



# The SHIELD Illinois Story

January 2020 — June 2023

# **SHIELD Illinois is a nonprofit COVID-19 screening testing organization founded by the University of Illinois System. It was formed urgently during the global pandemic to save lives in Illinois.**

The first positive case of COVID-19 was reported in the United States on January 19, 2020. By March, schools and businesses were shutting down, and hospitals and health centers were overloading. Meanwhile, a team of world-class researchers at the University of Illinois Urbana-Champaign (UIUC) got to work. Six months later, they delivered a groundbreaking method for testing.

Known as covidSHIELD, it was a Polymerase Chain Reaction (PCR) test (the gold standard of tests) that delivered highly accurate results fast. The screening test identified the virus in people with or without symptoms. This, coupled with the fact that results could be delivered in under 24 hours, meant anyone who tested positive could isolate faster than the 2-3 days it was taking most providers to produce results.

The covidSHIELD test was more convenient, accessible, and accurate than other tests because it:

- required only a small amount of saliva, not an invasive nasal swab
- bypassed RNA extraction, an expensive, time-consuming step required in most other PCR tests
- cost only \$20 to \$30 per test, while others cost \$100+
- detected three genes of the virus, instead of one, making the test even more accurate at catching infections early (A clinical study showed the test had a sensitivity of 96% and a specificity of 99%)

In fall 2020, as colleges and universities everywhere pivoted to online instruction, the covidSHIELD testing program was deployed at UIUC. Students, faculty, and staff tested twice a week on campus. Sample collection for covidSHIELD was so simple, anyone, even students, could be trained to administer it. In-person learning was back.

At the same time, leaders of K-12 school districts, businesses, and other universities searched for ways to return in-person, too. In July 2020, SHIELD Illinois was officially founded as a nonprofit unit within the University of Illinois System. The goals: Expand a quality, low-cost, and fast turnaround testing program across the state to those in need; get schools and businesses running again; and prevent further outbreaks.

The FDA granted the test Emergency Use Authorization in February 2021, which allowed SHIELD Illinois to expand testing around the state. The team collected, processed, analyzed, and delivered results at breakneck speed. The operation expanded to more labs, collection sites, and a transportation network. SHIELD Illinois was even brought in to test members of the Illinois General Assembly, as well as the U.S. District Court of the Northern District of Illinois, which meant court proceedings could resume at a time when most organizations were not meeting in person.

Experts found that regular testing, along with other mitigating protocols (masking, social distancing), became critical to preventing the spread. The federal government therefore allocated funding to every state, earmarked for testing. The Illinois Department of Public Health (IDPH), the Chicago Department of Public Health (CDPH), and the Midwest Coordination Center (MCC) chose SHIELD Illinois as their testing partner. This allowed for free testing for schools and community sites across the state. The CDC recognized the State of Illinois for being the best state in regard to use of funds.

The summer of 2021 was a critical point for the organization. A deadly COVID-19 variant called the Delta variant emerged, more contagious than other strains. Hospitalizations rose. The state government issued testing guidelines:

- IDPH and CDPH offered free SHIELD Illinois testing to all public and private K-12 schools
- IDPH implemented Test-to-Stay protocol, allowing K-12 students and staff to remain in school as long as they continued to test negative (Illinois was among the first states to use this protocol)
- The Governor's office issued an executive order that required unvaccinated higher education personnel and students as well as K-12 staff to test weekly to remain at school

Testing demand soared. Hundreds of school districts registered in mere weeks. The SHIELD Illinois team grew to 200 staff members (after launching with only three in July 2020), increased lab capacity, and streamlined the onboarding process. One million test results were delivered in the organization's first 16 months; it took only five more weeks for SHIELD Illinois to process another million tests.

To slow the spread of more deadly variants, the team worked with CDPH and IDPH to establish 98 free community testing sites in churches, hospitals, and recreational centers. To reopen businesses and boost the state's economy, the team partnered with companies like ADM and Rivian to test regularly to mitigate risks for employees. SHIELD Illinois brought testing to 1,000 locations by October 2021.

