

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 tested 172,000 Hoosiers in May 2020, exceeding the 150,000 previously projected (2.4% of the population). In June, Indiana tested 219,000 Hoosiers, or 3.3% of the population. Indiana has the goal of increasing specimen collection, testing, and reporting to 450,000 Hoosiers 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, assist clinical laboratories to scale operations based on the needs of their local communities. Second, continue to establish high-throughput, centralized testing for key public health testing initiatives that local community resources cannot cover. 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 Abbott 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 (5,700 daily) to future (15,000 daily) between July and December 2020.

To maximize clinical laboratory impact, the Indiana State Department of Health Laboratories (ISDHL) assesses 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, and used to snapshot reagent availability and testing bottlenecks. ISDH updates clinical laboratories weekly through a conference call named Weekly on Wednesdays. A call summary is provided via the ISDHLabInfo email listserv.

Next, nine laboratory testing systems were identified that are geographically distributed throughout the state. These sites will receive instrumentation and reagents from four different manufacturers (Hologic Panther, Roche Cobas, Luminex Aries/Magpix, ThermoFisher TaqPath) to diversify Indiana's testing platforms and provide surge capacity. These instruments are anticipated to arrive July-September; reagent distribution began in June. These sites will be digitally connected to allow for load-balancing and physically connected by a contracted transportation service, Langham Logistics. Using this centralized capacity model, if specimen volume ebbs in one location, but surges in another, specimens can be repositioned quickly to meet needs for seasonal increase or local outbreaks.

With these instrument and reagent purchases, the Laboratory Testing Network (LTN) has a theoretical daily testing capacity of 24,000 tests. One of the major challenges the LTN faces, however, is reagent allocation from vendors. Instrumentation deployments were strategized to meet regional and state-wide testing surges, but reagent allocations will continue to limit each facility's ability to test.

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Additional surge capacity will be established and maintained at the ISDHL, including testing of specimens collected from ISDH's congregate setting and industrial strike teams, drive-thru testing sites, and local health department (LHD)-run clinics. ISDHL will contribute a daily testing capacity of up to 4,000 tests.

Laboratory capacity is irrelevant, however, if specimen collection cannot occur. Significant shortages of collection supplies and viral 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. Supply shipments from FEMA have been incorporated into this model, as well as supplies provided via additional partners. Starting in July, supplies will be distributed by Langham Logistics, allowing ISDH Logistics to prioritize PPE distribution.

Once labs have testing capacity and specimen collection supplies are available, a relationship must be built between patients wanting to be tested and entities that can collect specimens. Outside of traditional provider/patient encounters, Indiana has developed two major mechanisms for specimen collection: strike teams and drive-thrus. In August 2020, Indiana will also add county-run clinics or drive-thrus in each of Indiana's 93 counties. ISDH is also considering deployment of antigen testing for immediate care settings starting in fall of 2020.

Since March 17, ISDH has operated strike teams to test residents/patients in congregate settings, responding to >800 requests to date. Testing for these facilities will continue to be performed by ISDHL. In addition to strike team specimen collection, ISDH has deployed 28 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 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.

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.

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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 youth 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 continue to perform 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 incentive programs that allow facilities to purchase and maintain their own testing.

To further protect this highly vulnerable population, all LTC employees were tested in June 2020. Moving forward, specimen collection will be performed biweekly by on-site nursing staff or in collaboration with contracted partners; testing will be performed based on each facility's 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 its 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 in up to 50 locations chosen by ISDH. Location choices are designed to fill voids in the testing landscape, ensuring that all Hoosiers have access to testing close to where they live and work. OptumServe will provide Indiana with up to 100,000 tests per month.

Since April 6, ISDH has operated drive-thru clinics at least weekly across the state, collecting specimens from >20,000 persons. Drive-thrus operate concurrently in 1-4 key spots where capacity is needed. Forty-three percent of all ISDH-sponsored drive-thrus have focused on Lake County, which represents

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7% of Indiana's total population, but includes 18.0% of the African American, 20.0% Latino/Hispanic, 5.0% Asian, 6.0% Pacific Islander, and 10.0% Indiana's American Indian populations.

