



SHIELD Testing in D50 Schools

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Woodland School District 50

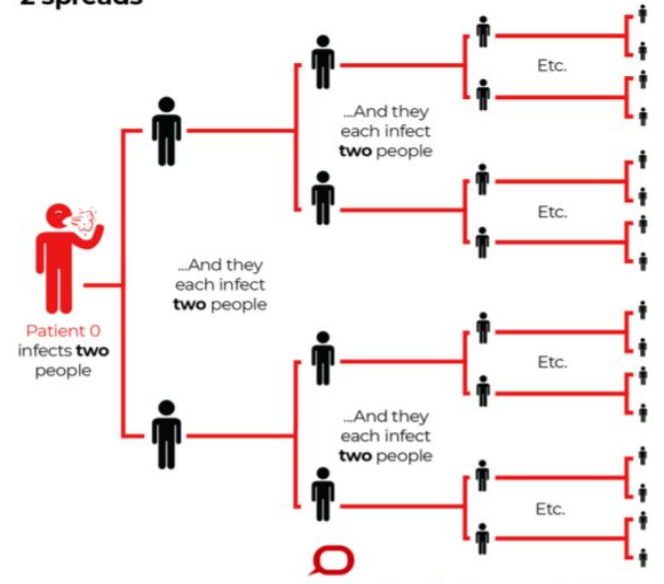
June 24, 2021

HOW INFECTIONS SPREAD



- A November 2020 study in the journal PLOS One stated the R0 of SARS-CoV-2 to be 2.87, even higher than this graphic.
- Identifying infections early and isolating infected individuals breaks the chain of infection and prevents the virus from spreading.

How a virus with a reproduction number (R0) of 2 spreads



Source: [The Conversation](#), Jan. 28, 2020




What is the SHIELD Test?

- PCR Saliva Test developed at the University of Illinois
- FDA-authorized
- Effective for symptomatic and asymptomatic individuals
- Test sensitivity rate - 96.8%
- Test specificity rate - 98.9%
- Positivity rate on UIUC campus and Champaign County < 1% since September 2020




Testing Procedures in D50

COLLECTION SITE EXAMPLE

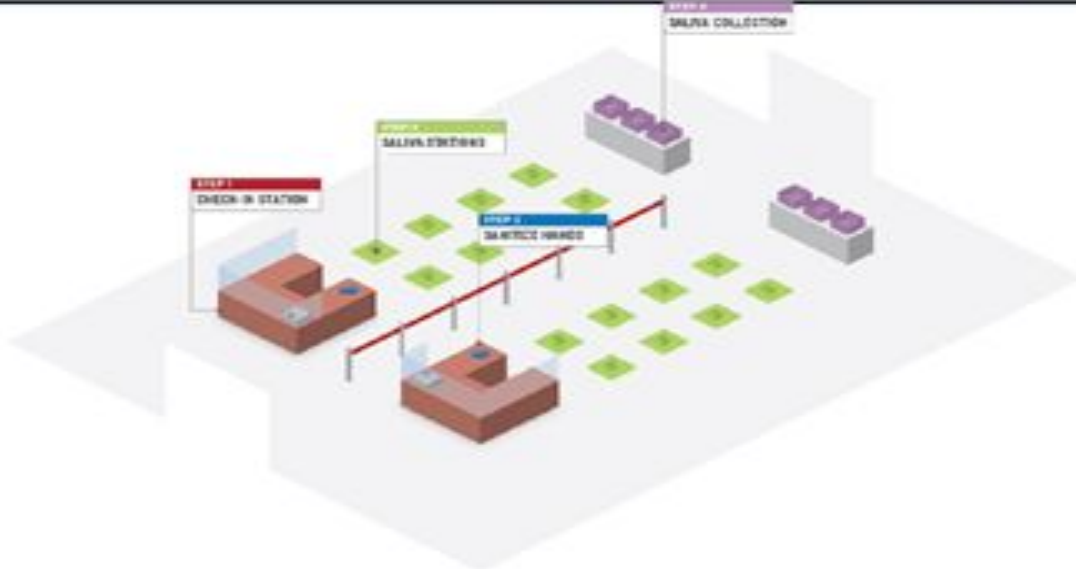


SHIELD ILLINOIS



UNIVERSITY OF ILLINOIS SYSTEM

- A collection lane can process approximately 40-60 people per hour.
- It typically takes an individual 3-5 minutes to provide a saliva sample and complete the process.
- Patients must refrain from eating, drinking, or putting anything in their mouth for 1 hour prior to providing a sample.





Testing Procedures in D50

- Pilot during last three weeks of summer school
- Voluntary Participation
- Non-Invasive
- Approximately 1-3 minutes per collection
- Saliva sample deposited orally into a plastic vial provided by SHIELD
- Flexible Testing Protocols - Time, Frequency, Location
- Specimens identified, labeled, sent to CLIA-certified laboratory
- Results in 12-24 hours



Why is this a good idea?

IMPORTANCE OF FREQUENT TESTING



Testing **everyone** is critical because ~50% of spread is done by asymptomatic or pre-symptomatic individuals.