The low cost of the test, plus funding received, allowed SHIELD Illinois to provide complete end-to-end services, removing administrative burdens from those who were already overloaded. We trained the staff, delivered supplies, provided a physician order, established a customer service center, and reported results to the state. If the client couldn't staff the site, we provided either our field operations team or an operations partner to collect samples and transport to labs. For sites that had low testing volumes, we created a reimbursement program that paid collection partners \$8 for each sample received and established a group of funnel sites – regional drop-off points – where testing partners located far from our labs could leave their saliva samples to be picked up by SHIELD Illinois drivers and restock their testing supplies.

During a period of rapid misinformation and testing unreliability, SHIELD Illinois established itself as the state's trusted testing partner. Some testing programs couldn't manage the massive demand, required insurance, or presumed that individuals had a car, in the case of drive-through testing sites. SHIELD Illinois identified these barriers and eliminated them. Equity and accessibility were the priority.

Beyond accuracy and fast results, we developed an entire testing program that was affordable, functionable, and scalable. We operated on a cost recovery model allowing our partners, including businesses, to afford testing. Our goal was low SARS-CoV-2 transmission – not high profits. This affordability allowed us to extend federal funding and cover another year's worth of testing in over 460 K-12 schools in 2022-23 at a time when many other states ceased testing operations. Even more schools registered for outbreak testing, should the need arise.

As of February 2023, we've identified 142,481 positive cases of COVID-19 and delivered over 7.2 million test results – more than 24 states combined. SHIELD Illinois testing accounted for 34% of all testing in Illinois.

Over the past three years, we learned that screening testing – paired with other mitigation protocols – significantly reduces the spread of SARS-CoV-2. By regularly testing everyone regardless of exposure or symptoms, the program detected the virus early and helped stop the spread at patient zero. Positivity rates within any organization that implemented the program dropped below community positivity rates after a few weeks. Regular screening testing led to fewer positive cases as the virus spread was reduced. Screening testing allowed for the implementation of the Test-To-Stay program, which enabled immediate isolation and reduced the spread in both schools and communities, keeping children in school, businesses open, and saving lives.

What follows is a list of achievements, a timeline, and department-by-department breakdown to show how we did it.

## Achievements

**7,200,000+**

COVID-19 tests  
resulted

**142,866**

positive cases  
identified

**16 hours**

average resulting  
time

**2,208**

total testing  
locations

**325**

SHIELD Illinois  
employees

**1,000+**

contractors hired

**1,779**

K-12 school  
testing locations

**1,100,000+**

K-12 students and  
staff given access  
to program

**305,000**

in-person  
K-12 school days  
saved with  
Test-to-Stay

**13**

funnel sites

**13**

operational  
laboratories

Data as of June 1, 2023

# Timeline

## January 2020

- First positive case of COVID-19 recorded in the United States

## May 2020

- UIUC researchers begin developing covidSHIELD test

## July 2020

- covidSHIELD test deployed at UIUC
- University of Illinois System establishes nonprofit unit SHIELD Illinois and hires first three employees

## November 2020

- Team grows to 50 employees

## December 2020

- IDPH announces free SHIELD Illinois testing for Illinois public universities
- First businesses begin SHIELD Illinois testing
- First colleges and universities begin testing

## May 2021

- Rapid Response (SHIELD Illinois Outbreak Testing) operations begin

- 150 total locations with testing access

## April 2021

- 100 total locations with testing access

## March 2021

- IDPH partners with SHIELD Illinois for free testing for evidence-based funding in Tiers 3 and 4 K-12 public schools

- 50 total locations with testing access

## February 2021

- FDA grants Emergency Use Authorization for covidSHIELD
- 100,000 total tests performed
- K-12 schools begin testing

## June 2021

- CDPH announces free testing for private and charter K-12 schools in vulnerable communities in Chicago

- Team reaches 100 employees
- Delta variant surge begins

- 200 total locations with testing access

## August 2021

- IDPH extends free SHIELD Illinois testing to every public K-12 school in the state (outside of Chicago)

