

COVID-19 Testing

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PROTECTING, MAINTAINING AND IMPROVING THE HEALTH OF ALL MINNESOTANS

Two types of testing: Molecular and Serologic

Molecular



Andrew Theodorakis/Getty Images

Serologic



SEBASTIEN BOZON/AFP VIA GETTY IMAGES

Molecular Test (rRT-PCR)

- Used to diagnose current infection
- Tests for presence of SARS-CoV-2, virus that causes COVID-19
- Detects viral RNA
- Results can vary depending on viral load and collection method
- Upper respiratory swab (such as nasal or throat)
- Performed in a certified lab – MDH PHL

Serologic Test (antibody)

- Used to detect antibodies
- Indicates immune response to an infection
- May take 14 days after infection to detect antibodies
- Some tests may detect antibodies from seasonal coronavirus infection – not just SARS-CoV-2
- Blood test
- Many unverified products on the market
- Performed in a certified lab

Use of testing: Molecular

- Clinical use
- Disease Investigation followed by isolation and quarantine
- Protect vulnerable populations
- Surveillance: Detect prevalence and rate of infection

Use of testing: Serologic

- **May** infer protective immunity (still under study)
- **May** indicate herd immunity rate
- Not for diagnostic testing

Dramatically ramp up testing

- Increase Surveillance
- Ensure testing of the following:
 - Vulnerable populations
 - Staff that serve vulnerable populations and health care workers
- Disease Investigation followed by isolation and quarantine

Prioritized molecular testing

Symptomatic:

- individuals (residents or staff) in congregate living settings (long term care facilities, prisons/jails, homeless shelters, etc.)
- dialysis patients
- hospitalized patients
- health care workers taking care of immunosuppressed patients
- health care workers and their ill household contacts
- patients 65 years of age and older
- patients with underlying medical conditions
- first responders
- child care providers

