

ELC ENHANCING DETECTION: PENNSYLVANIA TESTING PLAN

2020 Overarching Jurisdictional SARS-COV-2 Testing Strategy

Jurisdiction:	Pennsylvania
Population Size:	12,801,989

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

a.) The Wolf Administration has developed an enhanced testing strategy with a focus on three pillars: ensuring testing is accessible for all Pennsylvanians with symptoms of COVID-19; available by increasing supply and building community capacity; and adaptable to the evolving landscape of the virus and data. It is a top priority to ensure that all people in Pennsylvania who are experiencing symptoms of COVID-19 have access to diagnostic testing. In addition to continuing robust testing at the department’s State Laboratory, the commonwealth plans to make testing widely available by establishing a regional hub and spoke model of testing laboratories and partners to coordinate testing at the local level and ensure flexibility in testing access.

Through a grant process, the department will establish a network of 6 regional grantees to serve as hub and spoke testing facilitators. These regional grantees will be selected through a Request for Application (RFA) process and will be geographically dispersed across the 6 public health regions in Pennsylvania: Northwest, North Central, Northeast, Southwest, South Central and Southeast. Through this regional model, the laboratory hub will develop a smaller network of “spokes”, such as physician offices, outpatient clinics, Federally Qualified Health Centers (FQHCs), rural health clinics and other local community-based partners to provide testing specimen collection sites, education and outreach for Pennsylvanians, including those who are uninsured and underinsured. The hubs will ensure adequate testing capacity and supplies within their region and will need to demonstrate a commitment to working with and reaching vulnerable and high-risk populations within the grant agreements. To ensure all Pennsylvanians have access to available testing, regional hub grantees will be required to implement creative solutions when developing their local partners, or “spokes”, including establishing community-based and mobile testing options as part of their regional strategy and addressing vulnerable populations and their needs.

The department is working with vendors, such as Walmart, Quest Laboratories, OptumServe and CVS/OmniCare, to ensure a transition of testing capacity during the establishment of the regional hub and spoke testing model. Once the regional hub and spoke testing partners are in place, these vendor services will transition to the regional grantees. The number of cases in communities will continue to be closely monitored to ensure that these vendors are establishing specimen collection sites appropriately in areas with the greatest need. For example, if there is a substantial outbreak in a long-term care or food processing facility, testing resources will be targeted to that facility as needed. Furthermore, the department is working with organizations and local leaders, like Latino Connection, to support outreach, education and connection to testing for underrepresented and marginalized communities. The department will also continue to utilize community-based specimen collection sites to provide consolidated larger scale testing prior to the establishment of the hub and spoke regional model. The department will seek input from community partners, county/municipal health departments and local health care leaders to inform a localized strategy.

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In Pennsylvania, all major health insurance providers, as well as Medicare and Medicaid, cover medically appropriate laboratory testing for COVID-19 when ordered by an attending health care provider. Additionally, the Centers for Disease Control and Prevention (CDC) and the department continue to perform testing free of charge. For uninsured individuals, the Families First Coronavirus Response Act has provided funding through the Health Resources and Services Administration (HRSA) COVID-19 Uninsured Program.

The department is closely collaborating with other state agencies and federal partners to obtain additional testing resources through the creation of an interagency operational testing team to specifically focus on ensuring an accessible, available, and adaptable testing environment throughout Pennsylvania.

As more information becomes available, the administration will coordinate and quickly adapt to changes in the testing environment. Further, the testing team will continue to review where the greatest need for testing is and leverage mobile specimen collection capabilities when possible to ensure flexibility in the testing response.

As more accurate point of care tests become available, the department will utilize the regional hub and spoke grantees to provide rapid point of care testing. Pennsylvania currently has over 100 pharmacies and over 150 urgent care facilities that have a CLIA Certificate of Waiver licensed in the state.

b.) In addition to the regional hub and spoke testing grantees, the department's Bureau of Laboratories (BOL) will coordinate with existing vendors to expand testing capacity, prioritizing access for vulnerable and at-risk populations. The department will extend contracts directly with Eurofins, the Bureau's existing contracted overflow laboratory, to provide overflow coverage to process additional tests as needed, specifically prioritizing testing for long-term care residents and staff and other congregate care settings.

