Establishing a wastewater surveillance program in Delaware

CSTE Stories FROM THE Field

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CATEGORY: **Epidemiology and Laboratory Capacity (ELC)**

The Delaware Division of Public Health established a wastewater surveillance program to adjust to the changing surveillance needs of the COVID-19 pandemic. Data from the program are used to inform public health actions to mitigate disease transmission.

The "What"

Wastewater disease surveillance was a new area of consideration for public health response in Delaware during the COVID-19 pandemic. The Delaware Department of Natural Resources and Environmental Control and the University of Delaware had collected wastewater samples for years, which were then analyzed by the State Public Health Lab. However, there was no response component in community health initiatives. During the pandemic, COVID-19 tracking through wastewater became a popular non-invasive measure to ascertain community spread. As the shift to COVID-19 home-testing began, it became imperative to bring all the established partners throughout the state together as the wastewater science subject matter experts.

The wastewater surveillance team, which receives Epidemiology and Laboratory Capacity for the Prevention and Control of Emerging Infectious Diseases (ELC) funding, consulted the National Wastewater Surveillance System for guidance creating a dashboard and reached out to several states' wastewater surveillance teams for assistance in creating a response algorithm for COVID-19 community spread. These consultations helped the Delaware Division of Public Health (DDPH) successfully establish short and long-term goals for this new wastewater surveillance program.

Operationalizing wastewater surveillance has become another method to **bolster infectious disease surveillance practices.**

The "So What"

The new team has continued monitoring community spread of COVID-19 even with the shift from lab-based to home based-testing. This has resulted in a community response plan that has been utilized by the Delaware Department of Education and long-term care facilities to guide local response initiatives (i.e., masking, school closings, and altering visitor policies). The creation of Delaware's wastewater dashboard for real-time and long-term data has improved disease surveillance data dissemination, which has increased partners' ability to promote health, prevent disease, and decrease morbidity and mortality.

Operationalizing wastewater surveillance has become another method to bolster infectious disease surveillance practices. DDPH has begun to use COVID-19 surveillance as scaffolding to expand into other infectious disease programs.

The "Now What"

Future plans for the wastewater program are to transition from an internal static to an interactive public dashboard to improve public knowledge of infectious disease health statistics. Wastewater monitoring will also be utilized to track illicit drug use for law enforcement and additional infectious diseases (i.e., Influenza A&B, respiratory syncytial virus (RSV), *Candida auris*, Norovirus, campylobacter, and Carbapenemase-producing organisms).

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