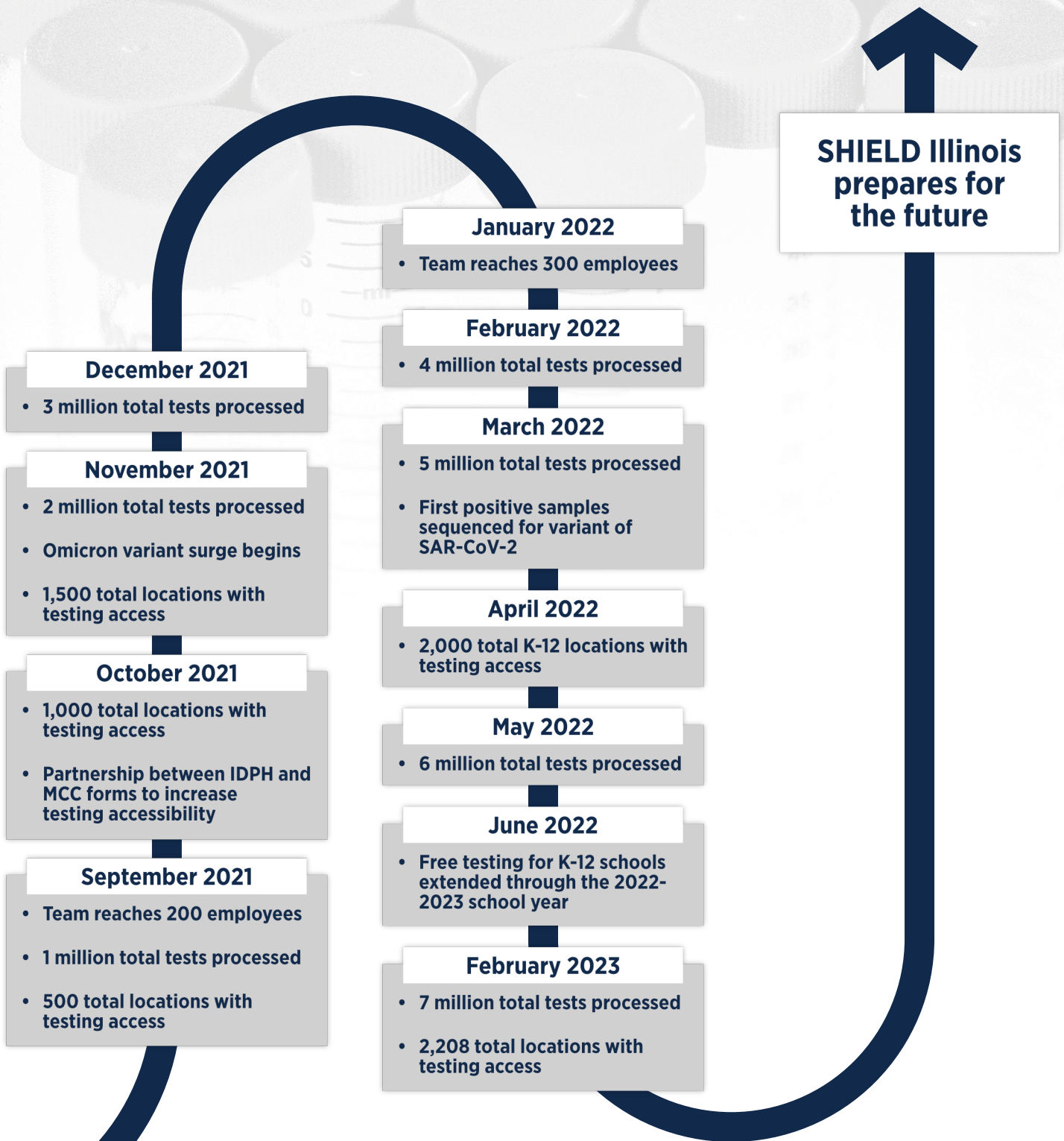
- CDPH announces free testing to all K-12 schools in Chicago (outside of CPS)

- Test-to-Stay Protocol is implemented in K-12 schools

- Governor's Executive Order requires unvaccinated staff of K-12 schools and staff and students at public universities to test weekly

- 300 total locations with testing access

# Timeline, continued



Data as of June 1, 2023

# External Relations

**The external relations team introduced the SHIELD Illinois testing program throughout the state and secured funding to protect communities, keep students in school, and boost the state economy.**