Based on this state drive-thru model, guidance has been drafted for county-level implementation of drive-thrus by LHDs. Starting in August 2020, all 93 counties will have the opportunity and funding to open county-run clinics or drive-thrus with testing provided either by LTN laboratories or the ISDHL. This funding, which spans a 2-year timeframe, includes employee salary, PPE, specimen collection kits, and access to an electronic test requisition system for laboratory test coordination. Specimen courier services will be available through Langham Logistics, as well as delivery/transport of VTM and swabs from the ISDH warehouse to each site.

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 laboratory information management 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.

Serology tests for COVID-19 have flooded the market, and many Indiana labs are keen to bring these tests in-house (estimated state daily capacity is 44,000 according to a mid-May survey). 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.

One creative Indiana organization has performed serology studies to validate LTCF PPE use strategy. Seroprevalence from >700 employees found comparable percentages to local prevalence, indicating that the PPE use in their facilities was appropriate. Similarly, ISDH plans to use serological testing to understand the impact/spread of COVID-19 in industrial or long-term care facility outbreaks beyond what was captured by molecular testing.

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 will be assessed in four waves (April, June, and September 2020; Spring 2021) by both molecular and serological means. Participants

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were selected randomly and represent all geographic, age, gender, and minority populations. During phase one (April 2020), 4600 Hoosiers were tested; results indicated an active infection rate of 1.7% and a seroprevalence of 1.1%. In phase two (June 2020), 2700 Hoosiers were tested; results demonstrated a 0.6% active infection rate and a seroprevalence of 1.5%. 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 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. LTCFs 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 EMResource, the LTN, 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 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 various partners and healthcare providers in the state.

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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	193,000	236,000	279,000	322,000	365,000	408,000	450,000	2,403,000
Serology	0	5,000	0	0	5,000	0	0	0	10,000
TOTAL	150,000	198,000	236,000	279,000	327,000	365,000	408,000	450,000	

*Each jurisdiction is expected to expand testing to reach a minimum of 2% of the jurisdictional population.

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 through-put	Daily serologic through-put	Specific at-risk populations targeted (list all)
Indiana Clinical Laboratories	Commercial or private lab	Various sendout labs, including Quest, LabCorp, Mayo Medical Laboratories, etc.	1,000	1,000	Various
Indiana Clinical Laboratories	Commercial or private lab	Various clinical laboratories and	3,000	3,300	Various

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Name of testing entity	Testing venue (select from drop down)	Performing Lab (if different from testing entity)	Daily diagnostic through-put	Daily serologic through-put	Specific at-risk populations targeted (list all)
		laboratory systems, including ISDHL capacity for surge hospital testing capacity			
Veteran's Affairs (VA) Hospitals	Hospitals or clinical facility	Richard Roudebush VA Medical Center	25	0	the elderly, diasabled, veterans
Clinical Laboratory Receiving Bulk-Purchase Reagents and/or ELC-funded Equipment	Hospitals or clinical facility	Mid-America Clinical Laboratories	7,000	8,000	Molecular: Inpatients, ICU, other; Serology: prevalence study with ISDH, businesses
Clinical Laboratory Receiving Bulk-Purchase Reagents and/or	Hospitals or clinical facility	Indiana University Pathology Laboratory	5,000	32,000	Molecular: Inpatients, ICU, other; Serology: HCW, employees at LTC facilities, follow-up for PCR-positive patients