Specifically, the commonwealth is working closely with the Pennsylvania Association of Community Health Centers to expand testing collection sites across the commonwealth. Through this partnership, the department will help source and supply testing specimen collection materials and necessary personal protective equipment (PPE) to identified FQHCs. The State Laboratory will serve the participating community health centers that do not have access to or an existing partnership with a diagnostic testing laboratory. As of June 2020, 93 percent of FQHCs surveyed by HRSA have the capacity to offer specimen collection across the commonwealth. In addition to bolstering the general testing capacity statewide, this partnership will ensure vulnerable populations have access to testing.

The administration is also working with retail pharmacies to expand testing collection sites throughout the state, including Rite Aid, Walmart, and CVS. Each retail pharmacy has identified certain locations and developed protocols for screening, registering and administering specimen collection before sending to a commercial laboratory for testing. Supplemental federal funding will be used to support the operations of these pharmacy testing sites when existing federal dollars allocated directly to the sites are exhausted.

The commonwealth will continue to partner closely with the ten County and Municipal Health Departments (CMHDs) to identify testing sites and, where applicable, work with partners directly to

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coordinate and increase testing. For example, in Allegheny County, the interagency operational testing team will continue to work with the Allegheny County Health Department, the University of Pittsburgh and others to leverage a strategy with Thermo Fisher to process tests. Together with state and local partners, Thermo Fisher plans to stand up centralized testing at the University of Pittsburgh by relocating and recalibrating their machines to an on-campus CLIA certified lab. Further, the Erie County Health Department plans to deploy health care workers into refugee communities to provide education, outreach, and specimen collection directly in the community. These specimens will be sent to the department's State Lab for testing. In addition, the Chester County Health Department is visiting community sites where at-risk populations and migrant workers will be able to walk up specimen collection. These specimens will also be sent to the department's State Lab for testing. These local strategies will be stood up in other communities as needed and resources permit.

The department has ordered universal testing of all patients and staff in long-term care facilities (LTCFs) and is working with facilities to provide support and clinical guidance as needed. The department is collaborating with the federal government to receive test swabs to ensure commonwealth LTCFs have adequate supply. In addition, the Pennsylvania National Guard will continue to provide specimen collection assistance for facilities without the means to do so.

The department has issued guidance requiring a resident who is being discharged from a hospital to a LTCF to be tested for COVID-19, if they were not hospitalized due to the virus. This information will assist LTCFs with infection control planning. Additionally, the Secretary of Health issued an Order requiring that hospitals establish a process to test all staff members with known exposure to a COVID-19 case to upon request.

The department is also working with the Department of Corrections to implement testing of staff and inmates to mitigate the outbreaks in state-operated correctional facilities and to guide cohorting of inmates and dedication of staff based on these test results. In addition, the department is collaborating with the Department of Agriculture to coordinate testing among critical infrastructure workers (primarily food production and distribution sites). Collaborations among the department, PEMA, the Department of Agriculture, local health care partners, CMHDs, and industry are occurring to identify gaps and challenges in specimen collection, testing access, language barriers and insurance coverage for these populations.

c.) The State Laboratory is exploring serology testing efforts for two major platforms: Dynex and DiaSorin. The State Laboratory already has the Dynex platform and is in the final stages of validating the EuroImmuno Anti-SARS-CoV-2 ELISA IgG test. The State Laboratory will look to procure the DiaSorin LIAISON. After validating the Dynex platform, which should be completed no later than July 20, the State Laboratory will be able to process 400 - 600 COVID-19 serology tests per day and will be able to utilize these data for enhanced surveillance efforts in addition to communication with patients. The department will also need to contract phlebotomists to assist in the specimen collection for serology testing.

