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A FIRST: WASTEWATER ANALYTICS HELPS GUIDE COVID SAFETY DECISIONS FOR REOPENING SCHOOLS

MWRA, City of Cambridge Set Example of Leadership in Opening Safely Using Sewage Metrics from Biobot Analytics

Cambridge, Mass., August 21, 2020 – In a first for the nation, the City of Cambridge is using wastewater epidemiology to help determine the safety of reopening its schools, with the help of wastewater data provided by the Massachusetts Water Resources Authority (MWRA) and analyzed by Biobot Analytics.

“Data on COVID-19 spread from wastewater analytics is an essential component of our decision-making framework for reopening schools,” said Kenneth N. Salim, Ed.D., Superintendent for Cambridge Public Schools.

Sewage monitoring is one of three metrics the Cambridge COVID-19 Expert Advisory Panel identified as key to reopening and keeping school open.

“These metrics will help us mitigate risk,” said Dr. Jamie Lichtenstein, Affiliated Faculty at Emerson College and member of the Safety, Health and Facilities Working Group for the Cambridge Public School District, adding that such metrics should be used in combination with safety measures like comprehensive mask-wearing and improved ventilation in schools.

Dr. Helen Jenkins, Assistant Professor at Boston University School of Public Health, added: “We believe it is critical to look at several measures when determining thresholds for moving schools to a fully remote option as all possible surveillance data are subject to their own biases. For example, incidence per capita from positive test results is dependent on the availability of and access to testing. By including the wastewater data in our metrics, we are able to reduce the impact of testing biases on our decision-making process.”

Massachusetts start-up Biobot Analytics is the first company in the world to conduct wastewater analytics to trace COVID-19 outbreaks through sampling and analysis of sewage. The company has been conducting regular sampling and analysis of sewage for the MWRA since March.

Overview of Metrics for September 2020

- ✓ New Cases Per Day
- ✓ Percent Positive Cases
- ✓ Sewage Monitoring

At least 2 out of 3 must remain below this limit for CPS to proceed as proposed.



Since that time, the MWRA has been publishing results of those wastewater analytics on their [website](#). As this [report](#) from Biobot demonstrates, viral concentrations of SARS-CoV-2 in wastewater are a predictive indicator of the number of COVID-19 cases within a community.

“As more and more communities see the value of wastewater analytics in predicting viral spread, we expect to see more authorities follow the lead of Cambridge in using our results as a key factor in making important decisions like reopening schools safely,” said Mariana Matus, Ph.D., Biobot’s CEO and Cofounder. “Spikes in virus concentration preempt clinical test data by 3-7 days, allowing governments more time to take action. In combination with other tools, our technology provides critical information to make smarter public health decisions.”

SARS-CoV-2, the virus that causes COVID-19, is shed in the stool of infected individuals, which ends up in sewage. Through regular analysis of samples of sewage, Biobot is able to determine incidence of viral spread before conventional clinical testing.

Wastewater analytics offers the opportunity to provide near real-time trend data to evaluate the impact of policy-making, provide early warning for spikes in infection, and offer the opportunity to mass test populations on a regular basis at a fraction of the cost of clinical testing. Wastewater testing provides anonymized data and protects the privacy of individuals.

For more information on how wastewater testing works, read Biobot’s blog post, [Wastewater data can predict coronavirus cases](#), and visit the Biobot [website](#).

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About Biobot Analytics

Biobot Analytics is a wastewater analytics firm and a global leader in wastewater epidemiology led by Mariana Matus, Ph.D., the company’s CEO and Co-Founder, and Newsha Ghaeli, President and Co-Founder. We use the data present in wastewater to learn valuable insights that shape the health of our communities. Our headquarters are located in Boston, MA, but we’re serving states across the US. More information on our mission and technology is available at our website, <https://www.biobot.io/>.