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Name of testing entity	Testing venue (select from drop down)	Performing Lab (if different from testing entity)	Daily diagnostic through-put	Daily serologic through-put	Specific at-risk populations targeted (list all)
ELC-funded Equipment					
Clinical Laboratory Receiving Bulk-Purchase Reagents and/or ELC-funded Equipment	Hospitals or clinical facility	Alverno Clinical Laboratories	3,250	4,000	Molecular: Inpatients, ICU, other; Serology: annual physicals, nursing home employees/patients
Clinical Laboratory Receiving Bulk-Purchase Reagents and/or ELC-funded Equipment	Hospitals or clinical facility	Parkview Regional Medical Center	1,100	7,500	Molecular: Inpatients, ICU, other; Serology: late-diagnosis of patients, plasma donors, disease prevalence
Clinical Laboratory Receiving Bulk-Purchase Reagents and/or ELC-funded Equipment	Hospitals or clinical facility	Memorial Hospital & Healthcare Center	1,000	500	Inpatients, ICU, elderly (short-term LTC), other

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Name of testing entity	Testing venue (select from drop down)	Performing Lab (if different from testing entity)	Daily diagnostic through-put	Daily serologic through-put	Specific at-risk populations targeted (list all)
Clinical Laboratory Receiving Bulk-Purchase Reagents and/or ELC-funded Equipment	Hospitals or clinical facility	Riverview Hospital	1,300	1,200	Molecular: Inpatients, ICU, other; Serology: public/emergency responders, HCW, physician orders
Clinical Laboratory Receiving Bulk-Purchase Reagents and/or ELC-funded Equipment	Commercial or private lab	Patients Choice Laboratories	5,000	0	Inpatients, nursing homes, the elderly, businesses
Clinical Laboratory Receiving Bulk-Purchase Reagents and/or ELC-funded Equipment	Hospitals or clinical facility	Deaconess Hospital	2,200	500	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 through-put	Daily serologic through-put	Specific at-risk populations targeted (list all)
Indiana COVID PLUS Strike Teams	Community-based	ISDH Laboratories	250	0	Disabled, nursing homes, prisons, congregate living settings, the elderly
Indiana COVID PLUS Strike Teams	Community-based	Quantigen	200	0	Disabled, nursing homes, prisons, congregate living settings, the elderly
Indiana Local Health Departments (LHDs)	Community-based	ISDH Laboratories	2,700	0	Disabled, nursing homes, prisons, congregate living settings, the elderly, local health departments
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	ISDH Laboratories	500	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	ISDH Laboratories	500	0	Underserved locations including the elderly, 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 through-put	Daily serologic through-put	Specific at-risk populations targeted (list all)
Indiana Long-Term Care Facilities (employees)	Community-based	Covance - support dedicated to the State of Indiana	4,000	0	the elderly, disabled, nursing homes, congregate living setting
OptumServe	Drive-thru Testing Sites	Contracted by OptumServe	1,300	0	Underserved locations.
CVS Pharmacies	Drug store or pharmacy	LabCorp	50	0	Underserved locations.
Kroger	Drug store or pharmacy	Unknown	50	0	Underserved locations.
Wal-Mart	Drug store or pharmacy	Quest, eTrueNorth	50	0	Underserved locations.
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

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Name of testing entity	Testing venue (select from drop down)	Performing Lab (if different from testing entity)	Daily diagnostic through-put	Daily serologic through-put	Specific at-risk populations targeted (list all)
Logansport Memorial Hospital	Hospitals or clinical facility	n/a	3	0	County with high-incidence, industrial plant outbreak, racial and ethnic minorities
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
Memorial Hospital Jasper	Hospitals or clinical facility	n/a	3	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 through-put	Daily serologic through-put	Specific at-risk populations targeted (list all)
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
Symphony Care Network	Other	n/a	3	0	the elderly, disabled, nursing homes, congregate living setting
Putnamville Correctional Facility	Other	n/a	3	0	Incarcerated persons, racial and ethnic minorities, the elderly
InTouch Pharmaceuticals	Other	n/a	3	0	nursing homes, 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 through-put	Daily serologic through-put	Specific at-risk populations targeted (list all)
(mobile testing lab)					
Maple City Health Care Center	Federally Qualified Health Center	n/a	6	0	underserved locations, racial and ethnic minorities
Rush Memorial Hospital	Hospitals or clinical facility	n/a	3	0	rural populations
HealthLinc (Michigan City)	Federally Qualified Health Center	n/a	3	0	underserved locations, racial and ethnic minorities
HealthLinc (Valparaiso)	Federally Qualified Health Center	n/a	3	0	underserved locations, racial and ethnic minorities
HealthLinc (Knox)	Federally Qualified Health Center	n/a	3	0	underserved locations, racial and ethnic minorities
Wildwood Healthcare	Federally Qualified Health Center	n/a	3	0	underserved locations, racial and ethnic minorities
Elkhart General Hospital	Hospitals or clinical facility	n/a	6	0	Increased community prevalence
Goshen Hospital	Hospitals or clinical facility	n/a	3	0	Increased community prevalence

