

# ELC ENHANCING DETECTION: NORTH CAROLINA TESTING PLAN

## 2020 Overarching Jurisdictional SARS-COV-2 Testing Strategy

Jurisdiction:	North Carolina
Population Size:	10,500,000

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

A) North Carolina’s coordinated testing action plan is a data-driven approach that (1) supports individuals with suspected disease (2) supports proactive management of populations at high risk for infection, and (3) promotes health equity for historically marginalized populations. For May and June, our coordinated testing strategy aim to test at least 2% of North Carolina’s population (~210,000 per month) through testing anyone with symptoms suggestive of COVID-19 and close contacts of known positive cases, regardless of symptoms. As we continue to increase testing for subsequent months, North Carolina will implement a “bottom-up” approach that uses an estimated daily testing threshold which factors (1) testing estimates by calculating the approximate size of testing cohorts of interest in prioritized populations (2) associated risk, and (3) frequency of testing. As we refine our strategy, additional federal financial and resource support are needed to achieve our increased testing goals.

While a decentralized public health system, the NC Department of Health and Human Services (NC DHHS) has enacted a robust testing strategy and engaged in several efforts to increase SARS-CoV-2 testing. NC DHHS has strengthened coordination and partnership among Local Health Departments, Federally Qualified Health Centers (FQHCs), healthcare systems, healthcare providers, community groups, commercial laboratories, and hospital laboratories to unlock current testing capacity by helping collection sites ramp up to max capacity; cataloging the existing ecosystem of collection sites, created new collection sites to increase daily testing numbers, and using data to inform how to deploy testing.

Additionally, NC DHHS established a Test Surge Workgroup to develop a coordinated action plan to increase testing throughput and capacity, expand testing sites, diversify testing options (including antibody testing), and address risks associated with testing supplies and PPE availability. This workgroup brings together a diverse group of stakeholders—many representing the aforementioned partners above—to increase transparency around current testing capabilities of laboratory, clinical, and retail partners and ensure continued progress on increasing COVID-19 testing in North Carolina.

The State is using informational resources provided by the White House Coronavirus Task Force and diagnostic test and instrument manufacturers to identify clinical laboratories in North Carolina with low throughput testing platforms (e.g., Cepheid GeneXpert and Becton Dickinson BD Max), medium throughput platforms (e.g., ThermoFisher 7500 and Hologic Panther) and high throughput platforms (e.g., Roche Cobas and Cepheid Infinity). These laboratories were surveyed to assess their capability and capacity to test for SARS-CoV-2. The survey evaluated the availability of collection supplies, testing reagents, and adequate staffing. Moving forward, in conjunction with our Test Surge Workgroup and laboratory stakeholders, data from these surveys will be used to support the technical and data infrastructure needed (command center approach, described later), to direct resources and identify opportunities for rapid response to surge testing needs.

NC DHHS is also accessing multiple new paths to meet increased demands for testing. As additional platforms and methods receive emergency use authorizations (EUA) from the Food and Drug

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Administration (FDA), locations with these instruments are identified and surveyed. These new methods include traditional laboratory-based molecular tests as well as new technology, such as antigen detection methods. Moreover, NC DHHS is investigating the use of at-home testing options through our robust relationship with the North Carolina-based commercial laboratory, LabCorp.

B) NC DHHS testing strategy provides testing at many locations, including non-traditional laboratory sites. NC DHHS has identified over 300 current test collection sites. The sites are publicly listed on the DHHS website, including an interactive “Find My Testing Location” feature to allow residents to search by zip code for testing sites. For each type of site, NC DHHS has developed a high-level set of criteria to inform vendor engagement and drive effective and efficient testing expansion.

For high throughput testing sites (>100 tests per site per day), NC DHHS is identifying vendors who bring the most full-service test collection offering to alleviate supply, labor, and infrastructure challenges in the short term and as part of surge testing. These locations include brick and mortar retail stores and pop-up/drive-thru settings. Low throughput locations (<50 tests per site) include pharmacies, described below, and community settings capable of performing point-of-care testing and specimen collection to bring the most cost-effective and low investment to the State by providing testing coverage to areas that are not covered by the range of current or planned facilities.

A “Strike team” model is being pursued to rapidly deploy resources to address an acute need for testing in facilities with outbreaks, and mobile solutions will address gaps in testing capacity by delivering tests to specific underserved areas. Vendors for these models will be able to effectively handle the logistics of site identification and coordination as well as partner with trusted members of the community.

