

ELC ENHANCING DETECTION: INDIANA TESTING PLAN

2020 Overarching Jurisdictional SARS-COV-2 Testing Strategy

Jurisdiction:	Indiana
Population Size:	6,732,000

1. Describe the overarching testing strategy in your state or jurisdiction.

Indiana is projected to test 150,000 Hoosiers in May 2020 (2.2% of the population). Compared to April, this represents a 60,000 test-per-month increase. The State of Indiana has the goal of increasing specimen collection, testing, and reporting to 900,000 per month by the end of December 2020. Here is our plan to achieve these numbers.

Indiana will use a three-pronged approach to maximize COVID-19 testing. First, help clinical laboratories scale operations based on the needs of their local communities. Second, continue to establish high-throughput, centralized mechanisms to test what local community resources cannot cover. Key Indiana State Department of Health (ISDH) partnerships for this include Eli Lilly and Company (Eli Lilly), OptumServe, the Animal Disease Diagnostic Laboratory at Purdue University (Purdue ADDL), Covance Laboratories (Covance), the Indiana State Department of Health Laboratories (ISDHL), and Quantigen Genomic Services (Quantigen). Finally, continue to distribute near-point-of-care (near-POC) instruments to test vulnerable populations, including rural or underserved populations and correctional facilities. In addition to the 15 ID NOW instruments allocated to Indiana, ISDH has purchased an additional 20 instruments to be placed at these facilities. Using these approaches, Indiana will scale testing capacity from current (5,000 daily) to future (30,000 daily) between May and December 2020.

To maximize clinical laboratory impact, we assess real- and ideal-state capacity for 112 locations, which are updated weekly by clinical laboratory managers/directors. These numbers are aggregated, provided to decision-makers biweekly, and used to snapshot reagent availability and advise the likelihood of achieving Governor Eric Holcomb's four Back on Track principles.

Next, eight laboratory testing systems were identified that (1) have instrumentation/staff capacity of >500 tests per day and (2) are physically distributed in the state. Due to reagent limitations, these sites have a combined daily testing capacity of 2,900 tests. Using the bulk-purchasing power of the State of Indiana and funding provided through the ELC cooperative agreement, reagents will be purchased for these sites to perform testing on four testing platforms (Hologic Panther, Roche Cobas, Luminex Aries/Magpix, Biofire Torch). With this purchase, these sites will now have a combined daily testing capacity of 28,600 tests.

Bulk-purchase supplies will be managed centrally by the ISDH and will be allocated based on need. Using this centralized distribution model, if specimen volume ebbs in one location, but surges in another, supplies can be repositioned quickly to meet seasonal increase or local outbreaks.

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Even with bulk-purchase, supply chain limitations are anticipated. Surge capacity will be maintained through partnership with academic, industry, and government partners that utilize instrumentation not commonly found in the clinical laboratory. Since March 18, Eli Lilly has stood as ISDH's chief partner in COVID-19 testing, performing up to 2,000 tests per day on behalf of Indiana. As Indiana opens back up, however, demands on Eli Lilly's other life-saving products have increased, and their partnership will be sunsetting in June. Additional partnerships have been established through their networks, including Purdue ADDL, Covance, ISDHL, and Quantigen. These key partners will perform testing for ISDH's congregate and industrial strike teams and drive-thru testing sites and will contribute a daily testing capacity of 7,100 tests.

Laboratory capacity is irrelevant, however, if specimen collection cannot occur. Significant shortages of collection supplies and transport media (VTM) have occurred. In the initial wave of these shortages, ISDHL partnered with Eli Lilly to generate testing kits, which were distributed to hospitals through the ISDH logistics team. Hospitals report shortages of collection kits daily through EMResource. The logistics team prioritizes orders to those on black (no supply) or red (four days of supply) status. Supply shipments from FEMA have been incorporated into this model, as well as supplies provided in partnership with Covance.

Once labs have capacity and specimen collection supplies are available, a relationship must be built between patients wanting to be tested and those that can collect specimens. Outside of traditional provider/patient encounters, Indiana has developed three major mechanisms for specimen collection: Strike Teams, drive-thrus, and retail pharmacies.