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Name of testing entity	Testing venue (select from drop down)	Performing Lab (if different from testing entity)	Daily diagnostic through-put	Daily serologic through-put	Specific at-risk populations targeted (list all)
Monroe Hospital	Hospitals or clinical facility	n/a	3	0	rural populations, underserved location
Jane Pauley Health Center Shelbyville	Federally Qualified Health Center	n/a	3	0	underserved locations, racial and ethnic minorities
Indiana Clinical Laboratories	Commercial or private lab	Purdue Animal Disease Diagnostic Laboratory - support dedicated to the State of Indiana	1,050	0	Various

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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-thru clinics 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 (LTC), correctional facilities, and 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. Since the start of the strike team initiative in mid-March, 28,610 patient specimens were tested through the strike team initiatives by the end of June, and 691 patient specimens were tested in the first week of July. The contracted testing service with OptumServe, having a testing capacity of 6,600 specimens daily, has expanded testing sites up to an additional 50 different geographic locations in Indiana and had provided testing for 57,000 LTC employees in June. In order to respond to surge needs timely, ISDH plans to utilize 10 mobile units for specimen collection in COVID-19 hot spots and transport the specimens for Indiana State Department of Health Department Laboratories (ISDHL), which will ensure the testing been completed timely through testing at ISDHL or coordinating with other laboratories in Indiana. To build a sustainable response system, ISDH has reached out to all 92 local health departments and invited their participation in building their own capability locally by providing staff and technical assistance.

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. A total of 43,661 patients have been tested through this partnership. ISDH has also collaborated with IU Pathology Laboratory and Mid America Clinical Laboratory and conducted SARS-CoV-2 PCR and serology testing for a total of 7,131 individuals who participated in the IU Fairbanks School of Public Health prevalence study. The lab testing network initiative described in the overarching strategy section will further expand the testing capacity in Indiana.

ISDHL has served an irreplaceable role in protecting the public health of Indiana, such as identifying the first MERS-CoV imported case in the US, testing during the Scott County HIV outbreak, preparing to combat Ebola virus disease, 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 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 had in protecting public health of Indiana, the expansion of testing capacity is a must. The ISDHL will expand its testing capacity from 200 to 4,000 specimens daily, which includes purchasing three 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.

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ISDHL has also planned to evaluate and perform flu SARS-CoV-2 multiplex PCR either through CDC's EUA and/or develop multiplex a flu SARS-CoV-2 assay using the open channel system of Panther Fusion instruments to effectively detect and differentiate both flu and SARS-CoV-2 activity in Indiana. Although ISDHL does not perform antigen testing, many clinical laboratories in Indiana perform antigen testing, and the test results are required to be reported to ISDH.

ISDH operates a congregate setting strike team that 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 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 provided four near-POC instruments at high density facilities as well as the largest intake facility. In the next few months, the Indiana Department of Correction will also expand 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 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.

Acknowledging the gap of these underserved populations and geographic regions, in addition to the 15 Abbott ID NOW instruments provided by HHS, ISDH purchased 20 more Abbott ID NOW instruments to provide testing capability. To further utilize the existing Abbott ID NOW instruments in Indiana, ISDHL has worked closely with clinics/laboratories and coordinated with the Abbott technical team on upgrading the instruments for COVID-19 testing. Near-POC instruments have been allocated to federally qualified healthcare centers that 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, which serves a large proportion of the racial and ethnic minorities and persons experiencing homelessness in Marion County.