## **Early on, we presented testing as an important layer of protection.**

- Collaborated with state agencies, such as IDPH and Illinois State Board of Education, to present the program, advocate for registration, and create and implement testing incentives (i.e., Test-to-Stay)
- Equipped state officials, business leaders, local health departments, union leaders, and K-12 associations (like the Illinois Nursing Association and the Association of School Administrators) with critical information so they could advocate for testing in their organization
- Met directly with hundreds of school and business leaders to demonstrate how testing could be tailored to their organizations
- Helped implement innovative Test-to-Stay program in K-12 schools throughout the state

## **We used \$348.8 million in federal funding to keep the test accessible.**

- Secured \$285.4 million from IDPH to provide testing for public universities, K-12 schools, and community sites
- Secured \$20 million from CDPH for community sites and every Chicago K-12 school (excluding CPS)
- Partnered with MCC and secured \$60 million for all K-12 schools and community sites
- Used \$1.4 million grant from Rockefeller Foundation to provide testing for underserved K-12 schools

## **We met the extraordinary demand.**

- Managed registration for thousands of K-12 schools and brought testing to over 250 K-12 schools in one month
- Worked with IDPH to establish 98 community testing sites in high-need regions
- Registered Illinois Senate and House and the U.S. District Court – Northern District of Illinois for testing, allowing hearings to resume
- Partnered with companies like Rivian and ADM to mitigate risk for employees and keep businesses open

### ACHIEVEMENTS

**\$348.8M**

in federal funding

**1,779**K-12 schools  
registered**2,208**total testing  
locations**1,100,000+**K-12 students and  
staff with testing  
access

# Client Experience

**Client experience included relationship management and customer success. The teams onboarded partners, set up testing sites, and ensured smooth operations from beginning to end.**

**We built an online onboarding system from the ground up to guide and train clients on SHIELD Illinois testing program, allowing them to become operational in just 2 weeks.**

- Brought 1,205 testing sites online in five months
- Trained over 10,000 people to collect and deliver samples, including SHIELD Illinois field operations, third-party operations partners, and testing partners
- Implemented reimbursement program to cover the cost for K-12 schools that sought to manage testing themselves

**Relationship Managers acted as strategic consultants for 1,779 testing locations throughout the state.**

- Problem solved and managed all day-to-day interaction with clients and partners
- Tailored testing to specific client needs and offered custom solutions, like on-demand testing, unobserved testing, and rapid antigen testing
- We built operations from the ground up to manage testing for partners who couldn't do it themselves. We provided either our team or a partner to collect samples and transport them to labs.
- Opened office hours to answer questions and share critical and changing information from federal and state agencies
- Developed resources for clients and patients, including an online FAQ, instructional videos, and a weekly newsletter for sharing updates on our processes and helpful information from federal and state agencies

**A customer success and technical support system was designed to solve time-sensitive issues for patients, clients, and employees.**

- Established 24/7 phone hotline to answer patient questions
- Launched system for clients to report time-sensitive issues and feedback
- Achieved typical response times of under 5 minutes for support tickets

## ACHIEVEMENTS

**1,205**

testing sites launched  
in five months

**100,000+**

patient phone calls

**10,000+**

support tickets  
fielded

**10,000+**

people trained

# Operations

**The operations team was the backbone of SHIELD Illinois and provided all the end-to-end services for a complete testing program. The team refined our processes, ordered all supplies, implemented key technology, and managed saliva collection from start to finish. Within operations, business analysts and project managers forecasted testing needs and ensured all issues were resolved.**

## Field Operations

**Field Operations was the frontline of SHIELD Illinois, dedicated to providing on-site sample collection services for hundreds of locations across the state. The division also served as the go-to unit for special projects and initiatives including community testing, outbreak response, FDA studies, and sample transport.**

- Successfully facilitated collection of 600,000+ test samples at over 1,800 testing locations
- Collaborated with the CDC Foundation and Illinois Department of Public Health to rapidly hire 40 team members and deploy them where needed
- Staffed and executed multiple mass community testing events during holiday seasons and Omicron variant surge
- Created and deployed an Outbreak Response Unit, handling hundreds of requests for testing assistance within 72 hours
- Our team consisted of over 200 team members organized into more than 20 teams spread across Illinois