Also, NC DHHS has partnered with Walmart, Walgreens, CVS, and Harris Teeter for testing at multiple locations across the State. Walmart, Walgreens, and Harris Teeter are part of the federal Health and Human Services (HHS) partnership for testing across the United States. CVS is expanding its corporate testing initiative and opening 55 new SARS-CoV-2 testing sites at select CVS Pharmacy drive-thru locations in North Carolina. Each CVS site manages their scheduling and reporting.

NC DHHS is also working with external pharmacy associations to help make the connection for independent pharmacies to partner with Local Health Departments to initiate testing.

C) A strategy for the use of serology as part of the North Carolina Coordinated Testing Action Plan is still being developed. As the prevalence of North Carolina residents with antibodies and the relationship between antibodies to SARS-CoV-2 and immunity to future infection remains unknown, NC DHHS is partnering with multiple University collaborators to evaluate this relationship. Lessons learned from these studies, as well as other research efforts will inform modification to the North Carolina Coordinated Testing Action Plan to finalize a strategy for the use of serology testing.

Currently, the North Carolina State Laboratory of Public Health (NCSLPH), commercial laboratories, and hospital laboratories around the State are validating and implementing serology testing in advance of this strategy. The NCDHHS Test Surge Workgroup’s Scientific Advisory Council recently finalized interim recommendations for the use of serology testing in the State. These recommendations include:

1. Antibody testing for SARS-CoV-2 should not be used as a first-line diagnostic test in patients who have had an onset of COVID-19 symptoms within the past 7 days.

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2. In the face of long-standing symptoms of COVID-19 (defined as greater than 14 days), antibody testing may be used as one piece of evidence in the confirmation of infection with SARS-CoV-2. This can be useful if PCR based testing is negative, showing an absence of detectable virus, or unavailable.
3. Antibody testing should not be used as an ‘immunity voucher’ to assure the safety of individuals or create a SARS-CoV-2 free environment.
4. Antibody testing can be used as an epidemiologic tool to approximate the prevalence of previously infected individuals and regularly determine how this prevalence is changing over time. This data can help drive public policy decision-making.

D) The composition of the Test Surge Workgroup—including Local Health Departments, FQHCs, healthcare systems, healthcare providers, pharmacies, community groups, academic partners, health information technology, commercial laboratories, and hospital laboratories—is designed to assure communication of the State’s approach to expanded testing and coordinate a response across stakeholder groups. Workgroup meetings are used to review progress toward the State’s expanded testing goals, communicate success stories and best practices, and identify barriers and potential solutions.

NC DHHS is also in the process of developing a Personal Protective Equipment (PPE) and Collection/Testing Supply Command Center model to bring together testing, contact tracing, historically marginalized populations, data, and communications functions into a central command center. This command center will enable an “air traffic control” view between the State and Local Health Departments and inform the tactical strategy. The command center team with operational, program design and implementation, and technical skills, including ad hoc data analysis and analytics, will support the coordination of complex logistics across the strategy to assure partners have the resources to achieve the State’s testing goals. This model connects supply with demand and enables communications to be directionally correct. Routine assessments (surveys) of local health partners, clinical laboratories, and providers will inform proactive strategies to support the maintenance of human resources and supply inventories.

Additionally, the PPE and Supply Command Center will establish and implement a process to request and proactively monitor requests for PPE, collection, and testing supply resources. Current guidance permits requests for a 7-day supply of PPE and supplies (from both State and federal warehouse). The command center model also facilitates and oversees the delivery of PPE and supplies. As part of the request process, the command center will facilitate reporting on PPE shortages, project and monitor the burn rate for collection kits and testing supplies, and address emerging concerns. With continued challenges obtaining PPE, collection supplies, and testing reagents; the State will need ongoing federal support to achieve our expanded testing goals. This structure will also use data to inform laboratory capacity expansion decisions.