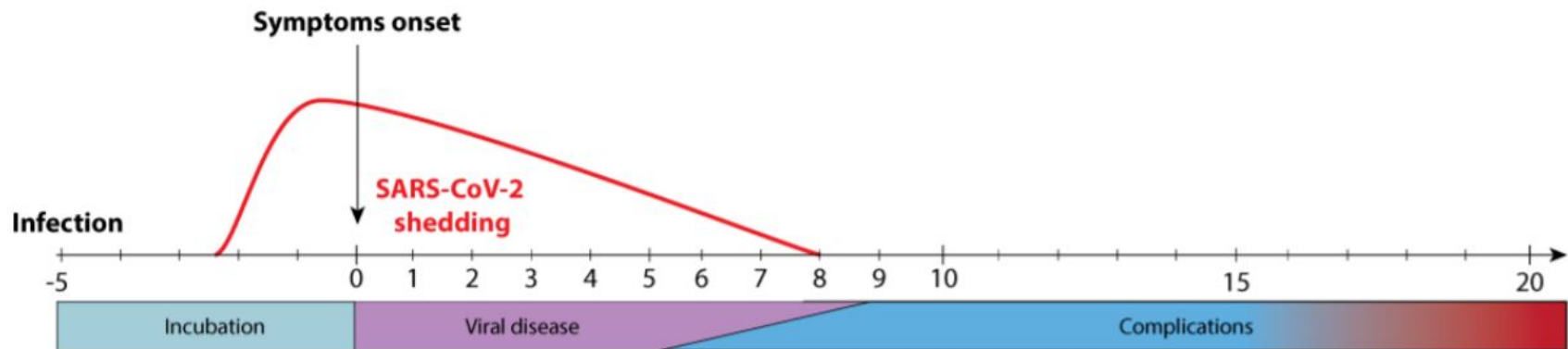
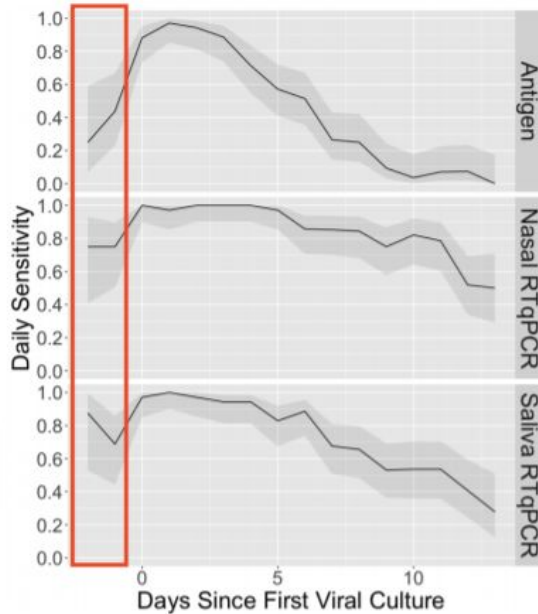


Figure from <https://viralzone.expasy.org/9116>

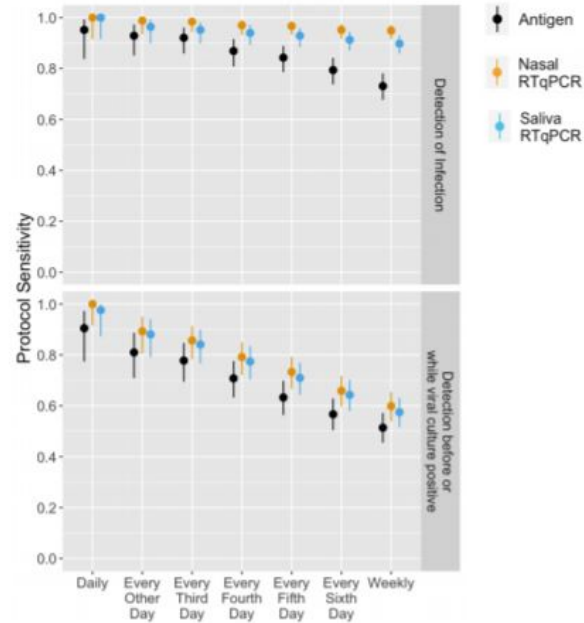
Individuals become contagious before symptoms appear
covidSHIELD can detect the virus before it becomes transmissible

Saliva PCR tests can find positives earlier than other tests, even 1-2 days before the infectious phase.



Saliva PCR tests have 90% sensitivity before day zero

If groups of people test twice per week, SHIELD's test will find >95% of positive cases.



Most PCR tests are highly accurate, but saliva tests catch positives earlier than nasal swabs.

- Identifies cases we would miss through current quarantine guidelines
- Weekly screening supports new IDPH quarantine guidelines for distance and masking
- Acts as a blueprint for district-wide testing when we return to full in-person instruction next August
- Supports students in extracurricular activities and will allow these activities to continue in the new school year
- Builds confidence among families, staff, and students to return to in-person learning
- Program administration is at no cost to District 50
- The SHIELD test becomes another resource in our systemic approach to re-opening our schools



Questions?