The department will utilize this serology testing capacity to initiate seroprevalence studies in distinct and targeted populations to understand disease transmission and provide baseline data to inform potential population-based serologic surveys. For example, to assess the serologic response among a

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relatively closed cohort of individuals in which PCR results are also available, the department will implement a study with 2 – 4 identified LTCFs to perform baseline and repeat serology testing over a 6 month or more period. In addition, Pennsylvania is participating in a CDC initiated pilot of community-based prevalence based on serology results for eastern Pennsylvania, using residual clinical specimens submitted to major laboratories such as Quest and LabCorp for non-COVID-19 testing. Antibody prevalence estimates are pending at this time. Pennsylvania (Pittsburgh) was also chosen as a site in the 25 city seroprevalence studies soon to be launched by CDC. The results of these studies will be used to better inform next steps on more widespread use of serology testing.

Furthermore, the commonwealth is closely monitoring the ever-changing landscape with commercial serology testing. The department's electronic disease surveillance system currently receives serology test results from across the state, primarily through Electronic Laboratory Reporting (ELR). The state clarifies these cases as probable cases using the CDC definition. The Administration is considering the use of the National Institute of Health's Rapid Acceleration of Diagnostics (RADx) Initiative approach as part of regional or community surveillance using Serology/Anti-body testing. Further considerations for the statewide serology testing strategy include communication around what antibody serology testing is capable of and exploring associated costs with this testing approach including through major insurance carriers. Pennsylvania will also participate in all webinars and working groups provided by CDC and CSTE where the focus is the use of serology.

d.) Regular communication, including reporting and monitoring of testing supplies, with regional hub grantees is an integral part of the regional hub and spoke testing network. This communication will allow the commonwealth to coordinate resources and ensure alignment with the testing goals. The department will continue to host calls and meetings with all major testing partners including retail pharmacies, FQHCs, hospitals and laboratories. Additionally, the commonwealth will continue to partner closely with the ten CMHDs across the commonwealth to account for all existing publicly accessible testing sites within those jurisdictions to better understand current testing capacity. Separately, the department will continue to survey all laboratory partners and specimen collection sites on a bi-monthly basis to monitor materials and capacity need.

To effectively communicate this strategy with the public and assist individuals in identifying specimen collection sites, an up to date map of all accessible sites in Pennsylvania will continue to be available on the department's website.

Additionally, the department will work with the Department of Human Services and County officials to develop communications to share with and outreach to community locations and agencies where particularly vulnerable populations can be more effectively reached. Locations will include County Assistance Offices, homeless shelters, domestic violence shelters, community action agencies, food banks, and family planning clinics. This outreach will ensure vulnerable populations know where they can go to be tested.

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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*	256,040	256,040	256,040	320,050	512,080	512,080	512,080	512,080	3,136,490
Serology	0	5,000	32,005	64,010	64,010	128,020	128,020	128,020	549,085
TOTAL	256,040	261,040	288,045	384,060	576,090	640,099	640,099	640,099	

*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)
Rite Aid Pharmacy	Drug store or pharmacy	BioReference Labs	750		
Walmart Pharmacy	Drug store or pharmacy	Quest Diagnostic	1,250		
PA Department of Health	Public health lab		800		Long-term care facilities, prisons, food facility workers, healthcare workers
CVS	Drug store or pharmacy	Quest Diagnostic	3,250		

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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)
Allegheny Valley Hospital; Canonsburg Hospital; Forbes Hospital; Jefferson Hospital; Western PA Hospital	Hospitals or clinical facility	Allegheny General Hosp Lab	400		All symptomatic
Moses Taylor Hospital; Steward Easton Hospital	Hospitals or clinical facility	BioReference Labs			Symptomatic, healthcare workers, first responders
Butler Memorial Hospital; Concordia of Monroeville; Clarion Hospital; ManorCare Health Services	Hospitals or clinical facility	Butler Memorial Hospital	144		Symptomatic
Albert Einstein Medical Center	Hospitals or clinical facility		500		All symptomatic