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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*	210,000	300,000							510,000
Serology									0
TOTAL	210,000	300,000	0	0	0	0	0	0	

**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)
LHD, FQHC, LTCF, Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru	Public health lab	State Laboratory of Public Health	400			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders

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LHD, FQHC, LTCF, Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru, Urgent Care	Commercial or private lab	Mako Medical Laboratory	5,000			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders
LHD, FQHC, LTCF, Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru, Urgent Care, Pharmacy	Commercial or private lab	LabCorp	3,000			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders

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LHD, FQHC, LTCF, Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru, Urgent Care	Commercial or private lab	Quest Diagnostics	2,000			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders
LHD, FQHC, LTCF, Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru, Urgent Care	Commercial or private lab	Diatherix	500			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders

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LHD, FQHC, LTCF, Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru, Urgent Care	Commercial or private lab	Viracor	500			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders
LHD, FQHC, LTCF, Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru, Urgent Care	Commercial or private lab	AccessDx	100			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders

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LHD, FQHC, LTCF, Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru, Urgent Care	Commercial or private lab	AIT	800			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders
LHD, FQHC, LTCF, Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru, Urgent Care	Commercial or private lab	Aegis	200			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders
Walgreens	Drug store or pharmacy	Walgreens	200			

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Eden Drugs, Harris Teeter, Kroger	Drug store or pharmacy	eTrueNorth (Gravity Dx)	200			
Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru, Urgent Care	Hospitals or clinical facility	Wake Forest Baptist Medical Center	300			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders
Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru, Urgent Care	Hospitals or clinical facility	Duke	1,600			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders

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Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru, Urgent Care	Hospitals or clinical facility	Moore Regional	10			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders
Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru, Urgent Care	Hospitals or clinical facility	Columbus Regional	10			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders

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Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru, Urgent Care	Hospitals or clinical facility	Randolph	10			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders
Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru, Urgent Care	Hospitals or clinical facility	CarolinaEast	50			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders
Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru, Urgent Care	Hospitals or clinical facility	New Hanover	50			

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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)
Cabarrus-Rowan Community Health Centers	Federally Qualified Health Center	Cabarrus-Rowan	10			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders
Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru, Urgent Care	Hospitals or clinical facility	Watauga	10			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders

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Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru, Urgent Care	Hospitals or clinical facility	UNC	500			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders
Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru, Urgent Care	Hospitals or clinical facility	Novant	600			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders

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LTCF, Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru	Hospitals or clinical facility	Durham VA	200			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders
Rural Health Group	Federally Qualified Health Center	Rural Health	10			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders

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Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru, Urgent Care	Hospitals or clinical facility	WakeMed	350			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders
LHD, LTCF, Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru, Urgent Care	Hospitals or clinical facility	Atrium	1,000			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders

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LHD, LTCF, Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru, Urgent Care	Hospitals or clinical facility	Cone	100			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders
Hospital, Healthcare Provider, Mobile Clinic, Drive-Thru, Urgent Care	Hospitals or clinical facility	Vidant	1,000			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders

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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)
Henderson County Health Department	Public health lab	Henderson	10			Persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders
Walmart	Drive-thru testing site	eTrueNorth (Healthquest Esoterics)	200			
CVS	Drug store or pharmacy	LabCorp	2,750			

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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) NC DHHS is working on expanding testing across the State by contracting with private testing vendors, collaboration with private/commercial and hospital laboratories, coordination of collection and testing resources for stakeholders (Local Health Departments (LHDs), FQHCs, nursing homes, healthcare systems, and healthcare providers), and direct expansion of capacity at the NCSLPH. A request for qualifications (RFQ) is being developed to identify vendors qualified to perform testing for COVID-19 including High throughput testing, Directed/Mobile testing, and Laboratory Reserve Capacity.

Ideal vendors will provide resources to support testing site management, specimen collection, human resources, and patient management and billing. The vendor is also expected to coordinate with the existing healthcare infrastructure within the communities it serves, including LHDs, Health Systems, medical homes, and FQHCs.

The decentralized public health system in NC provides unique opportunities and challenges with respect to expanding testing capacity statewide. LHDs are leading the response to COVID-19 in their jurisdictions and coordinating with their partners and stakeholders to expand testing. Some LHDs with clinical laboratories have already established testing, and others are working to identify paths to initiate testing. These paths may require new equipment, access to testing reagents, and additional staff depending on volume demands. LHDs are routinely engaged in rapid outbreak response and many are partnering with their hospital systems, contracting with commercial laboratories, and maximizing the use of non-laboratory options to assure testing for their residents. NC DHHS provides guidance, subject matter expertise, and direct support for LHDs in their efforts to expand testing in their jurisdictions.