Since March 17, ISDH has operated Strike Teams to test residents/patients in congregate settings, responding to >800 requests (>2500 patients) to date. Testing for these facilities was performed by ISDHL and Eli Lilly. In addition to Strike Team specimen collection, ISDH has deployed 16 near-POC testing instruments in residential facilities including long-term care (LTC), correctional, group homes, and those that serve the homeless. These instruments have been strategically allocated so that high-density congregate settings can perform testing to triage COVID-19 cases internally. Indiana continues to support these deployments by providing testing kits weekly to all 16 recipients. Strike Teams will continue to provide specimen collection for smaller settings as needed.

When ISDH Strike Teams identify facilities with high positivity rates, a second COVID PLUS team performs whole-house testing. This two-team strategy allows for rapid specimen collection when only a few individuals in a facility are symptomatic, while providing a mechanism for a more comprehensive assessment in the most impacted facilities.

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Indiana correctional facilities have employed a three-pronged testing scheme to date: for single cases, Wexford Health (contracted medical services) collects specimens for testing at Garcia Laboratories; ISDH Strike Teams are deployed to housing units with 2-3 symptomatic persons; for facilities with high acuity or multiple vulnerable persons, rapid near-POC instrumentation is deployed for on-site use. Near-POC testing has also been employed at the largest intake facility.

Two areas of focus for capacity building in the correctional system include assuring county jails (including work-release programs) have access to testing for all persons in residence for >24 hours, and serving the needs of the youths in juvenile detention facilities. The Indiana Department of Corrections plans to conduct full-house surveillance with both PCR and serology, by the end of 2020, or as guidance is provided.

LTC and nursing facilities will leverage lessons learned through the ARLN, performing point prevalence studies paired with infection control and response (ICAR) assessments. The ability of facilities to embrace and maintain their own programs long-term is contingent upon the success of these initial programs and the development of incentivization programs that allow facilities to purchase and maintain their own testing supplies.

To further protect this highly vulnerable population, biweekly testing of all LTC employees will be initiated by mid-June 2020 to decrease resident exposure to positive, but asymptomatic, healthcare workers. Specimen collection will be performed by on-site nursing staff; testing will be performed based on each facilities self-identified funding, including insurance billing (testing at clinical labs), receipt of testing vouchers (ISDH testing partnerships), and allocation of supplies and testing equipment to qualified sites.

Indiana ranks 10th in the nation for total agriculture production (including ducks, wood office furniture, popcorn, ice cream, chickens, eggs, corn, turkeys, and hogs), and as such, Indiana is home to a large industrial and migrant population. Since April 18, ISDH has been working with meat and poultry processing or manufacturing facilities to prepare for, contain, and mitigate outbreaks. Any Indiana business can request an assessment visit from the ISDH Industrial Strike Team, which includes a review of the facility and their health and safety plan. For essential critical infrastructure facilities, state-supported testing can be requested following an assessment visit. Once authorized, specimens are collected and tested via local resources (drive-thru or hospital), state-sponsored Strike Teams, or the LHD for specimen collection. Whole workforce testing is discouraged, except in limited cases, in preference of targeted testing.

On May 6, the state began collecting specimens via OptumServe and has expanded to 50 locations, which are chosen and refined by ISDH. Location choices are designed to fill voids in the testing

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landscape, ensuring that all Hoosiers have access to testing close to where they live and work. OptumServe will provide Indiana with 100,000 tests per month.

Since April 6, ISDH has operated drive-thru clinics at least weekly across the state, collecting specimens from >10,000 persons. At least four drive-thrus operate concurrently in key spots where capacity is needed. Based on this state-run model, guidance has been drafted for county-level implementation of drive-thrus by LHDs.

Patient registration and test requisitions for drive-thrus and strike teams have been coordinated through Zotec Partners (Zotec) and ISDHL LimsNet (LimsNet). Zotec has become the front-end registration and data entry portal for patients, which has reduced errors in specimen labeling and specimen cancellation. Zotec also allows for uniform metadata collection, allowing insight into illness level and potential COVID-19 hotspots. Zotec connects to the ISDHL LimsNet via an API, allowing partner laboratories to receive test requisitions in their LIMS system. Once results are released, the process is reversed through LimsNet into Zotec for patient reporting. This mechanism allows for HL7 messaging to report results to NBS. Indiana is working with the Indiana Health Information Exchange (IHIE) to make COVID-19 result reports available to Indiana physicians in the IHIE network.