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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)
Crozier Chester Medical Center	Hospitals or clinical facility		300		Critical workforce, pre-surgical patients
Evangelical Community Hospital	Hospitals or clinical facility		480		ED patients, inpatients, discharged to skilled nursing facilities
Geisinger Medical Center Lab, Geisinger Bellefonte Clinic, Geisinger Bloomsburg, Geisinger clinic - Family Health Associates, Geisinger Clinic - Nanticoke, Geisinger Community Medical Center, Geisinger Jersey Shore Medical Associates - Avis, Geisinger Wilkes-Barre	Hospitals or clinical facility		900		All symptomatic, first responders, healthcare workers

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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)
Guthrie Medical Group Labs, Sayre Health Care, Guthrie Medical Group Laboratories at Troy Community, GMG Lab at Towanda	Hospitals or clinical facility	Guthrie Medical Group Labs	480		Symptomatic, healthcare workers
Hospital of the University of Pennsylvania	Hospitals or clinical facility		2,800	3,000	Symptomatic, healthcare workers
Lankenau Medical Center	Hospitals or clinical facility		428		Inpatients, OB patients, critical healthcare workers
Reading Hospital - Tower Health	Hospitals or clinical facility		576		Critically ill inhouse patients (IMU/ICU patients, pregnant women, children, inhouse COVID 19 research protocol patients); mothers of NICU patients; symptomatic Tower healthcare workers; patients pending admission to an extended care or other facility

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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)
Southwestern Healthcare Center	Hospitals or clinical facility		1,000		All symptomatic, 65+
Temple University Hospital	Hospitals or clinical facility		1,154		All symptomatic, healthcare workers
Thomas Jefferson University, Magee Rehab Hospital; Rothman Orthopedic Specialty Hospital	Hospitals or clinical facility	Thomas Jefferson University	1,076		Symptomatic, Labor and Delivery, pre surgery/procedure, Admitted patients, Patient requiring test prior to discharge to facility, critical workforce
Conemaugh Nason Medical Center; Select Specialty Hospital Johnstown; DLP Conemaugh Miners Medical Center; DLP	Hospitals or clinical facility	DLP Conemaugh Memorial Medical Center	282		symptomatic, screening for all admitted patients, screening for surgical/procedures

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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)
Conemaugh Meyersdale Medical Center					
Holy Redeemer Health System, MCHS- Chambersburg, The Wright Center for Community Health, Rosewood Rehabilitation and Nursing Center, Premier at Susquehanna, Slate Belt Health and Rehabilitation Center, The Wright Center for Community Health School-Based Practice	Hospitals or clinical facility	Health Network Laboratories - Lab Medicine	1,000		

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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)
Barnes-Kasson Hospital, Centerville Clinics, Fairmount Behavioral Health System, Horsham Clinic, Lancaster Health Center, Punxsutawney Area Hospital, Tyler Memorial Hospital, Doylestown Hospital	Hospitals or clinical facility	LabCorp			Symptomatic
Lancaster Behavioral Health Hospital, Pleasant View Communities, St. Anne's Retirement Community, ManorCare	Hospitals or clinical facility	Penn Medicine Lancaster General Hospital	50		Symptomatic

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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)
Health Services - Lancaster, Masonic Village - Elizabethtown, United Zion Retirement Community					
Abington Jefferson Health	Hospitals or clinical facility		76		Symptomatic, Labor and Delivery, pre surgery/procedure, Admitted patients, Patient requiring test prior to discharge to facility
AHN Saint Vincent Hospital	Hospitals or clinical facility		230		symptomatic hospital inpatients; symptomatic healthcare workers
Allegheny County Health Department - Public Health Laboratory	Public health lab		20		Symptomatic
American Oncologic Hospital	Hospitals or clinical facility		93		Hospital admissions, pre-chemotherapy, pre-XRT, pre-operative