## Regional Operations Network

**Because no transportation network existed to meet testing demand and to ensure fast turnaround times and equitable testing coverage of the state, SHIELD Illinois created one. Initially utilizing vehicles from the University carpool system, and sometimes even personal vehicles, SHIELD Illinois purchased a fleet of 40 vehicles to support its system.**

- Achieved a 16-hour average turnaround time for test results
- Reached over 1 million miles driven throughout the state of Illinois, far exceeding national standards
- Strategized for most optimal routing, accounting for interstate access and proximity to collection sites
- Established a group of “funnel sites,” regional relay sites for transporting tests and supplies to decrease drive time
- Transported in excess of 100,000 saliva samples weekly while also serving as the internal courier system for supplies and equipment
- Chartered a plane to utilize available lab capacity and continue operations
- Established “The Depot” in Darien, Illinois, a resource hub where samples were sorted and organized from all of Chicagoland and then distributed appropriately to balance load across labs and decrease processing time

# Operations, continued

## Logistics and Supply Chain

**The logistics and supply chain teams sourced essential lab supplies to meet demand during a global supply chain crisis. We urgently procured, stored, and delivered supplies during a period of unprecedented demand.**

- Managed courier services and supplied over 7.2 million units each of funnels, vials, racks, and other materials to testing sites
- Acquired 30+ PCR machines in 2020 after determining that only four were available statewide
- Urgently redirected shipment of 300,000 antigen tests for K-12 students and staff in only a few days, allowing the largest school district in the state to resume classes
- Ensured operations team and laboratory network could meet peak demand of 14,000 samples collected per day
- Coordinated with O'Hare International Airport to expedite supplies through customs
- Optimized each step and created predictive ordering system to ensure supplies were ordered properly, reducing both labor time and waste
- Used vehicle fleet, funnel sites, and Depot strategically to decrease driving time
- Created custom supplies and sourced domestic suppliers rather than international to ensure fast turnaround times

## Technology

**Our use of advanced technology was critical to the success of SHIELD Illinois, allowing us to determine pain points and solve them quickly. We were constantly refining and evaluating our systems to deliver accurate results fast. We automated many of our most complex processes so we could scale quickly and test more populations. Automation enabled our 16-hour average turnaround time when many PCR tests delivered results in 2-3 days.**

- Created a customer relationship management system of 2,000 accounts in just three days
- Used efficient scheduling software and built onboarding systems to free up time to meet with more clients
- Partnered with the National Center for Supercomputing Applications at UIUC to create a custom laboratory information management software (LIMS) that managed samples and data
- Used GPS Insight and Point-and-Click (PNC) software to track real time specimens and balance load across labs
- Co-created online dashboard that delivered real-time reporting and notifications of test results
- Developed platform and phone call system for support teams
- Securely stored and managed Electronic Medical Records (EMRs)
- Partnered with University of Illinois System to get FDA approval for faster and more reliable heating method for saliva samples

## Operations Achievements

**7,200,000+**

units each of  
funnels, vials, and  
supplies  
distributed

**1,684**

unique purchase  
orders

**2,236**

tests performed  
in one day at a  
single location

**60+**

individuals tested  
in an hour, per  
lane, at sites

**170+**

emergency  
outbreak  
fulfillments in  
one month

**40,000+**

samples accepted  
at the Depot in  
3 hours

**16 hours**

average  
turnaround time  
for patient results

**6 hours**

turnaround time  
from receiving  
sample at lab to  
resulting

**1,000,000+**

miles driven

**40**

vehicle fleet

Data as of June 1, 2023

# Laboratories

**We built new labs and partnered with existing labs to meet testing demand. The team processed over 7.2 million tests as of April 2023.**

**We brought 13 certified laboratories online and maintained scientific excellence throughout.**

- Built two dedicated SHIELD Illinois labs and worked with hospitals, medical centers, and universities to repurpose existing labs
- Funded, designed, and managed \$2.3 million upgrade to lab on University of Illinois Chicago campus
- Obtained CLIA licensing and adhered to all rigorous federal procedures