Utilizing existing relationships, ISDH is working with retail pharmacies such as Walgreens, CVS, Wal-Mart and Kroger to provide COVID-19 testing. CVS will operate 21 drive-thru testing sites, with over half of the sites located in Marion County and are targeting 1,050 patient collections daily. These locations will greatly increase testing access for Indiana's minority populations: 41.9% of African American, 21.4% of Latino/Hispanic, 21.0% of Asian, 15.3% of Pacific Islander, and 15.6% of American Indian populations reside in Marion County.

Local relationships with Kroger were successfully piloted by Allen County, Indiana's third most populated county, to perform testing for a LHD-sponsored drive thru testing site. Kroger currently has two drive-through testing locations in Indiana. Wal-Mart has opened six testing locations with the ability to expand.

Serology tests for COVID-19 have flooded the market: however, little is known about best practice and use of these tests for patient care. The Infectious Diseases Society of America (IDSA) has indicated that serological tests could be beneficial for epidemiologic studies to assess disease prevalence. Indiana, heeding this guidance, will focus on serology for prevalence testing, expanding use clinically only once more is known about the role of serology in assessing immunity to COVID-19. Potential uses of serology include back-to-work plans (especially in occupations with at-risk populations), cohorting in congregate living settings, and plasma donation.

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The State of Indiana has partnered with the Indiana University Fairbanks School of Public Health to perform a statewide prevalence study. Prevalence throughout the state of Indiana will be assessed in four waves (April, June, and September 2020; Spring 2021) by both molecular and serological means. Participants were selected randomly, and represent all geographic, age, gender, and minority populations. During phase one (April 2020), 4600 Hoosiers were tested, and results indicated a 2.8% prevalence across the state. The study aims to test a total of 20,000 Hoosiers.

Generally, laboratory testing starts with the specimen and ends with a result. However, the pieces before and after testing are just as critical and have been challenging to appropriately scale during this pandemic. Key to successful testing efforts are communication, collaboration, and coordination to ensure that everyone is at the table and that all Hoosiers can be tested wherever they work or live.

Robust local partnerships are critical to create and sustain successful, widespread testing. LHDs, local minority health coalitions, and religious/faith-based leaders play a vital role in reaching migrant workers, older individuals, racial and ethnic minorities, and special populations. LTCs and nursing homes coordinate with the elderly and disabled. Corrections and law enforcement reach our incarcerated. Each has the expertise to know the strategies, locations, and persons who are most effective in reaching each group. ISDH has forged strong relationships with these public health allies and will continue to collaborate with them on testing strategies.

Tying them all together are the resources for specimen collection, including Covance, Quantigen, Eli Lilly, Purdue ADDL, EMResource, and the ISDHL; patient registration using Zotec; specimen collection via Strike Teams, healthcare facilities, drive-thrus, and LHDs; specimen accessioning using LimsNet; testing by Indiana clinical laboratories and key State of Indiana partners; deployment of near-POC instrumentation; testing result dissemination by LimsNet and IHIE; reporting via NBS; coronavirus.in.gov dashboards; and patient follow-up by partners and healthcare providers in the state.

This is Indiana's strategy to test for COVID-19.

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Table #1a: Number of individuals planned to be tested, by month

BY MONTH:	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	TOTAL
Diagnostics*	150,000	260,000	350,000	450,000	550,000	650,000	725,000	900,000	4,035,000
Serology	0	5,000	0	0	5,000	0	0	0	10,000
TOTAL	150,000	265,000	350,000	450,000	555,000	650,000	725,000	900,000	

Table #1b: Planned expansion of testing jurisdiction-wide

Name of testing entity	Testing venue (select from drop down)	Performing Lab (if different from testing entity)	Daily diagnostic throughput	Daily serologic throughput	Platforms or devices used (list all)	Specific at-risk populations targeted (list all)
Indiana Clinical Laboratories	Commercial or private lab	sendout labs, including Quest, LabCorp, Mayo Medical Laboratories, Eli Lilly and Company, etc.	1,000	0		