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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)
AristaCare at Woodland Park	Hospitals or clinical facility		125		Symptomatic
Chester County Hospital	Hospitals or clinical facility		340		Symptomatic, pre-procedure, labor and delivery, inpatients
Concordia Lutheran Health and Human Care	Hospitals or clinical facility		142		New admissions from hospital; symptomatic existing residents
Erie VA Medical Center	Hospitals or clinical facility		190		Symptomatic
Meadville Medical Center	Hospitals or clinical facility		350		Symptomatic, healthcare workers
Millcreek Community Hospital	Hospitals or clinical facility		96		All inpatients, attached nursing home patients, and symptomatic healthcare workers.
Monongahela Valley Hospital	Hospitals or clinical facility		240		Symptomatic and pre-operative patients
Penn State Hershey Medical Center Diagnostic	Hospitals or clinical facility		150		symptomatic, L&D, pre-surgical screens

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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)
Virology Laboratory					
Pennsylvania Hospital	Hospitals or clinical facility		200		Symptomatic patients for admission, patients who require COVID status for transfer/disposition
Philadelphia Health Department Laboratory	Public health lab		240		Nursing home, prisons, health care workers, Ambulatory Health Center patients, medical examiner office , symptomatic/ asymptomatic and patients of high interest.
St luke's University Health Network	Hospitals or clinical facility		375		inpatients, HCW, Emergency Department patients, SNF (nursing homes)
St. Mary Medical Center	Hospitals or clinical facility		382		critical workforce, labor and delivery, ED admits, OR schedule patients, symptomatic patients, newborns, patients going to SNF

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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.

a.) The department is prepared to issue updated messaging that makes clear that asymptomatic individuals are eligible for testing. The department will add staff and high-throughput instrumentation at its State Laboratory to increase testing capacity. The department will make structural changes to the State Laboratory and if necessary, lease additional laboratory space as necessary to enable this enhanced capacity, including the creation of spaces for specimen receipt, accessioning, additional high-throughput instrumentation, and storage. Critical lab structural changes are needed to ensure that accurate testing can be performed in a safe and secure working environment.

Informatics and data exchange will be improved through the addition of information technology staff that can expand the laboratory information system and enable electronic test ordering, supported in large part through supplemental CDC funding from the Coronavirus Preparedness and Response Supplemental Appropriations Act and the Coronavirus Aid, Relief, and Economic Security Act.

In addition to the regional hub and spoke testing grantees, the department will coordinate with existing vendors to expand testing capacity, prioritizing access for vulnerable and at-risk populations. The department will extend contracts directly with Eurofins, the state laboratory's existing contracted overflow laboratory, to provide overflow coverage to process additional tests as needed, specifically prioritizing testing for long-term care residents and staff and other congregate care settings. This increased overflow capacity will also be critically important during a potential surge in cases throughout the fall and winter of 2020 – 2021. The department is also working with Pennsylvania's ten CMHDs and numerous community health centers and FQHCs to expand testing to vulnerable populations.

To further ensure all Pennsylvanians have access to available testing, the commonwealth is working with various partners, such as Rite Aid, CVS, and Walmart, to establish community-based and mobile specimen collection options. To date the Administration has effectively implemented several community-based specimen collection sites. At these community-based collection sites, eligible individuals pre-register and specimens are sent to the State Laboratory for testing. Individuals eligible for the free testing have included first responders or health care workers with symptoms, patients 65 years or older with symptoms and residents with symptoms who live or work in the region, and critical infrastructure workers.

b.) A core tenet of the Pennsylvania testing plan is to ensure testing is accessible to all Pennsylvanians, with an emphasis on and commitment to vulnerable and at-risk populations. To best safeguard a healthy Pennsylvania for all, especially during these unprecedented times, the Wolf Administration will only partner with organizations and entities throughout the response to COVID-19 that have an established commitment to non-discriminatory practices. Regional hub grantees will be required to implement creative solutions when developing their local partners, or "spokes", including establishing community-based and mobile testing options as part of their regional strategy and addressing vulnerable populations and their needs. Furthermore, the department is working with organizations and local

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leaders, like Latino Connection, to support outreach, education and connection to testing for underrepresented and marginalized communities. The department will seek input from community partners, county/municipal health departments and local health care leaders to inform a localized strategy.