**We expertly streamlined operations to achieve fast turnaround times, enabling individuals to isolate and prevent COVID-19 spread.**

- Maintained 16-hour average turnaround times even during peak periods, compared to other testing programs delivering in 2-3 days
- Processed between 10,000 and 14,000 samples daily in each lab during peak periods
- Over 7,000 positive samples were sequenced for variants of SARS-CoV-2
- Processed and accessioned specimens using PNC (Point-and-Click, Electronic Health Record System) and LIMS (Laboratory Information Systems)
- Created a third operational shift to meet demand

**We assisted the state of Illinois with COVID-19 variant monitoring and testing.**

- Tested 600 samples per week and with a two-day turnaround time on variant monitoring, reduced from 7 days
- Averaged 80-90% success rate on variant testing while average for alternatives is 50-60%

## ACHIEVEMENTS

**7,200,000+**

tests resulted

**228,499**

tests processed in  
one week

**1.99%**

sample rejection rate  
at testing peak

**6 hours**

turnaround time from  
receiving sample at  
lab to resulting

# Finance and Legal

**The finance and legal teams forecasted and managed \$275 million in revenue while adhering to rigorous state and federal regulations.**

**As a nonprofit within a public university system, we enforced transparency and accountability. We operated at cost and kept testing affordable or free.**

- Developed novel business model for a university system working with laboratories
- Leveraged purchasing power to receive bulk discounts on supplies and raw materials during global supply chain crisis
- Conducted analysis and allocated funds appropriately to bring labs online according to need
- Managed fiscal reporting and provided oversight on all financial functions

**We diligently drafted, negotiated, and managed legal contracts.**

- Processed over 1,000 invoices and managed over 500 vendor agreements with operations partners, K-12 schools, colleges, and universities
- Facilitated intergovernmental agreements (IGAs) quickly to meet testing demands
- Facilitated agreements with state's public universities to permanently transfer equipment for research, teaching, and future pandemic readiness
- Processed reimbursements to allow schools to collect samples on their own

## ACHIEVEMENTS

**\$275M**

revenue budget  
managed

**251**

contracts processed  
in Q3 2021 alone

# Marketing and Public Relations

**The marketing and PR team built and maintained the brand identity of SHIELD Illinois.**

**We first created the brand from scratch, including logos, assets, and guidelines.**

- Launched SHIELD Illinois website
- Created and managed LinkedIn, Instagram, Twitter, and Facebook pages to reach thousands of people to promote the importance of testing
- Wrote and designed [presentations](#), flyers, and [case studies](#)

**We created targeted awareness campaigns to build community trust and persuade parents to opt-in for testing.**

- Developed campaign with World Series champion Willson Contreras, news anchor Bill Kurtis, and Chicago Red Stars players Kayla Sharples and Kealia Watt that included radio ads (English and Spanish), videos, and billboards
- Partnered with parent Instagram influencers to maximize visibility

**Our media strategy kept the public informed during a time of misinformation.**

- Created press releases and curated list of journalists to announce new testing sites, encourage testing, and showcase SHIELD Illinois accomplishments
- Earned coverage in major outlets, including [NPR](#), [The Washington Post](#), [Business Insider](#), [The Chicago Tribune](#), and [Crain's Chicago Business](#)

**In a changing landscape, we shared current materials with crucial testing information.**

- Filmed and edited instructional videos to promote accurate testing procedures
- Translated materials for non-English speaking communities
- Produced, hosted, and promoted monthly webinars that featured epidemiologists and other experts to share timely health information

**Company culture remained a focus.**

- Wrote and designed internal weekly newsletter called “The Droplet” and monthly newsletter called “The Funnel” for 325 staff members to showcase team accomplishments and share information
- Created “Drooler of the Week” award to highlight individual staff member achievements
- Executed team-building events, like cooking classes and game nights, to cultivate positivity and well-being during a time of isolation

