P3-S13

Wastewater community surveillance can monitor circulating pathogens in near real-time

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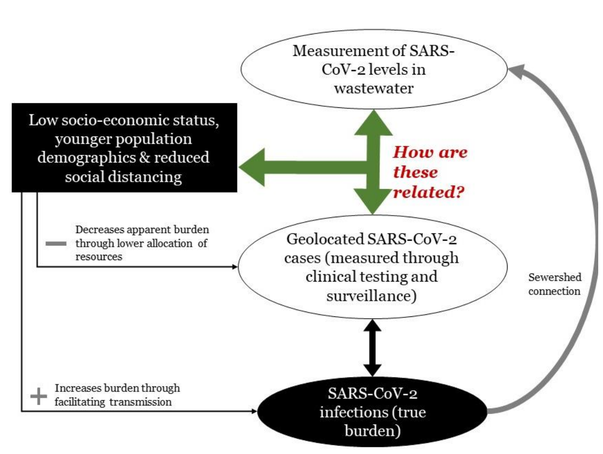
Environmental surveillance should be implemented to strengthen clinical surveillance, particularly where social inequalities limit conventional clinical testing

BACKGROUND

Wastewater-based epidemiology has gained popularity as an affordable way to monitor whole populations near real-time as it can give a measure of true disease burden.