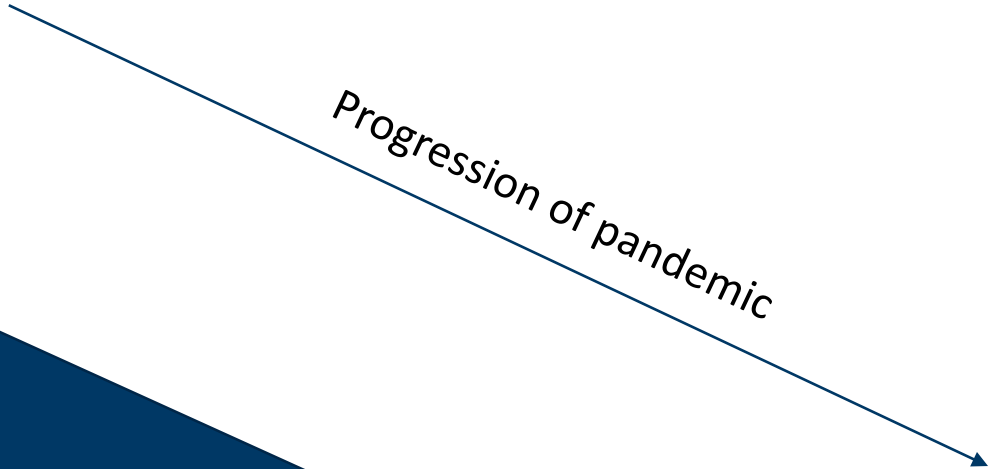
Testing Strategy

Early phase:
Few people
infected

Molecular tests gives rate or
speed of going down
mountain



Progression of pandemic



Serologic tests shows how
far down the mountain

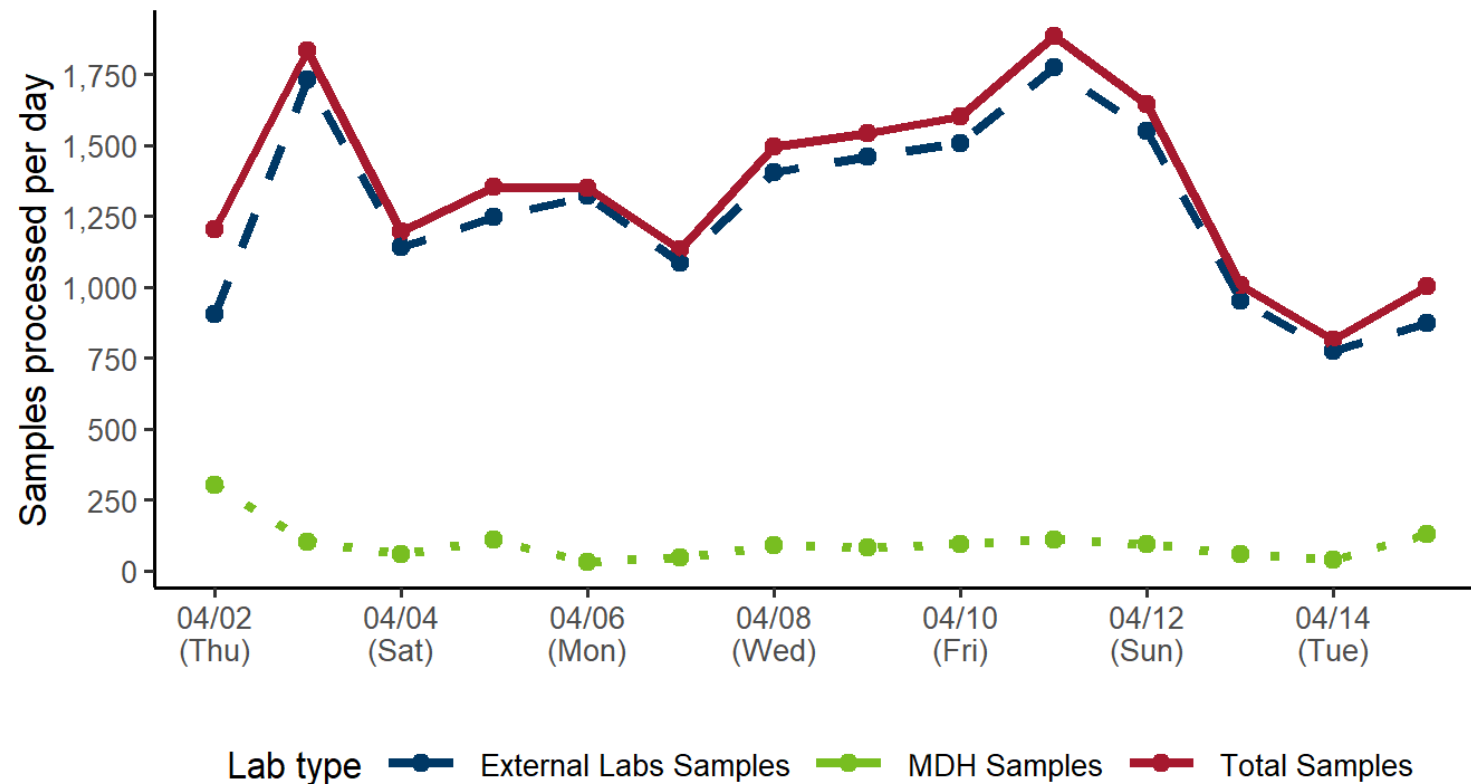
Late phase:
Herd Immunity

Molecular tests daily in MN