## Notable videos

### [K-12 Schools Collection Model](#)

Different ways that K-12 schools test

### [K-12 Unobserved Collection Tutorial](#)

Guidance for K-12 testing at home

### [Keep Kids in the Game - and in the Classroom](#)

with World Series champion Willson Contreras

### [Business Collection Model](#)

How businesses protect employees

### [Unobserved Collection Tutorial](#)

Guidance for testing at home

### [Defense Wins Championships](#)

with Chicago Red Stars players

## ACHIEVEMENTS

**1,000,000+**

users reached via  
paid social ads

**100+**

unique news articles

**1,600,000+**

billboard and radio  
advertisement  
impressions

# People and Human Resources

The people team (along with the University of Illinois System human resources department) onboarded employees, provided professional development tools, and cultivated a positive culture during a period of rapid growth.

**SHIELD Illinois began with three employees. We grew the team to 325 employees at a breakneck pace.**

- In less than 12 months, screened over 500 candidates
- In less than 12 months, hired, onboarded, and trained 230 staff members
- Partnered with System HR to create new civil service employment classification to provide health care and paid time off benefits to 100+ employees previously in temporary classifications
- Leveraged staffing from temporary recruiting firm to deliver nearly 10,000 hours of additional support
- Created employee evaluation system for delivering constructive feedback

**Recognizing the short-term nature of employment at SHIELD Illinois, we empowered employees with numerous professional development tools.**

- Executed over two dozen different development seminars
- Launched “Cheat Codes for Careers,” a biweekly newsletter with actionable career advice
- Opened office hours to review resumes, practice interviews, and answer questions
- Created and curated the “Professional Development Notebook” to centralize materials for career growth
- Created Peer Accountability Groups to encourage goal setting
- Shared LinkedIn courses and curated relevant job listings

**To foster a positive culture, we centered diversity, equity, and inclusion in our initiatives.**

- Launched “The Culture Crew” for sharing personal experiences
- Created a support group for caregivers and parents
- Designed six seminars dedicated to inclusion and belonging
- Conducted a climate survey to get a pulse on the organization amid steady change and address opportunities
- Collaborated with marketing department to plan and manage dozens of social events



# SHIELD Illinois is preparing for the next public health emergency

SHIELD Illinois is stockpiling supplies and preparing labs that can be converted for pandemic response if needed, training new laboratory technicians, and providing funding for pandemic-related research. This long-term commitment is evidence that the University of Illinois System is ready to be an effective and responsive partner in meeting the next challenge our public health sector faces.



## Clinical Laboratory Development Program

The Clinical Laboratory Development Program (CLDP) was created to help solve the critical shortage of qualified clinical laboratory personnel. The CLDP, located at the University of Illinois Chicago (UIC), will develop the next generation of laboratory technicians and scientists through hands-on training and work experience.

- The 16-week clinical technician apprenticeship training program will take place in SHIELD Illinois' new state-of-the-art laboratory, where apprentices will have access to top-tier leadership, partnering industry mentorship, and real-world assays to process.
- Through partnering sponsors, apprentices will have a pipeline to job opportunities at partner organizations, which includes hospitals and reference labs.
- Should the need arise, the facility can quickly convert to a pandemic response lab.



## Permanent Equipment Donations

As part of its mission to advance learning and research, SHIELD Illinois has donated lab-ready equipment valued in excess of \$2.5 million to public universities across the state. In the event of a public health crisis, the labs can quickly switch to emergency production.

The equipment, such as PCR machines, ovens, robots, freezers, etc., will be used for research and teaching purposes in labs at the universities.



## Ongoing Research

SHIELD Illinois has allocated \$1.5 million for pandemic-related research grants.

- This funding will support research to help decision-makers better understand how to handle future COVID variants, pandemics, public policy, educational policy, and other public health programs.
- One of the goals of this initiative is to develop econometric models to better understand the costs of the pandemic.
- This research fund aims to produce studies with unique perspectives that can offer new insights and substantially benefit public health.
- Additionally, this research fund aims to better our understanding of SHIELD Illinois' impact on the state, including its strengths, organizational growth, supply chain, logistics, internal processes, human resources, culture, and operations.