The development of the Lab Testing Network (LTN) has provided not only the COVID-19 testing capacity but also the relationships that will have long lasting benefit on combating outbreaks/pandemic in the future. Coordination between the LTN and the contracted logistics company has allowed Indiana to track testing capacity and the supply chain needs. A taskforce has been developed to strategize

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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 CDC NEDSS Base System (NBS), and these results are fed directly to the CDC. The ISDH 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. The data in term will inform and guide ISDH on testing, surveillance activities and mitigation planning.

In a survey performed in June by ISDHL, 18 clinical laboratories in Indiana were live with COVID-19 serology testing and had daily capacity of 43,945 specimens. Abbott, Beckman Coulter, Diasorin XL, Ortho and Roche platforms were in use by the clinical laboratories. Screening home employees and patients, testing first responders, screening health care workers, following up with positive PCR patients, identifying potential plasma donors, and prevalence testing are among the reasons for performing serology testing. On the other hand, ISDHL has purchased two Abbott Alinity instruments to perform the Abbott IgG (and IgM when it is available) assay. The advantage of bringing in this platform is the existing instrument Laboratory Information Management System (LIMS) interface, which would shorten the time needed for the development of test ordering, testing flow in LIMS and reporting via ELR. With the addition of these two instruments, ISDHL will have daily capacity of 1,500 tests by the end of August and will be ready for the phase three IU Fairbanks School of Public Health prevalence study in September and any public health focused prevalence and surveillance studies on targeted populations, such as LTCF, industrial facilities, etc. ISDH is developing a plan to do antibody testing at places with a known large outbreak to determine the level of additional spread beyond what was captured by PCR testing, such as an industrial site or other long term care facilities.

With increased use of serology testing, Indiana requires 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. Three teams are each focused on different populations and strategies. The congregate setting strike team focuses on monitoring, communicating and testing in congregate living settings. The drive thru team's focus is 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, an industrial strike team 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 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. The LHD community testing initiative described above will enhance the outreach activity.

ISDH has worked closely with the Chief Medical Officer for the Department of Corrections (DOC). Abbott ID NOW instruments have been deployed to five DOC facilities for testing and monitoring

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outbreaks. The CMO has educated on infection prevention and investigated outbreaks in collaboration with ISDH.

Zotec Partners developed a dashboard that allows ISDH 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.

In the ISDH COVID-19 pandemic response structure, Finance is a designated section to expedite the procurement process for the purchase of equipment, reagents, supplies and other materials that are needed for enhancing the detection of COVID-19. This is proven to be effective as all the equipment listed in strategy and this sections, bulk reagents and supplies have been purchased. The same process will be utilized in the course of the COVID-19 response. Hiring is another important aspect of enhancing COVID-19 detection, and ISDH has been able to work with a contracting company, Knowledge Services, to advertise and attract potential candidates. Through this process, staff have started their duties at positions a month after the positions were posted. ISDH has an established onboarding process to orient new hires for their job responsibilities, including a training process for COVID-19 related job duties, such as biosafety training, equipment platforms training etc. in place to accelerate the onboarding process. Through these established processes, ISDH is confident on securing the resources necessary for rapid COVID-19 pandemic response.

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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									0
FOR DIAGNOSTIC TESTING									
How many additional* testing equipment/ devices 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

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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 swabs needed to meet planned testing levels ⁺⁺	150,000	193,000	236,000	279,000	322,000	365,000	408,000	450,000	2,403,000
Volume of additional media (VTM, MTM, saline, etc.) needed to meet planned testing levels ⁺⁺	150,000	193,000	236,000	279,000	322,000	365,000	408,000	450,000	2,403,000

