

SHIELD Illinois Overview:

IDPH Funded COVID-19 Testing for School Districts

University of Illinois System

WHAT IS SHIELD ILLINOIS?

SHIELD ILLINOIS

UNIVERSITY OF ILLINOIS SYSTEM

HINSDALE TOWNSHIP High School District 86

SHIELD Illinois is a screening and diagnostic testing program that deploys the University of Illinois' **innovative PCR covidSHIELD saliva test** across the state.

MISSION: *SHIELD Illinois is an example of the University of Illinois' land-grant mission, as a non-profit unit working to control the spread of COVID-19 across the state of Illinois, safely open schools, protect workplaces and save lives.*

SHIELD ILLINOIS DEPLOYMENT: K-12 PARTNER LIST

SHIELD ILLINOIS

UNIVERSITY OF ILLINOIS SYSTEM

- Acero Charter Schools
- The Ancona School
- Avery Coonley School
- Brehm Preparatory School
- Campus Middle School for Girls
- Chicago Jesuit Academy
- Christopher House
- The Cove School
- Countryside Private School
- DePaul College Prep
- District 1 Leland
- District 2 Bensenville K-8
- District 2 Liberty
- District 2 Triad
- District 2 Westville
- District 3 Taylorville
- District 3A Rochester
- District 4 Champaign
- District 5 Ball Chatham
- District 5 McLean County
- District 5 Sterling
- District 5 Woodland
- District 6 Waverly K-8
- District 7 Edwardsville
- District 7 Midland
- District 8 Bethalto
- District 9 Earlville
- District 9 Granite City
- District 11 Alton
- District 11 Hoopeston Area
- District 11 Pawnee
- District 12 Johnsburg
- District 12 Roselle K-8
- District 14 Riverton
- District 15 McHenry K-8
- District 15 Palatine
- District 18 Blue Ridge
- District 18 Riley K-8
- District 19 Alden-Hebron
- District 19 Mascoutah
- District 21 Wheeling-Buffalo Grove-Arlington Hts.
- District 24 Millburn K-8
- District 25 Arlington Heights K-8
- District 26 Cary K-8
- District 26 River Trails K-8
- District 27 Northbrook K-8
- District 30 Northbrook/Glenview K-8
- District 31 West Northfield K-8
- District 33 West Chicago K-8
- District 34 Glenview K-8
- District 36 Grass Lake K-8
- District 37 Gavin K-8
- District 38 Big Hollow K-8
- District 39 Wilmette K-8
- District 41 Glen Ellyn K-8
- District 46 Grayslake
- District 46 Prairie Grove K-8
- District 47 Crystal Lake K-8
- District 50 Harvard
- District 50 Woodland K-8
- District 54 Schaumburg
- District 57 Mt. Prospect K-8
- District 59 Comm Cons K-8
- District 60C Saratoga K-8
- District 62 Gower K-8
- District 63 East Maine K-8
- District 64 Park Ridge K-8
- District 65 Evanston/Skokie K-8
- District 65 Lake Bluff K-8
- District 67 Golf K-8
- District 68 Skokie K-8

Safely Opening Schools for In-Person Learning.