The department's State Laboratory prioritizes testing capacity for vulnerable and at-risk populations and is committed to testing all patients and staff in LTCFs. The department has been coordinating with facilities that are implementing universal testing. We are receiving test swabs from the federal government to ensure our facilities have an adequate supply. In addition, the department has been collaborating with the Pennsylvania National Guard to aid with specimen collection for facilities that may not be able to do so independently in a further effort to support universal and ongoing testing among LTCFs

The department has issued guidance requiring a resident who is being discharged from a hospital to a nursing home, personal care home, or assisted living facility to be tested for COVID-19, if they were not hospitalized due to the virus. This will provide valuable information to the LTCF on any needs to cohort the patient, monitor their condition and take necessary precautions to prevent the spread of the virus, if applicable.

In addition, clinical information was distributed through the state Health Alert Network to provide direction to all LTCFs on a universal testing strategy, outlining when testing should be used, and what steps to take after a positive test result. Test results can be used to cohort residents and staff who were exposed, determine the burden of COVID-19 across units or facilities to allocate resources, identify health care workers who are infected, and address the needs of those who are no longer ill.

The State Laboratory has also been assisting the Department of Corrections and the County prisons to test staff and inmates, to mitigate any possible outbreaks in these correctional facilities.

The department is also engaged with a variety of clinical and community-based partners, such as FQHCs and HIV/STD providers with whom the department already collaborates to serve vulnerable populations such as uninsured or underinsured individuals, people experiencing unstable housing or homelessness, racial and ethnic minorities, people without a medical home and people living with HIV. These providers were surveyed to assess their capacity to provide COVID-19 testing. Some are already doing clinic-based and/or mobile testing in underserved areas. Others have expressed interest in testing and the department is coordinating how best to support these efforts. A number of those that cannot provide testing have offered to assist in other ways by offering their property as possible locations for community-based walk-up or drive-up testing locations.

The department is also working closely with the Department of Human Services to ensure the broadest coverage of vulnerable populations possible. The departments surveyed LTCFs, including skilled nursing facilities, personal care homes, assisted living residences, as well as community group homes, life sharing homes, intermediate care facilities, residential treatment facilities for adults, community residential rehabilitation services, and others, to determine where enhanced testing could take place to help inform future cohorting or proper isolation. As capacity is developed, the departments are also planning to expand testing availability to other residential and congregate care settings where many other vulnerable populations reside, such as Community Residential Rehabilitation for individuals with a mental illness, Youth Development Centers for adjudicated delinquent youth, congregate care settings

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for dependent children and youth, or intermediate care facilities for individuals with an intellectual disability.

The department is also working with the Department of Corrections to implement testing of staff and inmates to prevent introduction into facilities and to guide cohorting of inmates and dedication of staff based on these test results. In addition, the department is collaborating with the Department of Agriculture to coordinate testing among critical infrastructure workers (primarily food production and distribution sites). Collaborations that among the department, PEMA, the Department of Agriculture, local healthcare partners, CMHDs, and industry are occurring to identify gaps and challenges in specimen collection, testing access, language barriers and insurance coverage for these populations.

c.) The department surveyed partners, specimen collection sites and laboratories across the state in May 2020 to understand current testing capacity and identify potential supply chain barriers. Survey results allowed the department to identify laboratories with high-throughput instruments and available capacity.

Through this survey, the department has been able to connect facilities with other high-throughput laboratories for overflow testing and partnerships. The survey also identified that certain instruments, such as the Cepheid and Abbott ID NOW are in high demand and have seen major issues with the supply chain. Adequate quantities of swabs and viral transport medium (VTM) tubes also continue to be a barrier.

The department through frequent communication, will continue to survey these testing partners bi-monthly to maintain up to date capacity information.