## SHIELD ILLINOIS IS AT THE READY

- Institutional knowledge can help operationalize the program and assemble a qualified workforce.
- The CLDP and public university labs can quickly convert to pandemic response labs.
- More than 500,000 test kits, including vials, labels, funnels, and other necessary equipment, have been stockpiled.
- SHIELD Illinois' Electronic Medical Records (EMR) reporting system can be reactivated.

# Terms and Definitions

**ANTIGEN TEST** - Antigen tests can detect the presence of a specific viral antigen, which indicates current viral infection. Antigen tests are currently authorized to be performed on nasopharyngeal, nasal swab, or saliva specimens placed directly into the assay's extraction buffer or reagent.

**CLIA** - The Clinical Laboratory Improvement Amendments of 1988 statute is an amendment to the Public Health Services Act in which Congress revised the federal program for certification and oversight of clinical laboratory testing. When a lab is CLIA-certified, it meets certain quality standards for laboratory testing performed on specimens from humans, such as blood, body fluid and tissue, for the purpose of diagnosis, prevention, or treatment of disease, or assessment of health.

**COMMUNITY SITE** - Any facility or site, open to the public, which collects material derived from the human body for the purposes of testing for COVID-19.

**THE DEPOT** - A resource hub in Darien, Illinois, that SHIELD Illinois established to ensure labs didn't become overwhelmed with volume. Staff of the Depot sorted and rejected samples, and then sent them to labs efficiently, allowing for faster results.

**EMERGENCY USE AUTHORIZATION (EUA)** - The Food and Drug Administration allows medical products or new uses of medical products that do not have full FDA approval in an emergency to diagnose, treat, or prevent serious or life-threatening diseases or conditions when there are no adequate, approved, or available alternatives. Tests that have EUA do not require a second test and have liability protection through the PREP Act.

**EMR** - Electronic medical records (EMRs) and electronic health records (EHRs) are often used interchangeably. An EMR allows the electronic entry, storage, and maintenance of digital medical data. EHR contains the patient's records.

**ENDEMIC** - A disease that is spreading at the normal or expected level. A pandemic can become endemic once the disease has been controlled.

**EVIDENCE-BASED FUNDING (EBF)** - The Illinois Evidence Based Funding for Student Success Act prioritizes distribution of new funding to the students with the most need and the most poorly funded school districts.

**FEDERAL FUNDING DETAILS** - Federal funding means an award of financial assistance, including formula grants, discretionary grants, and cooperative agreements, in the form of money, or property in lieu of money, by the federal government through any federal agency to an eligible grantee.

**FUNNEL SITES** - A location where collection partners can drop off their saliva samples to be picked up and transported to a SHIELD Illinois laboratory. These aggregation points

reduced travel time for SHIELD Illinois drivers and facilitated faster result times for patients.

**LIMS** - A Laboratory Information Management System (LIMS) is software that allows you to effectively manage samples and associated data. By using a LIMS, labs can automate workflows, integrate instruments, and manage samples and associated information.

**ON-DEMAND TESTING** - A program that uses covidSHIELD tests collected and registered into the patient portal by a patient at home. The sample is then dropped at a dropoff location for transportation to a SHIELD Illinois lab.

**PANDEMIC** - A widespread occurrence of an infectious disease over a whole country or the world at a particular time.

**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. PCR tests are considered the most accurate test for determining if an individual has COVID-19.

**RNA EXTRACTION** - Costly and time-consuming step in the standard method of RT-qPCR testing requiring additional reagents that became scarce during the COVID-19 pandemic

**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.

**SEQUENCING** - The sequence or order of bases or letters that makes up a virus's genetic material, or its genome.

**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.

**TEST-TO-STAY** - Test-to-Stay (TTS) protocol is an alternative to home quarantine for school-aged children. TTS allows school-based close contacts to continue in-person learning by combining contact tracing and COVID-19 testing repeated at least twice during the week after a COVID-19 exposure.

**UNOBSERVED TESTING** - COVID-19 testing that can be performed off-site without trained staff. Saliva samples can be mailed or dropped off, and then processed.

**VARIANT** - Any change in the DNA sequence of a cell. Variants may be caused by mistakes during cell division, or they may be caused by exposure to DNA-damaging agents in the environment. Variants can be harmful, beneficial, or have no effect.