**list updated 8/11/2021

SHIELD ILLINOIS DEPLOYMENT: K-12 PARTNER LIST

SHIELD ILLINOIS

UNIVERSITY OF ILLINOIS SYSTEM

- District 69 Skokie K-8
- District 70 Libertyville K-8
- District 72 Rondout K-8
- District 73 East Prairie K-8
- District 73 Hawthorn K-8
- District 73.5 Skokie K-8
- District 75 Mundelein K-8
- District 79 Pennoyer K-8
- District 80 Mendota HS
- District 83 Mannheim K-8
- District 84 Rockdale
- District 87 Glenbard HS
- District 88 Bellwood K-8
- District 89 Fairmont K-8
- District 89 Glen Ellyn K-8
- District 90 Taft K-8
- District 91 Forest Park
- District 91 Lockport K-8
- District 92 Will County K-8
- District 92.5 Westchester K-8
- District 93 Hillside
- District 93 Carol Stream K-8
- District 96 Riverside K-8
- District 97 Oak Park K-8
- District 98 Berwyn North
- District 100 Belvidere
- District 100 Jersey
- District 101 Western Springs
- District 105 LaGrange
- District 106 Bannockburn K-8
- District 108 Lake Park HS
- District 109 Deerfield K-8
- District 110 Central Stickney K-8
- District 112 North Shore K-8
- District 113A Lemont-Bromberek K-8
- District 114 Fox Lake K-8
- District 117 Jacksonville
- District 117 Lake Villa
- District 118 Palos Park
- District 120 LaSalle-Peru HS
- District 120 Mundelein HS
- District 123 Oak Lawn-Hometown K-8
- District 124 Grant HS
- District 124 Peru K-8
- District 125 Oglesby K-8
- District 126 Havana
- District 126 Zion-Benton HS
- District 127 Grayslake HS
- District 127 Worth K-8
- District 127.5 Chicago Ridge K-8
- District 128 Palos Heights K-8
- District 135 Orland K-8
- District 140 Kirby K-8
- District 140 Ottawa K-8
- District 142 Forest Ridge K-8
- District 144 Prairie Hills K-8
- District 153 Homewood
- District 155 Crystal Lake-Cary HS
- District 156 McHenry HS
- District 158 Huntley
- District 161 Flossmoor K-8
- District 165 Marengo-Union K-8
- District 180 Burr Ridge K-8
- District 181 Hinsdale K-8
- District 185 Macomb
- District 185 Waltham

SHIELD ILLINOIS DEPLOYMENT: K-12 PARTNER LIST

SHIELD ILLINOIS

UNIVERSITY OF ILLINOIS SYSTEM

- District 186 Springfield
- District 187 Cahokia
- District 189 East St. Louis
- District 189 Illini Central
- District 200 North Boone
- District 200 Oak Park-River Forest HS
- District 200 Wheaton-Warrenville
- District 200 Woodstock
- District 201 Morton HS
- District 201U Crete Monee
- District 202 Lisle
- District 202 PORTA
- District 203 Naperville
- District 203 New Trier HS
- District 204 Joliet Township HS
- District 205 Lockport Township HS
- District 205 Thorton Township HS
- District 207 Hononegah HS
- District 209 Proviso Township HS
- District 211 Township HS
- District 215 Lansing
- District 218 Oak Lawn HS
- District 220 Barrington
- District 221 Forrestville Valley
- District 225 Northfield Twp. HS
- District 227 Rich Township HS
- District 229 Oak Lawn HS
- District 234 Ridgewood HS
- District 300 Algonquin
- District 301 Rock Falls Twp. HS
- District 302 Kaneland
- District 303 St. Charles
- District 309 East Peoria HS
- District 321 Illinois Valley Central
- District 323 Dunlap
- District 325 Peoria Heights
- District 326 Princeville
- District 327 Illini Bluffs
- District 365U Romeoville-Bolingbrook
- District 428 DeKalb
- District U-46
- Elgin Math and Science Academy
- Gold Coast Prep
- Great Lakes Academy
- Horizon Science Academy SW Chicago
- Hyde Park Day School
- Ida Crown Jewish Academy
- Illinois Math and Science Academy
- Illinois State Univ. Lab Schools
- Immanuel Lutheran – Crystal Lake
- Immanuel Lutheran – Palatine
- Intercultural Montessori Language School
- KIPP Chicago K-8
- Lake Forest Academy
- The Latin School of Chicago
- Madison Cty. Regional Safe School
- New Hope Academy
- Next Generation School
- Noble Network of Charter Schools
- North Park Elementary School
- Peoria Hebrew Day School
- READY Program
- Sacred Heart Griffin Springfield
- Sacred Heart School Chicago
- Sonia Shankman Orthogenic School
- Univ. of Chicago Laboratory Schools
- Vienna High School
- Westlake Christian Academy
- Wolcott College Prep
- Youth Charter Connection Schools

Safely Opening Schools for In-Person Learning.

