COVID-19 Testing

Dan Huff, Assistant Commissioner
Minnesota Department of Health

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
• 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

Lab type: External Labs Samples, MDH Samples, Total Samples

04/02 (Thu) - 04/14 (Tue)
Minnesota has conducted 48.4 total tests per 10,000 residents as of April 5, ranking 32nd.
Additional Information

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