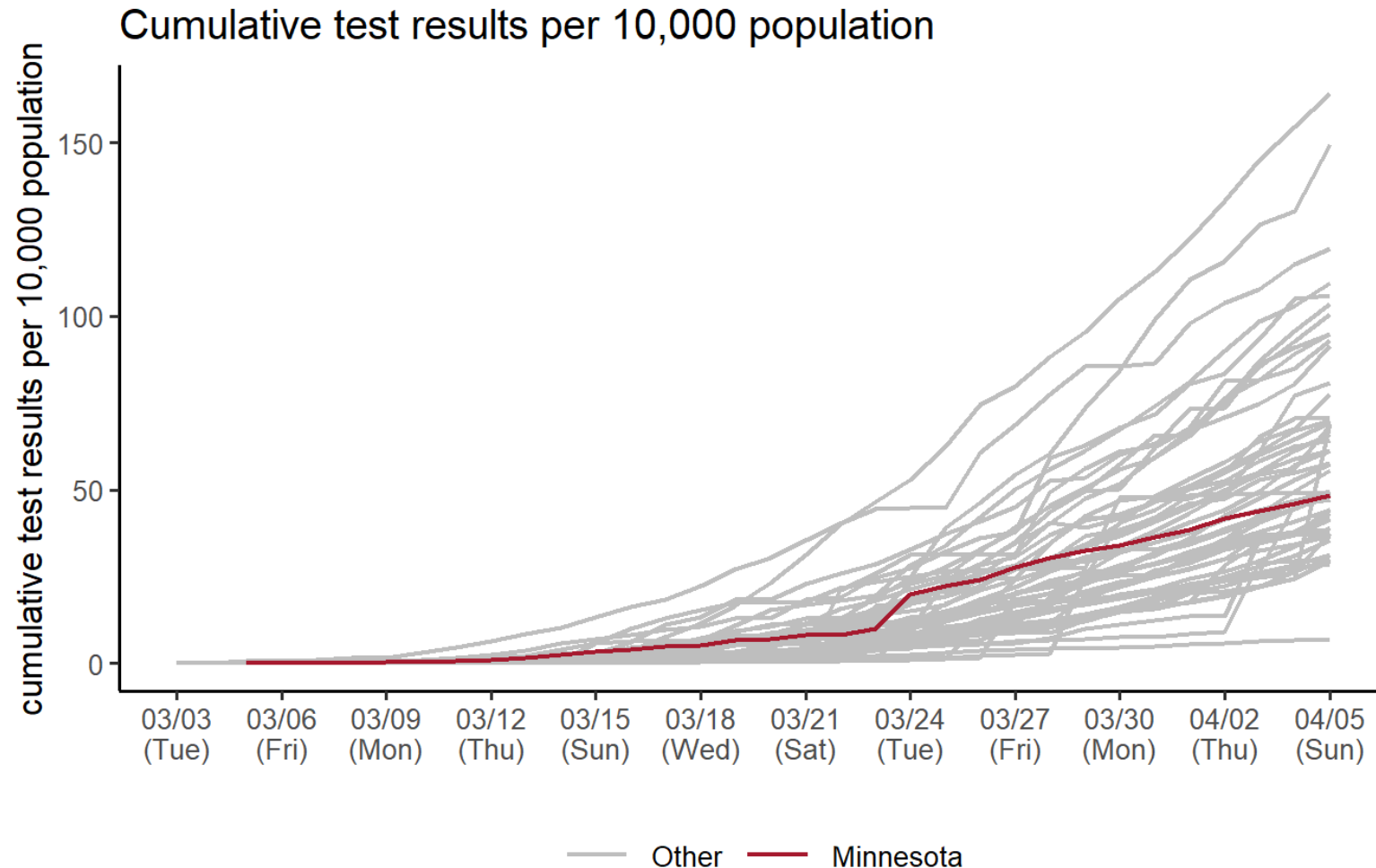
Daily completed sample analyses

New samples on April 15: MDH: 128 / External Labs: 873 / Total: 1,001

Past week average change in total samples: -10% per day



Minnesota has conducted 48.4 total tests per 10,000 residents as of April 5, ranking 32nd.



- <https://www.health.state.mn.us/diseases/coronavirus/hcp/eval.html>