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Indiana Clinical Laboratories	Commercial or private lab	clinical laboratories and laboratory systems, including ISDHL capacity for surge hospital testing capacity	550	0		
Eli Lilly and Company Drive-Thru	Drive-thru testing site	n/a	330	0		First responders, essential workers, high risk individuals
Marion County Department of Health Drive-Thru	[Select One]	Indiana University Infectious Disease Laboratory	200	0		First responders, essential workers, high risk individuals

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Name of testing entity	Testing venue (select from drop down)	Performing Lab (if different from testing entity)	Daily diagnostic throughput	Daily serologic throughput	Platforms or devices used (list all)	Specific at-risk populations targeted (list all)
Veteran's Affairs (VA) Hospitals	Hospitals or clinical facility	Richard Roudebush VA Medical Center	20	0		the elderly, diasabled, veterans
Clinical Laboratory Receiving Bulk-Purchase Reagents and/or ELC-funded Equipment	Hospitals or clinical facility	Mid-America Clinical Laboratories	6,144	0		Inpatients, ICU, other
Clinical Laboratory Receiving Bulk-Purchase Reagents and/or ELC-funded Equipment	Hospitals or clinical facility	Indiana University Pathology Laboratory	6,656	0		Inpatients, ICU, other

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Name of testing entity	Testing venue (select from drop down)	Performing Lab (if different from testing entity)	Daily diagnostic throughput	Daily serologic throughput	Platforms or devices used (list all)	Specific at-risk populations targeted (list all)
Clinical Laboratory Receiving Bulk-Purchase Reagents and/or ELC-funded Equipment	Hospitals or clinical facility	Alverno Clinical Laboratories	5,699	2,025		Inpatients, ICU, other
Clinical Laboratory Receiving Bulk-Purchase Reagents and/or ELC-funded Equipment	Hospitals or clinical facility	Parkview Regional Medical Center	816	0		Inpatients, ICU, other
Clinical Laboratory Receiving Bulk-Purchase Reagents and/or ELC-funded Equipment	Hospitals or clinical facility	Memorial Hospital & Healthcare Center	1,190	0		Inpatients, ICU, other
Clinical Laboratory Receiving Bulk-Purchase Reagents and/or ELC-funded Equipment	Hospitals or clinical facility	King's Daughters' Hospital and Health Services	796	0		Inpatients, ICU, other

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Clinical Laboratory Receiving Bulk-Purchase Reagents and/or ELC-funded Equipment	Hospitals or clinical facility	Riverview Hospital	2,377	350		Inpatients, ICU, other
Clinical Laboratory Receiving Bulk-Purchase Reagents and/or ELC-funded Equipment	Hospitals or clinical facility	Deaconess Hospital	2,080	500		Inpatients, ICU, other
Indiana COVID PLUS Strike Teams	Community-based	ISDH Laboratories	250	100		Disabled, nursing homes, prisons, congregate living settings, the elderly

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Indiana COVID PLUS Strike Teams	Community-based	Quantigen Genomic Services	100	0		Disabled, nursing homes, prisons, congregate living settings, the elderly
State of Indiana Congregate Settings Strike Team	Community-based	ISDH Laboratories	50	0		Healthcare workers, disabled, the elderly, nursing homes, and other congregate living settings
State of Indiana Industrial Strike Team	Community-based	Eli Lilly and Company	270	0		Employees of industrial settings, including food processing plants, and other factory settings; congregate work settings, racial and ethnic minorities
State of Indiana Drive-Thru Team	Drive-thru Testing Sites	Eli Lilly and Company	200	0		Underserved locations including the elderly, racial and ethnic minorities.
Indiana Long-Term Care Facilities (employees)	Community-based	ISDH Laboratories	500	150		the elderly, disabled, nursing homes, congregate living setting

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Indiana Long-Term Care Facilities (employees)	Community-based	Clinical Laboratory Receiving Bulk-Purchase Reagents and/or ELC-funded Equipment	833	0		the elderly, disabled, nursing homes, congregate living setting
Indiana Long-Term Care Facilities (employees)	Community-based	OptumServe	1,000	0		the elderly, disabled, nursing homes, congregate living setting
OptumServe	Drive-thru testing site	Contracted by OptumServe	1,300	0		Underserved locations
CVS Pharmacies	Drug store or pharmacy	LabCorp	50	0		Underserved locations

