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Wastewater Surveillance Reaches Most New York Communities but With Caveats

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CONTEXT

New York State has been using a public health tool that tests a community's sewage for germs to track which infectious diseases are spreading. Because it doesn't depend on people getting tested or visiting a doctor, it can give an early, low-cost warning of outbreaks. Still, a new study of the system from 2020 to 2024 found that its benefits aren't reaching every community equally, with the most vulnerable communities getting slower detection of outbreaks.

80%

of New York's population is covered by wastewater surveillance

3-4x

larger outbreaks must grow in the most vulnerable communities before testing detects them, compared to the least vulnerable

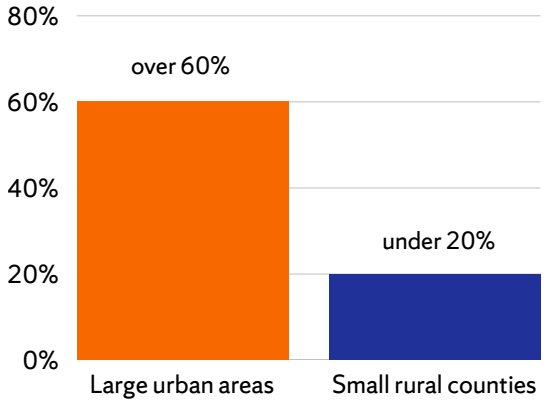
<20%

forecast accuracy in small rural counties, compared to over 60% in large urban areas

KEY POINTS

- Large treatment plants mix sewage from many people, so small outbreaks get diluted and are harder to spot.
- The most vulnerable communities are more likely to be served by these large plants.
- Later detection leaves health agencies less time to respond, and these communities are often hit hardest by disease.
- Broad coverage can make a system look successful while hiding unequal results.

Forecast Accuracy Is Three Times Higher in Large Urban Areas Than in Small Rural Counties



WHAT IT MEANS FOR POLICY

- Measure equity, not just overall coverage
- Test sewer lines upstream, before the signal gets diuluted
- Build better forecasting models for small and rural counties

WHAT COMMUNITIES CAN DO

- Push for more sampling sites in smaller and vulnerable communities
- Ask how quickly local outbreaks would be detected, not just whether the area is covered

ABOUT THE AUTHORS

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