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ABOUT OUR TEST

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HINSDALE TOWNSHIP High School District 86

Identify Infection	covidSHIELD takes a proactive approach to identify pre-symptomatic and asymptomatic individuals to allow those individuals to quarantine, reducing virus spread.
Fast Results	Results will be sent to the school district and IDPH through a HIPAA compliant health records portal within 24 hours of samples reaching our lab.
No Cost	The SHIELD Illinois saliva-based PCR test is FREE to public and private K-12 schools.
High Accuracy	In a recent clinical trial, covidSHIELD's sensitivity (false negatives) was 96.8% and specificity (false positives) was 98.9%.
CLIA Certified	All of SHIELD Illinois' tests are processed in CLIA labs located throughout the state. SHIELD provides both the CLIA waiver and the doctor's order.
Easy to Collect	The covidSHIELD test is non-invasive and doesn't require a healthcare professional. A 3rd party operations partner will handle the collections.
FDA Authorization	covidSHIELD received emergency use authorization (EUA) from the FDA to test symptomatic and asymptomatic individuals. Individuals who test positive don't need to seek a second test result to confirm the result.

SHIELD'S LAB SYSTEM



High Population Areas

Labs are located near high-population areas to increase access to testing.

Logistical Convenience

Locations are selected based on logistical considerations such as ease of transportation, etc.

Load Balancing

Ability to manage influx of samples and option to secondary locations for quick processing and resulting.

All Labs Identical CLIA Certified

Labs must be CLIA certified and be able to process the number of tests anticipated.

(additional labs to be added in Southern IL as demand increases)

PCR: "GOLD STANDARD OF TESTING"

covidSHIELD is a highly sensitive molecular **RT-PCR** saliva-based test.

PCR (polymerase chain reaction) creates a chain reaction that **replicates viral genetic material,** allowing detection of even low viral loads.

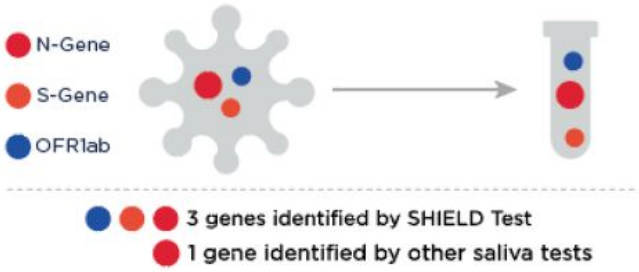
SHIELD'S PCR TEST IS HIGHLY ACCURATE AND CAN SCREEN FOR VARIANTS

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covidSHIELD detects three genes of the SARS-CoV-2 virus, unlike most PCR tests, which only detect 1 gene.

- This allows the test to identify pre-symptomatic and asymptomatic cases, as two of the three genes must be present to label a sample as "positive." This makes it extremely accurate in detecting positive and negative results.
- As the virus mutates, SHIELD's test may have superior detection abilities compared to a one-gene approach and **can screen for variants of concern.**



PCR: ABLE TO IDENTIFY VARIANTS

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To optimize functionality, SHIELD partnered with **Thermo Fisher, the leading supplier of reagent material for PCR tests.**

- Thermo Fisher regularly updates its reagent to identify variants of the SARS-CoV-2 virus.
- The CDC says SHIELD's test is only 1 of 3 available that is able to identify new variants.

ThermoFisher SCIENTIFIC

SHIELD ILLINOIS

ADD ON: BinaxNOW Rapid Antigen Test

For districts using weekly SHIELD screening testing, IDPH and SHIELD will provide FREE rapid antigen tests to school districts.

- This provides an added layer of mitigation, especially valuable for schools that are not self collecting with SHIELD.
- Positive result of covidSHIELD test will override any negative BinaxNOW test result, details provided in SHIELD orientation.
- SHIELD IL will provide the training, CLIA waiver, physician order, and reporting for BinaxNOW.
- District will identify a designated staff member(s)* to sign SHIELD provided paperwork and administer test.



*If the district wants to provide Binax testing minor training and technical requirements are needed. (PnC mass tester authorization, computer, internet, and scanner.)