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Name of testing entity	Testing venue (select from drop down)	Performing Lab (if different from testing entity)	Daily diagnostic throughput	Daily serologic throughput	Platforms or devices used (list all)	Specific at-risk populations targeted (list all)
Kroger	Drug store or pharmacy			0		Underserved locations
Wal-Mart	Drug store or pharmacy	Quest, eTrueNorth		0		Underserved locations
Indiana Department of Corrections	Other	Garcia Laboratories	50	0		Incarcerated persons, racial and ethnic minorities, the elderly
Westville Correctional Facility	Other	n/a	3	0		Incarcerated persons, racial and ethnic minorities, the elderly
Plainfield Intake Facility	Other	n/a	3	0		Incarcerated persons, racial and ethnic minorities, the elderly
Logansport Memorial Hospital	Hospitals or clinical facility	n/a	3	0		County with high-incidence, industrial plant outbreak, racial and ethnic minorities

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Name of testing entity	Testing venue (select from drop down)	Performing Lab (if different from testing entity)	Daily diagnostic throughput	Daily serologic throughput	Platforms or devices used (list all)	Specific at-risk populations targeted (list all)
HealthLinc East Chicago	Federally Qualified Health Center	n/a	3	0		underserved locations, racial and ethnic minorities
Eskenazi Health	Hospitals or clinical facility	n/a	3	0		underserved locations, racial and ethnic minorities
Jane Pauley Health Center North Arlington	Federally Qualified Health Center	n/a	3	0		underserved locations, racial and ethnic minorities
Valley Professionals Community Health Center (Clinton, IN)	Federally Qualified Health Center	n/a	3	0		underserved locations, racial and ethnic minorities
Pendelton Correctional Facility	Other	n/a	3	0		Incarcerated persons, racial and ethnic minorities, the elderly

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Name of testing entity	Testing venue (select from drop down)	Performing Lab (if different from testing entity)	Daily diagnostic throughput	Daily serologic throughput	Platforms or devices used (list all)	Specific at-risk populations targeted (list all)
Memorial Hospital Jasper	Hospitals or clinical facility	n/a	3	0		Underserved locations
HealthLinc SouthEast	Federally Qualified Health Center	n/a	3	0		underserved locations, racial and ethnic minorities; serves a homeless shelter of 400 beds
Community HealthNet	Federally Qualified Health Center	n/a	3	0		underserved locations, racial and ethnic minorities
New Castle Correctional Facility	Other	n/a	3	0		Incarcerated persons, racial and ethnic minorities, the elderly
Valley Professionals Community Health Center (Rockville, IN)	Federally Qualified Health Center	n/a	3	0		underserved locations, racial and ethnic minorities

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Name of testing entity	Testing venue (select from drop down)	Performing Lab (if different from testing entity)	Daily diagnostic throughput	Daily serologic throughput	Platforms or devices used (list all)	Specific at-risk populations targeted (list all)
Symphony Care Network	Other	n/a	3	0		the elderly, disabled, nursing homes, congregate living setting
Plainfield Correctional Facility	Other	n/a	3	0		Incarcerated persons, racial and ethnic minorities, the elderly
InTouch Pharmaceuticals (mobile testing lab)	Other	n/a	3	0		nursing homes, the elderly
Indiana Clinical Laboratories	Commercial or private lab	Covance - support dedicated to the State of Indiana	4,000	0		

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Name of testing entity	Testing venue (select from drop down)	Performing Lab (if different from testing entity)	Daily diagnostic throughput	Daily serologic throughput	Platforms or devices used (list all)	Specific at-risk populations targeted (list all)
Indiana Clinical Laboratories	Commercial or private lab	Purdue Animal Disease Diagnostic Laboratory - support dedicated to the State of Indiana	1,050	0		

2020 Direct Expansion of SARS-COV-2 Testing by Health Departments

2. Describe your public health department's direct impact on testing expansion in your jurisdiction.

In order to provide COVID-19 testing throughout Indiana, the Indiana State Department of Health (ISDH) has set up drive-thrus and conducted strike team initiatives throughout the state. The purpose of drive-thru testing is to ensure Hoosiers have access to accessible, free, and timely testing in order to determine their COVID-19 status. Facilities including long-term care, correctional facilities as well as industrial sites are the most important to conduct testing initiatives. As the capability to test expands, ISDH is providing planning tools to local response partners in order to plan for and operate local testing locations. So far in May, 12,198 patients were tested thru the strike team initiatives. The contracted testing service with OptumServe, a testing capacity of 6,600 daily, has expanded the testing sites for 50 different geographic locations in Indiana.