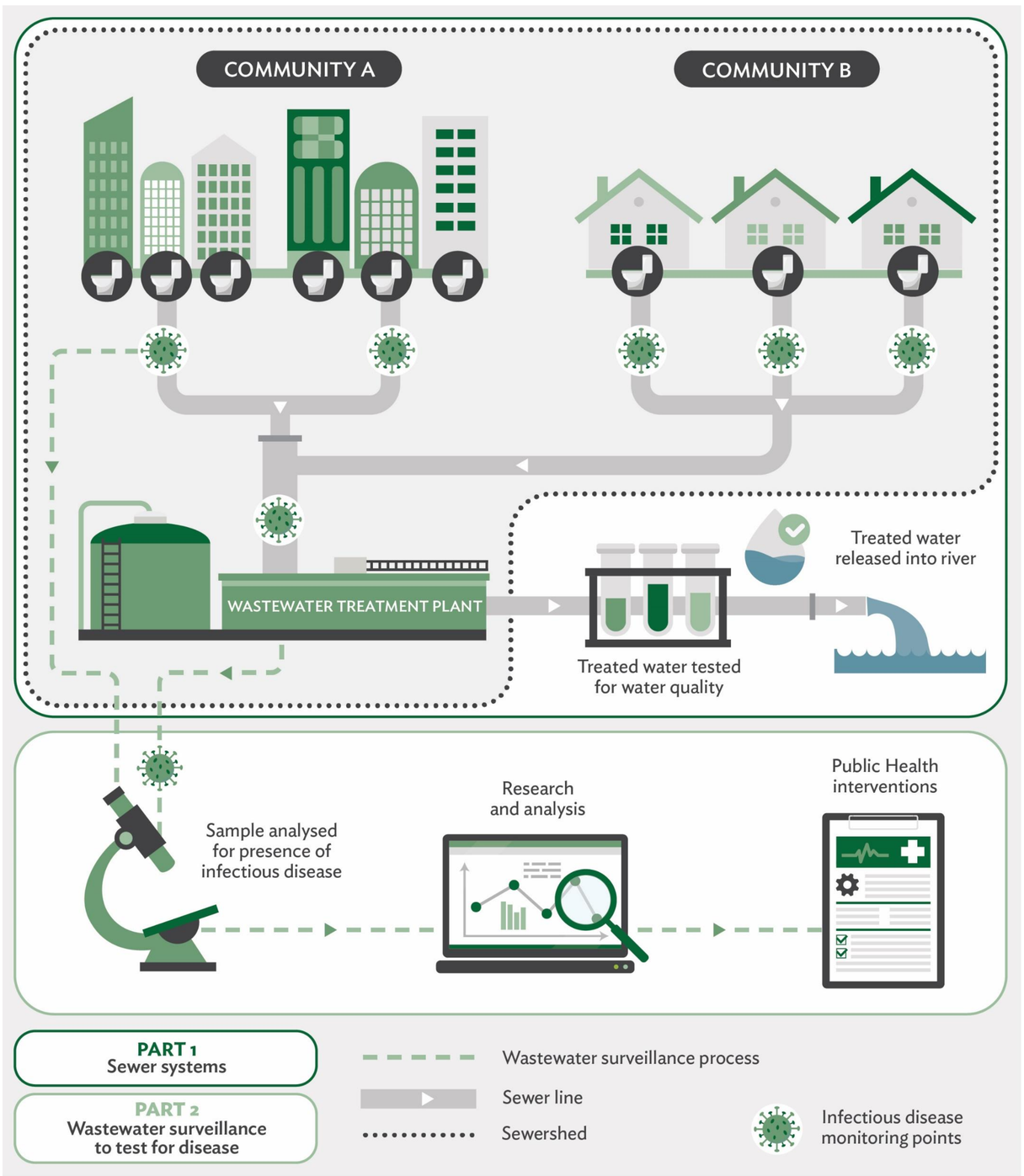


AIM

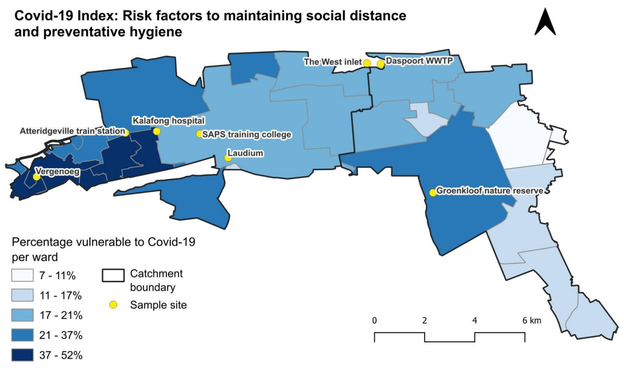
Explore the relationship between SARS-CoV-2 concentration in wastewater, corresponding clinical cases and socio demographic characteristics.