IMPORTANCE OF FREQUENT TESTING

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

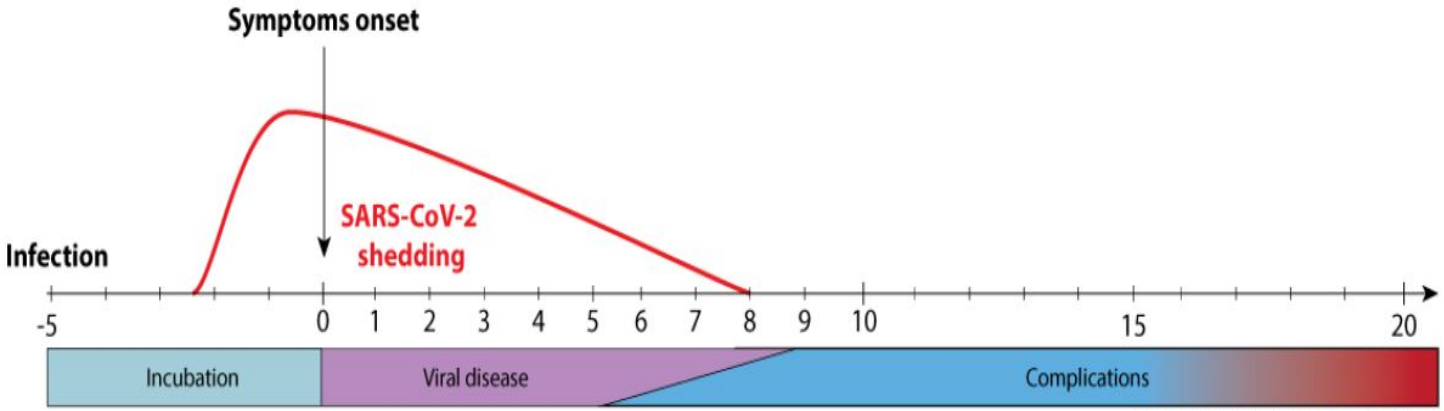


Figure from https://viralzone.expasy.org/9116

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

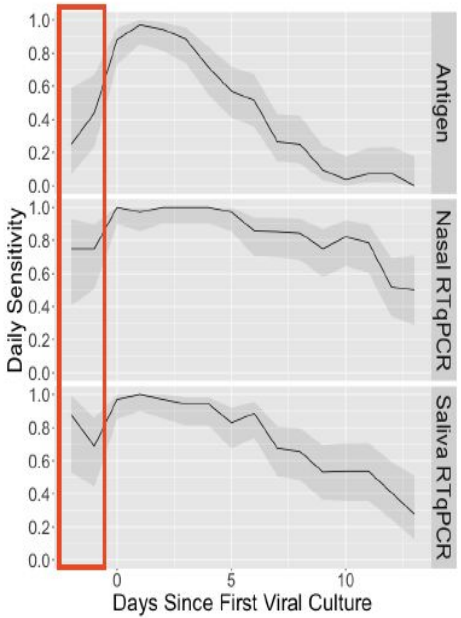
SALIVA TESTS

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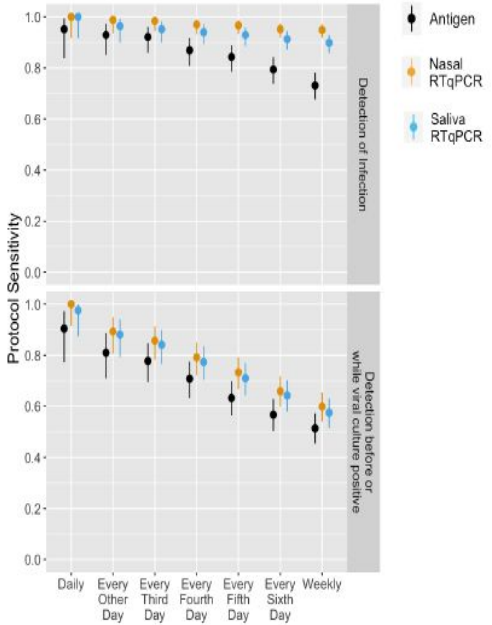
HINSDALE TOWNSHIP HIGH SCHOOL DISTRICT 86

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.

OUTSOURCED COLLECTION PROCESS



A patient checks in by confirming their identity, then a barcoded label is associated with their sample vial



The patient deposits a small amount of saliva in a vial, then screws on the vial's cap



The patient places the vial in a rack and leaves the collection site



Samples are taken to the nearest available lab for testing



Results are delivered within 24 hours of samples reaching lab

Professional, trained, third-party operations partner can handle the collections and reporting.

RESPONSIBILITIES FOR SHIELD TESTING

IDPH/SHIELD will provide:

- Test related funding
- Technology platform
- Test supplies
- 3rd party operations partner ***or*** funding for school to run self-collections process

School district is responsible for:

- Space and operations plan
- Consent from participants
- Communications and contact tracing
- In some cases, running self-collections process (with funding from state)

WEEKLY SCREENING TESTING COLLECTIONS OPTIONS

IDPH and SHIELD will provide a weekly screening testing program for your school district, with various options available.

