

Environmental Surveillance

An article in your local newspaper published in June 2020 had the following headline:

“COVID-19 Clues in a Community’s Sewage”

1. Based only on the headline, what do you notice? What do you wonder? Record your initial thoughts here.

2. Environmental surveillance, or testing wastewater for the presence of a disease agent, has been used for several decades to track diseases such as cholera and polio. These techniques are now being used to track COVID-19. Classify each of the following statements as True, False, Unsure by circling the T, F or U in the Prior to Viewing/Reading column before moving to the next step.

Prior to Viewing/Reading True/False/Unsure	Statements	After Viewing True/False/Unsure	After Reading True/False/Unsure
T F U	Active viruses can be found in wastewater from hand washing.	T F U	T F U
T F U	Active viruses can be found in sewage from feces and urine.	T F U	T F U
T F U	Sewage testing is sensitive enough to measure if even one person in the sample has an active infection.	T F U	T F U
T F U	Sewage testing can identify the specific home that put the infected sample in the system.	T F U	T F U
T F U	Anyone infected with COVID-19 will excrete coronavirus in their stool.	T F U	T F U

Prior to Viewing/Reading True/False/Unsure	Statements	After Viewing True/False/Unsure	After Reading True/False/Unsure
T F U	Wastewater testing can serve as an “early warning” of outbreaks before infected patients begin to arrive at hospitals and clinics.	T F U	T F U
T F U	Wastewater testing could detect infected members of the community as much as 7 days faster than individual diagnostic tests.	T F U	T F U
T F U	Wastewater testing could replace contact tracing as a method of containing COVID-19 outbreaks.	T F U	T F U

3. View the June 20, 2020 Beyond the Blog Episode: “*What does your wastewater have to do with COVID-19?*” (<https://vimeo.com/427590411>) After viewing, revisit the statements from the table and classify each as True, False or Unsure, by circling T, F or U in the After Viewing column.

4. Read the Nature Biotechnology article *Tracking COVID-19 with wastewater*, published September 21, 2020 (<https://www.nature.com/articles/s41587-020-0690-1>). After reading, revisit the statements from the table and classify each as True, False or Unsure by circling T, F or U in the After Reading column.

5. Did your responses change either after viewing or reading? If so, was it the viewing or reading that changed your responses?

6. Were any of your notice or wonder questions from Question 1 answered during those interactions? If so, which one(s)?

7. What questions do you still have about wastewater testing and COVID-19?