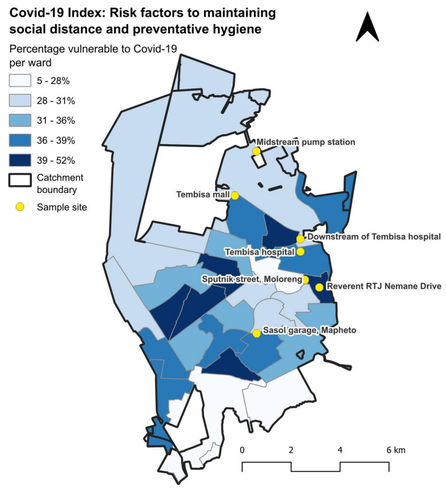
METHODS

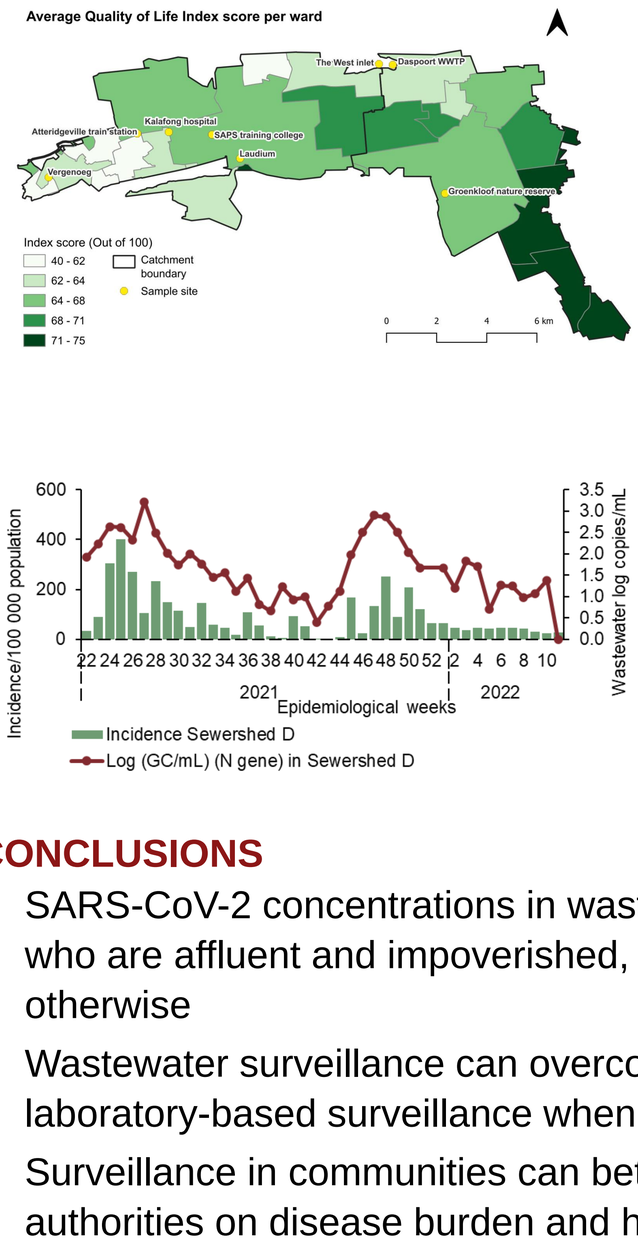
Developed a wastewater surveillance programme to monitor SARS-CoV-2 circulating in communities in Gauteng Province, South Africa.

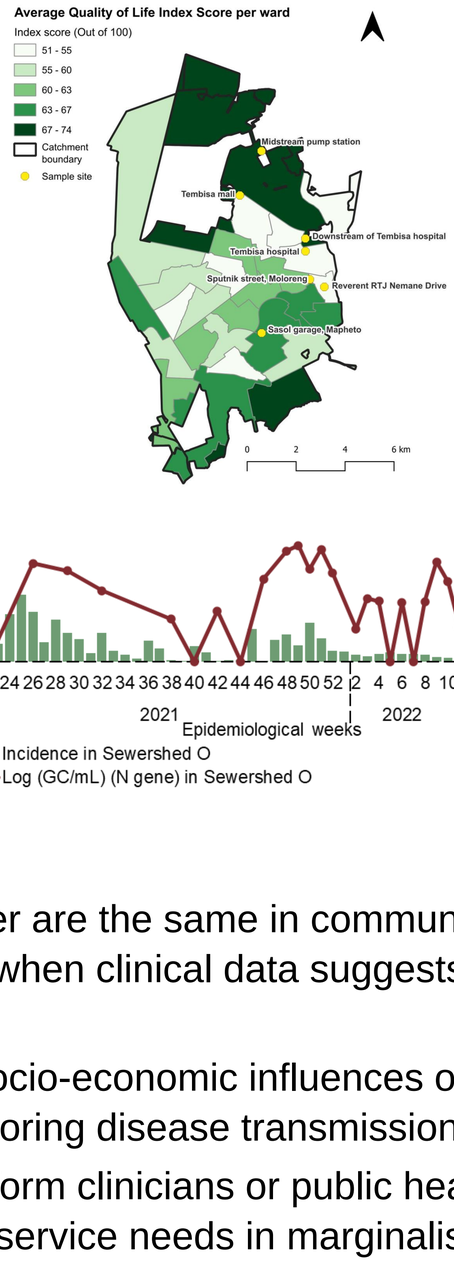


RESULTS









CONCLUSIONS

- SARS-CoV-2 concentrations in wastewater are the same in communities who are affluent and impoverished, even when clinical data suggests otherwise
- Wastewater surveillance can overcome socio-economic influences of laboratory-based surveillance when monitoring disease transmission
- Surveillance in communities can better inform clinicians or public health authorities on disease burden and health service needs in marginalised communities
- Traditional clinical surveillance can be strengthened to include environmental water testing to report to policy makers in a short turn-around time

ACKNOWLEDGEMENTS

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Happy to chat more about this!
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