An innovative partnership between ISDH and Eli Lilly & Company, combining the high testing throughput and robust web-based test ordering /reporting strengths, has played a tremendous role in this COVID-19 pandemic response. 36,877 patients have been tested through this partnership. The lab testing network initiative described in the overarching strategy section will further expand the testing capacity in Indiana.

Indiana State Department of Health Laboratories (ISDHL) has served an irreplaceable role in the public health of Indiana, such as curbing the spread of MERS COV imported case, recognizing the Scott County HIV outbreak, preparing to combat Ebola and detecting Zika cases. During this COVID-19 pandemic, due to the lack of high throughput nucleic acid extraction and PCR instruments, the ISDHL has heavily relied on the manual extraction methods and has only been able to test up to 200 specimens daily with extended testing hours. To continue serving the important role as ISDHL has been in public health of Indiana, the expansion of testing capacity is a must. The ISDHL will expand its testing capacity from 200 to 4,000 daily, which includes purchasing 3 Hologic Panther Fusion and two King Fisher instruments. These instruments will allow three different EUA approved SARS CoV 2 assays (PCR and Transcription Mediated Amplification (TMA) assays) on Panther Fusion, TaqPath COVID-19 multiplex on Thermo Fisher platforms) and diversify the reagents and supplies sources to minimize impact of potential reagents and supplies shortage. The expanded testing capacity in ISDHL will streamline coordination among partners for prioritized public health testing activities, such as the activities of the strike team initiatives.

ISDH operates a congregate setting strike team who responds to requests for specimen collection of at-risk patients, including the elderly and disabled (both home-bound or who reside in group homes), those living in nursing homes and correctional facilities, and the healthcare workers (HCW) who care for these individuals. Generally, a strike team collects specimens from between 1-20 patients or HCWs per visit.

When a facility with a high positivity rate is identified, a second COVID PLUS team is deployed to perform whole-house testing, including HCWs. Indiana has also placed near-point-of-care (near-POC) testing instruments in one LTC facility and one mobile testing unit to pilot an in-house testing approach. If successful, this project will be expanded to other facilities. Starting in mid-June, all LTC employees will

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be screened biweekly for COVID-19 to additionally limit the exposure of the vulnerable LTC population. These tests will be performed by a combination of clinical lab, OptumServe, and ISDHL resources.

Indiana correctional facilities use contracted medical services to test for single cases, ISDH Strike Teams for housing units with 2-3 symptomatic persons, and have been provided four near-POC instruments at high density facilities as well as the largest intake facility. In the next few months, the Indiana correctional facilities will also expand its initiatives to include county jails, juvenile detention facilities, and work release programs by working with local health departments (LHDs) and sheriffs to organize testing.

Racial and ethnic minorities were initially underrepresented in the first phase of Indiana's prevalence study. Since that time, the ISDH's Office of Minority Health has worked tirelessly to pair testing initiatives with local minority health coalitions and religious/faith-based leaders to decrease barriers and enhance awareness of COVID-19, its risks, and testing opportunities.

Near-POC instruments have been allocated to six federally qualified healthcare centers who have both the geographic access, and proven track record, of reaching racial and ethnic minorities as well as persons who experience homelessness. One of the facilities, HealthLinc SouthEast, serves a 400-bed homeless shelter. In addition, one near-POC instrument was provided to Eskenazi Health, who serves a large proportion of the racial and ethnic minorities and persons experiencing homelessness in Marion County.

The development of the Lab Testing Network and contracting with a logistics company will allow Indiana to track the supply chain needs. A taskforce has been developed to strategize placement of assets based on ability to increase capacity, connectivity and geography. Several sub-committees inform the taskforce on priorities: communication, supply chain, laboratory enhancement, sample collection, policy, legal, privacy, billing and reimbursement. Eli Lilly has partnered with Indiana to assist in the procurement and development of the Lab Testing Network.