Choose one of the following options for handling collections:

Option 1:

Third-Party Operations Partner

- This group will handle collections, transportation, and notification of positives will be provided by a 3rd party operations partner
- IDPH will cover all costs
- 100 sample minimum per deployment applies

Option 2:

District Self-Collection

- District will handle collections, transportation, and results reporting
- IDPH will pay districts $8/test to cover costs

Option 3:

Hybrid Model

- Combination of Options 1 and 2, suiting the specific needs of each district

Add-ons:

BinaxNOW

- SHIELD will provide training, CLIA waiver, physician order and reporting
- Supplies provided by LHD/IDPH
- School responsible for collections of samples

Test to Stay

- Option to test on days 1, 3, 5, 7 with SHIELD and/or Binax to safely minimize length of quarantining through rigorous testing after exposures

On-demand testing

- Screening for events, diagnostic testing, etc.

- IDPH recommends that at a minimum, each school district will be set up for Outbreak Testing.

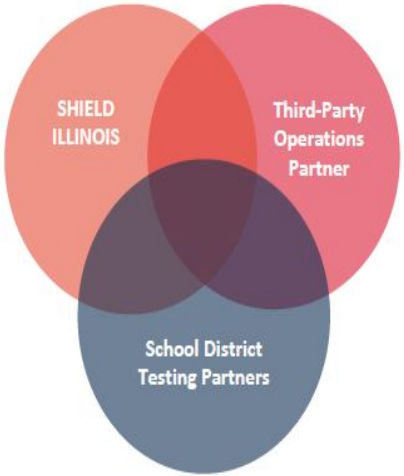
BREAKDOWN OF RESPONSIBILITIES WITH 3RD PARTY OPERATIONS PARTNER

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HINSDALE TOWNSHIP High School District 86

Three Major Stakeholders



Key Stakeholder Responsibilities

SHIELD Illinois

- Technology and results platform (HIPAA-secure)
- Saliva test supplies and consumables
- Training for results reporting
- CLIA waiver and doctor order
- Daily reporting to IDPH
- Trained collections partners

3rd Party Collection

- Develops operational plan
- Trained collection staff (collect and register samples)
- Transports samples to lab
- Reports positive results to patients
- Provides equipment and consumables for site and staff
- Reorders supplies

School District

- Patient consent forms
- Roster upload
- Operational plan (who, what, where; completed with 3rd party)
- Location for collection sites
- Communication to constituents
- Contact tracing, as is required for all quarantined students

GLOSSARY

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TYPES OF TESTS

- **DIAGNOSTIC TEST –** These tests show that you have an active infection.
  - **MOLECULAR TEST –** A type of diagnostic test that detects the virus' genetic material and is typically highly accurate.
    - **PCR TEST –** Polymerase chain reaction (PCR) is a technique used to amplify small segments of DNA. PCR tests detect the presence of an antigen, in this case the SARS-CoV-2 virus.
    - **LAMP –** Loop-mediated isothermal amplification is an alternative to the rt-PCR method of testing for SARS-CoV-2.
  - **ANTIGEN TEST –** These are a type of diagnostic test that detects specific proteins on the surface of the virus. Antigen tests for SARS-CoV-2 are generally less sensitive than real-time reverse transcription polymerase chain reaction (rt-PCR) tests for detecting the presence of viral nucleic acid.
- **ANTIBODY TEST –** These tests detect the presence of infection-fighting proteins that may take days or weeks to develop.

USES OF TESTS

- **SCREENING –** Testing asymptomatic individuals regardless of exposure or signs and symptoms.
- **SURVEILLANCE –** Testing on de-identified specimens so results are not linked to individuals, in order to gain information at a community level.
- **DIAGNOSTIC –** Testing at the individual level when there is reason to suspect infection.

TEST CHARACTERISTICS

- **SENSITIVITY –** The rate at which a test correctly gives a positive result when a person has the SARS-CoV-2 virus. A high rate of sensitivity means a test has very few false negatives.
- **SPECIFICITY –** The rate at which a test correctly gives a negative result when a person does not have the SARS-CoV-2 virus. A high rate of specificity means a test has very few false positives.

Source: FDA