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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 6800/8800; 400/day - Luminex Aries/Magpix; 400/day - Cepheid GeneXpert; 133/day - Diasorin Liaison; 167/day - Abbott ID NOW; 200/day - Abbott m2000; 2k/day - out of state testing	167/day - TaqPath ThermoFisher; 1k/day - Hologic Panther; 1k/day - Roche 6800/8800; 1350/day - Abbott Alinity/M; 400/day - Luminex Aries/Magpix; 250/day - Biofire; 400/day - Cepheid GeneXpert; 177/day - Diasorin Liaison; 167/day - Abbott ID NOW; 200/day - Abbott m2000; 500/day -	167/day - TaqPath ThermoFisher; 1.3k/day - Hologic Panther; 1k/day - Roche 6800/8800; 2700/day - Abbott Alinity/M; 433/day - Luminex Aries/Magpix; 250/day - Biofire; 100/day - BD MAX; 400/day - Cepheid GeneXpert; 237/day - Diasorin Liaison; 167/day - Abbott ID NOW; Abbott ID NOW; 500/day -	1k/day - TaqPath ThermoFisher; 1.3k/day - Hologic Panther; 1k/day - Roche 6800/8800; 2700/day - Abbott Alinity/M; 433/day - Luminex Aries/Magpix; 300/day - Biofire; 100/day - BD MAX; 500/day - Cepheid GeneXpert; 317/day - Diasorin Liaison; 167/day - Abbott ID NOW; Abbott ID NOW; 1k/day -	1.7k/day - TaqPath ThermoFisher; 2k/day - Hologic Panther; 2k/day - Roche 6800/8800; 2.7k/day - Abbott Alinity/M; 433/day - Luminex Aries/Magpix; 367/day - Biofire; 100/day - BD MAX; 500/day - Cepheid GeneXpert; 423/day - Diasorin Liaison; 1.67/day -	2.5k/day - TaqPath ThermoFisher; 2.5k/day - Hologic Panther; 2.5k/day - Roche 6800/8800; 2.7k/day - Abbott Alinity/M; 433/day - Luminex Aries/Magpix; 433/day - Biofire; 100/day - BD MAX 700/day - Cepheid GeneXpert; 560/day - Diasorin Liaison; 167/day -	2.5k/day - TaqPath ThermoFisher; 2.5k/day - Hologic Panther; 2.5k/day - Roche 6800/8800; 2.7k/day - Abbott Alinity/M; 433/day - Luminex Aries/Magpix; 500/day - Biofire; 100/day - BD MAX 833/day - Cepheid GeneXpert; 750/day - Diasorin Liaison; 167/day -	2.5k/day - TaqPath ThermoFisher; 2.5k/day - Hologic Panther; 2.5k/day - Roche 6800/8800; 2.7k/day - Abbott Alinity/M; 433/day - Luminex Aries/Magpix; 567/day - Biofire; 100/day - BD MAX 1k/day - Cepheid GeneXpert; 1k/day - Diasorin Liaison;	318 k - TaqPath ThermoFisher; 395 k - Hologic Panther; 405 k - Roche 6800/8800; 527 k - Abbott Alinity/M; 102 k - Luminex Aries/Magpix; 148 k - Biofire; 18 k - BD MAX 142 k - Cepheid GeneXpert;

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BY MONTH:	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	TOTAL
		1333/day - out of state testing	Abbott m2000; 883/day - out of state testing	Abbott m2000; 500/day - out of state testing	Abbott ID NOW; 1k/day - Abbott m2000; 333/day - out of state testing	Abbott ID NOW; 1.3k/day - Abbott m2000; 267/day - out of state testing	Abbott ID NOW; 1.4k/day - Abbott m2000; 167/day - out of state testing	167/day - Abbott ID NOW; 1.4k/day - Abbott m2000; 117/day - out of state testing	108 k - Diasorin Liaison; 40 k - Abbott ID NOW; 211 k - Abbott m2000; 167 k - out of state testing
FOR SEROLOGIC TESTING									
Number of additional* equipment and devices to meet planned testing levels	0	0	2						2

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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)	0	0	0	800/day Abbott Alinity I	1,500/day Abbott Alinity I	1,500/day Abbott Alinity I	1,500/day Abbott Alinity I	1,500/day Abbott Alinity I	204k total by Abbott 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.