All labs and providers are required to report their results of both positive and negative results to ISDH. ISDH uses the Neds Based System (NBS) and these results are fed directly to the CDC. The epidemiology team monitors resulting for errors and the ISDH lab IT team assists in developing data transfer connections for automation of reporting. ISDH developed a connection from the NBS database to report into the Indiana Health Information Exchange (IHIE), a statewide electronic medical record (EMR), so that all results can be seen by providers.

Although a few clinical laboratories in Indiana have COVID 19 serology testing capability, the main use of the testing is not public health focused. ISDHL does not currently have the testing capability and has been evaluating performance of different EUA approved COVID 19 serology assays in the market. ISDHL plans to purchase 2 Alinity instruments to perform IgG (and IgM when it is available) assay. The advantage of bringing in this platform is the existing instrument LIMS interface, which would shorten the time needed for the development of test ordering and reporting via ELR. Additionally, ISDHL has a long history of performing testing for HIV, HBV and HCV surveillance. The observation of an unusual high positivity rate of HIV serology results triggered the investigation of the Scott County HIV outbreak in 2015. The experience with serology assays, the trained mindset and sharp eyes of public health

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laboratorians will provide valuable insight to any public health focused prevalence and surveillance studies on targeted populations, such as LTCF, industrial facilities etc.

At this time, ISDH has partnered with a reference laboratory in central Indiana to perform COVID 19 IgG testing for Fairbanks' multiphase prevalence study. The phase two study will occur in the first week of June with 5,000 participants. The serology testing will be expanded as more is known.

Indiana will require reporting of serology results for disease exposure surveillance and continues to provide education on what serology results mean for an individual.

ISDH has remained focused on providing outreach testing to vulnerable populations. There are 3 teams each focused on different populations and strategies. The congregate setting strike team is focused on monitoring, communicating and testing in congregate living settings. The drive thru team is focused on providing drive thru testing to minority and underserved populations. This team works closely with the ISDH Minority Health Director and community partners to engage community leaders and identify needs. The community leaders assist with outreach and education. Lastly, there is an industrial strike team that works closely with industrial plants to test and advise on infection prevention and mitigation. ISDH's minority health director will work with OptumServe to develop specific "days" at the 50 sites across Indiana to focus on different minority and at risk populations. ISDH will work with community leaders to ensure interpreters and leaders are on-site to welcome and assist the members of their community.

ISDH has worked closely with the CMO for the Department of Corrections. 3 ID machines have been deployed to prisons as well as additional testing collection kits to be used at the department of corrections discretion for monitoring and testing outbreaks. The CMO has educated on infection prevention and investigated outbreaks in collaboration with ISDH.

Zotec Partners developed a dashboard that allow Indiana to see in real time the number of tests being performed at a particular location and when those tests are resulted. Additionally, the data and results can be reviewed by patient's age, race and ethnicity, location, COVID-19 exposure and symptoms. This information provides insight into level of illness prior and alerts to potential hotspots prior to receiving the results.

The development of the Lab Testing Network and contracting with a logistics company will allow Indiana to track the supply chain needs. A taskforce has been developed to strategize placement of assets based on ability to increase capacity, connectivity and geography. Several sub-committees inform the taskforce on priorities: communication, supply chain, laboratory enhancement, sample collection, policy, legal, privacy, billing and reimbursement. Eli Lilly has partnered with Indiana to assist in the procurement and development of the Lab Testing Network.

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Table #2: Planned expansion of testing driven by public health departments

BY MONTH:	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	TOTAL
Number of additional* staff to meet planned testing levels	5	20							25
FOR DIAGNOSTIC TESTING									
How many additional* testing equipment/de vices are needed to meet planned testing levels? (provide an estimated number, and include platform details in narrative above)	1	3	7	12	3	3	3	2	34
Volume of additional swabs needed to meet	150,000	260,000	350,000	450,000	550,000	650,000	725,000	900,000	4,035,000

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BY MONTH:	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	TOTAL
planned testing levels ⁺⁺									
Volume of additional media (VTM, MTM, saline, etc.) needed to meet planned testing levels ⁺⁺	150,000	260,000	350,000	450,000	550,000	650,000	725,000	900,000	4,035,000