The department is assisting specimen collection sites, including those at hospitals and health care centers, to overcome barriers to supply chain issues through direct commonwealth procurement of specimen collection kits and other laboratory supplies to offer to health networks at cost. This effort will focus on the most common types of supplies for testing equipment identified by current need (i.e., Cepheid, Abbott).

The commonwealth, through the Department of Community and Economic Development and the Department of General Services, continues to work with national and international suppliers to procure critical PPE supplies, as well as working with Pennsylvania businesses to start manufacturing critical supplies. Accordingly, the commonwealth interagency operational testing team is exploring options for 3D printed swabs and procurement from other countries.

d.) The State Laboratory validated serology testing using the semi-automated Dynex DSX using the EuroImmune IgG ELISA. The laboratory will purchase the DiaSorin full-automated, high-throughput platform for serological tests. New microbiologists will be hired to perform serology testing. The department's Bureau of Laboratories will coordinate with internal partners, including the long-term care support team and epidemiologists, for decisions about the application of the testing (e.g., health care

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workers, high-risk facilities). After validating the Dynex DSX, the State Laboratory will be able to perform 400-600 serology tests per day.

The department will utilize this serology testing capacity to initiate seroprevalence studies in distinct populations to understand disease transmission and provide baseline data to help inform potential future population-based serologic surveys. Such studies will be conducted in partnership with facilities and individuals in naturally occurring cohorts. For example, to assess the serologic response among a relatively closed cohort of individuals in which PCR results are also available, the department will implement a study with 2 – 4 identified LTCFs to perform baseline and continued serology testing. In addition to these seroprevalence studies, Pennsylvania is participating in a CDC initiated pilot of community-based prevalence based on serology results for eastern Pennsylvania, using serum specimens submitted to major laboratories such as Quest and LabCorp for non-COVID-19 testing. Antibody prevalence estimates are pending at this time.

e.) We are currently targeting LTCFs and their workers, since residents and patients who live in LTCFs are some of our most vulnerable populations. We are also focused on increasing access to testing in areas in which stay at home orders are slowly being lifted, to ensure testing is widely available and contact tracers are involved to mitigate the spread of COVID-19. Testing among first responders, health care providers, prison populations and critical infrastructure workers will remain a focus throughout.

f.) Under the Governor's disaster emergency declaration, the department has an emergency procurement process in place, which gives it the ability to execute contract expeditiously outside of the normal procurement processes. This emergency procurement process has allowed for direct purchasing from testing supply manufacturers rather than working with several different vendors. Furthermore, under the disaster declaration the department has the ability to on-board staff expeditiously and hired two contractual microbiologists in May, with plans to hire additional laboratory and support staff in the immediate future. This will include a contractual administrator for the laboratory information management system, a bioinformatician, and project manager for the State Laboratory. The State Laboratory will purchase another Roche MagNa Pure 96 high-throughput extraction machine, Hologics Panthers for fully-automated molecular testing, thermocyclers, a DiaSorin platform for additional serology tests, and a liquid-handling system for molecular detection. This additional staffing and procurement of equipment is scheduled for completion by August 2020.

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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	2	5	5	3	0	0	0	0	15
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)	0	3	2	2	0	0	0	0	7

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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 ⁺⁺	0	400,000	400,000	400,000	600,000	600,000	600,000	600,000	3,600,000
Volume of additional media (VTM, MTM, saline, etc.) needed to meet planned testing levels ⁺⁺	0	400,000	400,000	400,000	600,000	600,000	600,000	600,000	3,600,000

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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)	0	2,400/day - Thermofisher	2,400/day - Thermofisher	2,400/day - Thermofisher	2,400/day - Thermofisher	2,400/day - Thermofisher	2,400/day - Thermofisher	2,400/day - Thermofisher	
FOR SEROLOGIC TESTING									
Number of additional* equipment and devices to meet planned testing levels	0	1	1	0	0	0	0	0	2

ELC ENHANCING DETECTION: PENNSYLVANIA TESTING PLAN

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	250/day	500/day	500/day	500/day	500/day	500/day	500/day	

* 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.