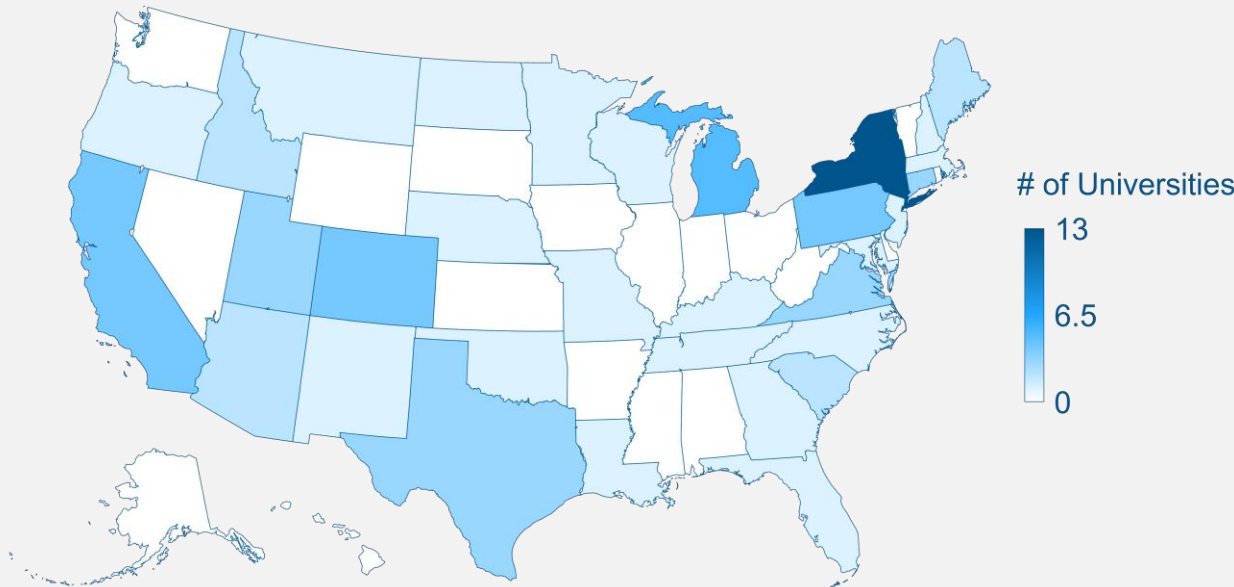


HURON COVID-19 INSIGHTS

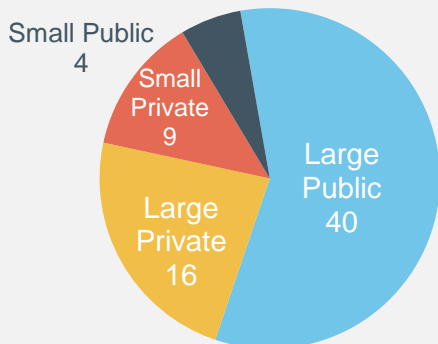
WASTEWATER TESTING PROGRAMS

Huron is tracking the implementation of campus wastewater testing and wastewater-based epidemiology (WBE) programs. **This analysis focuses on 69 institutions whose Fall 2020 COVID-19 response plans include wastewater testing.**¹

Institutions Implementing SARS-CoV-2 Wastewater Testing by State



Breakdown of Institutions by Type (n=69)



Institutions of all types, sizes, and resource levels have begun to invest in wastewater testing programs.

Nearly 64% of institutions included in the sample are public.

CONSIDERATIONS FOR WASTEWATER TESTING

Though the science continues to evolve, institutions implemented on-campus WBE programs as early as mid-April 2020. Factors guiding their decisions include:

EARLY INDICATOR POTENTIAL



A recent Yale study found that SARS-CoV-2 RNA is detectable in sewage as early as one week prior to reported positives from other tests. Efficacy-at-scale research is ongoing.

OPERATIONAL CAPACITY



WBE should be one component of a broader comprehensive prevention strategy. Data management and data-driven action plans are key to successfully leveraging WBE insights.

FINANCIAL COSTS



For some vendors, per-sample costs (including collection, testing, and analysis) can exceed \$1,000. 75% of institutions have developed in-house testing capacity to minimize these costs.

INFRASTRUCTURE



Some institutions have created as many as 45 on-campus sample sites, but infrastructure (e.g., building plans, sewage lines, other utilities) may be barriers to implementation.

CASE STUDIES: SAMPLING AND RESPONSE STRATEGIES

Institutions piloting SARS-CoV-2 wastewater testing programs have taken varied approaches to their sampling and response strategies. These variations are driven by the institutions' reopening plans and the robustness of their other testing measures (e.g. routine surveillance testing).

Syracuse University

Private R-1 University | Syracuse, NY

Random Sampling for Routine Nasal Swab Testing

WBE Strategy:

24 wastewater testing sites (including all dormitories) tested twice per week

Recent Outcome:

- Found viral traces in a 200-person dorm
- Mandated quarantine for all residents in the dorm
- Identified the result was due to a student who had previously tested positive

UC San Diego

Public R-1 University | San Diego, CA

Required Nasal Swab Testing Every Two Weeks

WBE Strategy:

One campus dormitory with 600 students tested daily

Recent Outcome:

- Detected the virus
- Contacted residents using an emergency text alert
- Required testing for all 600 students within 36 hours
- Identified two new asymptomatic cases

Hope College

Private Baccalaureate College | Holland, MI

Nasal Swab Testing for 1% of Students Daily

WBE Strategy:

Nine zones on campus with 200-250 students each tested daily

Recent Outcome:

- Tracked running averages of viral RNA levels
- Noted increased signals of COVID-19 and tested one entire dorm in 24 hours
- Identified 5 asymptomatic cases and traced contacts

LOOKING AHEAD

Wastewater testing has been employed for over 70 years and is being implemented across the world to test for COVID-19...

PCR nasal swab testing is currently the norm for higher education, though wastewater testing is growing in frequency. Institutions are also looking into...

BEYOND HIGHER ED

The U.S. Department of Health and Human Services is seeking bids to test **up to 30% of the nation's wastewater** as an "early warning system" for coronavirus outbreaks.

BEYOND THE U.S.A

The Netherlands and the United Kingdom have already announced plans to incorporate **daily sewage surveillance** into national COVID-19 monitoring.

FLU + COVID-19 TESTING

Testing companies are rolling out single tests to simultaneously detect COVID-19, influenza A / B, and respiratory syncytial virus (RSV), which could be effectively leveraged by colleges and universities.

SALIVA TESTING

Saliva testing is easier to perform, more comfortable for the patient, and requires less PPE; institutions may opt for this option in lieu of nasal swabs if there is enough capacity.

CONTACT INFORMATION

Mark Finlan

Managing Director
mfinlan@hcg.com
404.444.1102

Brenna Casey

Associate
bcasey@hcg.com
312.583.8700 Ext. 329122

© 2020 Huron Consulting Group Inc. and affiliates. Huron is a global consultancy and not a CPA firm, and does not provide attest services, audits, or other engagements in accordance with standards established by the AICPA or auditing standards promulgated by the Public Company Accounting Oversight Board ("PCAOB"). Huron is not a law firm; it does not offer, and is not authorized to provide, legal advice or counseling in any jurisdiction. Huron is the trading name of Pope Woodhead & Associates Ltd.

20-0XXX

HURON