Mairal mean by an “optimistic perspective” that emerges from this pandemic? What are some of Dr. Mairal’s thoughts in terms of taking successes and mindsets from local levels to the global community, e.g., rich countries helping poor countries, countries with advanced technologies helping countries that do not?

Recommended debriefing activities

1. Following the viewing of the interview, have each small group (from section 2) discuss the set of questions that the group was assigned. Have one student from each group present a summary of its discussion to the class.
2. Have students write essays on one of the following topics or one of his/her choosing: misconceptions of diseases like COVID-19; the importance of leadership during times of a pandemic or other crises; a review of the response of one's local community to COVID-19.
3. Have students write poems or lyrics to a song in recognition of the sacrifices being made by frontline health care workers or others in the community.
4. In the interview, Dr. Mairal talks about a post-COVID-19 "new normal." Write a journal entry that focuses on one or more of the issues he discusses, e.g., reprioritizing objectives and goals in our lives; the role of innovation; addressing the needs of the most vulnerable and disenfranchised.
5. In her concluding comments, Dr. Sorcar noted, "With the greatest challenges in the world come the greatest opportunities." Have students visit the [CoviDB](#) website, consider this statement in the context of COVID-19, and write reflections of this statement. Students might consider sending their reflections on this statement to TeachAids' social media accounts @TeachAids.