



MWRA Pilot Study Update

MAPC COVID-19 Webinar: Wastewater Testing

Steven F. Rhode, MWRA Director of Laboratory Services

December 3, 2020

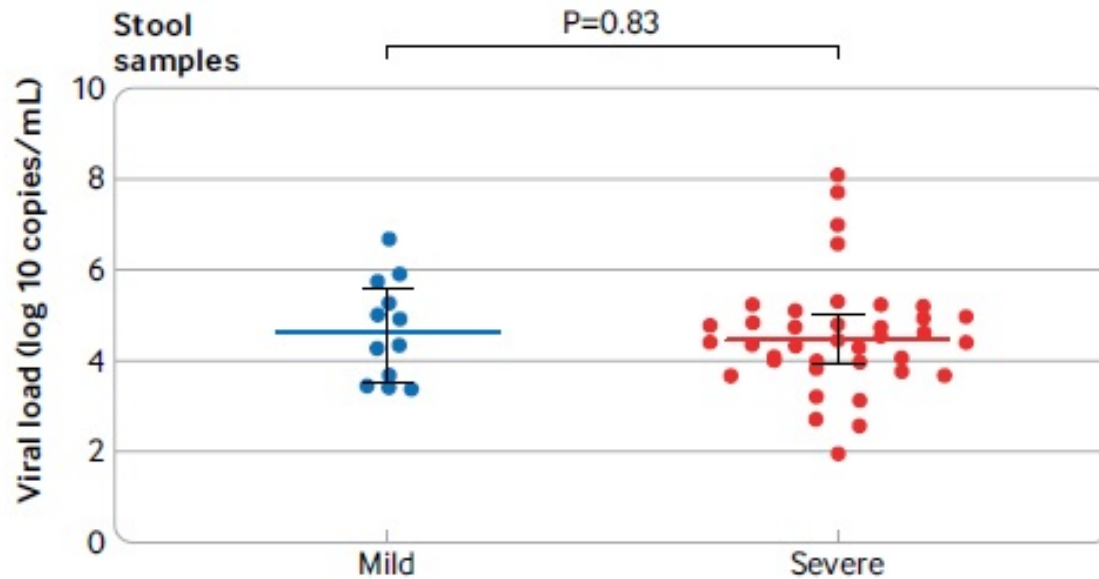


Groups Around the World are Racing to Use Wastewater as a Predictor of COVID

- International Utilities/Research Groups
 - Miami, Detroit, Portland, New Haven
 - France, Netherlands, Australia, Spain
- MWRA has provided samples to:
 - Biobot Analytics/MIT
 - Stanford/UMichigan/Tufts national study
 - Northeastern
 - ActiveSignal
 - UMASS Amherst
- MWRA has been asked to co-author two additional papers with Biobot/MIT



Calibrating the Viral Signal is Difficult



- Fecal shedding by patients can range from 100 copies/g to 100,000,000 copies/g
- This complicates the conversion from how much viral RNA is present to how many people that signal represents, along with other variables at treatment plants (like rainfall)



Timeline of Biobot Deer Island Study

- Started in March with a preliminary request for samples
- Follow up included samples archived sample from Deer Island from January and February, and daily samples for early March, and one to two weekly samples through April
- Concurrently Biobot worked with Boston Water and Sewer Commission to analyze neighborhood results
- Daily samples 5/19 – 7/26 to correlate to the Governor's Reopening Plan



Current Program

- Pilot program:
 - Samples 3 times per week (or more) from Deer Island
 - Increase to daily if it looks like there is a change
 - Through January 2021
 - Results are shared with the state Command Center as received
- Results are available at <http://www.mwra.com/biobot/biobotdata.htm>
- Competitive procurement in fall to allow overlap/comparison of data