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BY MONTH:	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	TOTAL
Volume of additional reagents needed to meet planned testing levels, by testing unit and platform (i.e. 100K/day - Hologic panther; 100k/day - ThermoFisher)	100/day - TaqPath ThermoFisher; 1k/day - Roche 6800; 400/day - Luminex Aries/Magpix; 700/day - Cepheid GeneXpert ; 150/day - Diasorin Liaison; 500/day - ID NOW; 200/day - m2000; 2k/day - out of state testing	175/day - TaqPath ThermoFisher; 1k/day - Hologic Panther; 1k/day - Roche 6800; 1350/day - Alinity/M; 1500/day - Luminex Aries/Magpix; 1k/day - Biofire; 1k/day - Cepheid GeneXpert ; 175/day - Diasorin Liaison; 675/day - ID NOW; 200/day - m2000; 1300/day - out of	175/day - TaqPath ThermoFisher; 5.3k/day - Hologic Panther; 1k/day - Roche 6800; 2700/day - Alinity/M; 1500/day - Luminex Aries/Magpix; 1k/day - Biofire; 1250/day - Cepheid GeneXpert ; 250/day - Diasorin Liaison; 900/day - ID NOW; 200/day - m2000; 900/day - out of	175/day - TaqPath ThermoFisher; 7k/day - Hologic Panther; 1k/day - Roche 6800; 2700/day - Alinity/M; 1500/day - Luminex Aries/Magpix; 1k/day - Biofire; 1.7k/day - Cepheid GeneXpert ; 325/day - Diasorin Liaison; 1200/day - ID NOW; 200/day - m2000; 600/day - out of	5.7k/day - TaqPath ThermoFisher; 8.3k/day - Hologic Panther; 3.1k/day - Roche 6800; 2.7k/day - Alinity/M; 1500/day - Luminex Aries/Magpix; 1k/day - Biofire; 2.2k/day - Cepheid GeneXpert ; 425/day - Diasorin Liaison; 1.6k/day - ID NOW; 200/day - m2000; 375/day - out of	5.7k/day - TaqPath ThermoFisher; 8.3k/day - Hologic Panther/Fusion; 5.2k/day - Roche 6800; 2.7k/day - Alinity/M; 1500/day - Luminex Aries/Magpix; 1k/day - Biofire; 3k/day - Cepheid GeneXpert; 550/day - Diasorin Liaison; 2.1k/day - ID NOW; 200/day - m2000; 275/day - out of state testing	5.7k/day - TaqPath ThermoFisher; 11k/day - Hologic Panther/Fusion; 5.2k/day - Roche 6800; 2.7k/day - Alinity/M; 1500/day - Luminex Aries/Magpix; 1k/day - Biofire; 4k/day - Cepheid GeneXpert; 550/day - Diasorin Liaison; 2.8k/day - ID NOW; 200/day - m2000; 175/day - out of state testing	5.7k/day - TaqPath ThermoFisher; 11k/day - Hologic Panther/Fusion; 5.2k/day - Roche 6800; 2.7k/day - Alinity/M; 1500/day - Luminex Aries/Magpix; 1k/day - Biofire; 5.3k/day - Cepheid GeneXpert; 550/day - Diasorin Liaison; 3.7k/day - ID NOW; 200/day - m2000; 120/day - out of state testing	698k - TaqPath ThermoFisher; 1550k - Hologic Panther/Fusion; 681k - Roche 6800; 527k - Alinity/M; 327k - Luminex Aries/Magpix; 140k - Biofire; 571k - Cepheid GeneXpert; 108k - Diasorin Liaison; 404k - ID NOW; 48k - m2000

ELC ENHANCING DETECTION: INDIANA TESTING PLAN

BY MONTH:	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	TOTAL
		state testing	state testing	state testing	state testing				
FOR SEROLOGIC TESTING									

ELC ENHANCING DETECTION: INDIANA TESTING PLAN

BY MONTH:	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	TOTAL
Number of additional* equipment and devices to meet planned testing levels	0	2							2
Volume of additional reagents needed to meet planned testing levels, by testing unit and platform (i.e. 100K/day - Hologic panther; 100k/day - Thermofisher)	0	800/day - Alinity I	1,500/day Alinity I						

* Report new monthly additions only, not cumulative levels

++ For May and June, only include needs beyond the supplies provided by FEMA. Report new monthly additions only, not cumulative levels.