In support of expanded State testing efforts, the NCSLPH is expanding and enhancing its existing testing infrastructure, which currently includes a variety of extraction platforms (e.g., Roche MagNA Pure, Qiagen EZ1) and real-time PCR instrumentation (e.g., ABI 7500 FAST DX). Capacity expansion and workflow enhancements include the integration of automation via liquid handling instrumentation (e.g., Hamilton Starlet), utilization of existing multifunctional platforms (e.g., Abbott Architect), procurement of multiple high-throughput platform systems (e.g., Hologic Panther and DiaSorin LIAISON XL), and incorporation of fully integrated rapid molecular testing platforms (e.g., Biofire FilmArray Torch and Cepheid GeneXpert Dx).

B) Promoting health equity for historically marginalized populations is a foundational goal of NC's Coordinated Testing Action Plan. NC DHHS has assembled workgroups around historically marginalized communities and vulnerable populations to assess and develop strategies to respond to the needs of these groups. In addition, NC DHHS guidance to providers and laboratories stated that clinicians should ensure the following populations have access to testing: persons who live in or have regular contact with high-risk settings, persons who are at high risk of severe illness, people of any age with underlying health conditions, persons who come from historically marginalized populations, and healthcare workers or first responders.

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Utilizing recently released guidance from the CDC and CMS, NC DHHS is finalizing a plan for testing residents and staff at nursing homes around the State. To address the diverse needs for testing in these settings, it is anticipated that a hybrid of strike teams and commercial resources capable of specimen collection and testing to meet the volume and frequency demands for testing.

The historically marginalized and vulnerable population workgroups have identified goals and is focused on actioning numerous tactics within each goal:

- 1) Effectively reach the population to provide COVID related education and guidance.
  - a) Create patient-facing culturally competent content in multiple languages.
  - b) Identify lay leaders and influencers to partner to share critical messages.
  - c) Utilize a variety of venues and platforms in which to communicate and engage.
  - d) Recognize the need for spiritual connection for health and wellness and encourage alternate worship opportunities.
  - e) Provide household PPE to protect vulnerable populations outside of and within the home.
- 2) Connect people to medical and behavioral care providers regardless of ability to pay.
  - a) Offer testing sites for underserved communities and medically disconnected people to create a medical home relationship with an FQHC or nearest accessible healthcare provider.
  - b) Identify resources to expand coverage for COVID specific care and chronic medical care.
  - c) Expand virtual and telehealth services and uptake for chronic disease management and prevention.
  - d) Recognize testing bias and creating resources to educate healthcare providers to minimize unintentional bias effect.
- 3) Link people to needed resources to address social determinants of health.
  - a) Connect to non-congregate housing and quarantine resources.
  - b) Identify and link to food resources for people experiencing food scarcity.
  - c) Provide unemployment support for out of work individuals or those experiencing long recovery from hospitalization.
  - d) Provision of medical, pharmacy and other needed supplies.
  - e) Connect to transportation resources.
- 4) Protect essential, undocumented and front-line workers from exposure to COVID
  - a) Engage state and local leadership to enforce best practices related to COVID prevention and care.
  - b) Engage local business community to support outbreak management in community businesses, including agricultural, manufacturing, processing and retail.

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- c) Help communities rapidly address urgent needs for economic and social supports.
- d) Create safe environments for testing and access to healthcare during outbreaks.
- e) Focus on language and culturally appropriate communications and connections to needed resources.

C) There are several barriers that have been identified with increasing testing capacity. As noted above, a significant amount of additional laboratory capacity, testing supplies, and PPE will be needed to support our testing strategy. Additionally, there is uncertainty on the extent to which payers will cover testing for (1) those without a doctor's order, (2) testing that is strictly for surveillance purposes, (3) periodic testing if they do not share NC's assessment of optimal testing interval or underlying risk, and (4) insufficient funding to support the uninsured and underinsured. An increase in testing will also increase the need to provide support for COVID positive patients to safely quarantine away from family or roommates; a strategy will be needed to address what supports are needed, how target populations to ensure access to supports, and how to cover the costs of these services. There will be a need for additional Coronavirus Relief Fund (CRF) allocations for testing and tracing or the use FEMA to fill gaps in other funding sources.

To mitigate these barriers to the best extent, NC DHHS is using informational resources provided by the White House Coronavirus Task Force and diagnostic test and instrument manufacturers to identify clinical laboratories in NC with low, medium, and high-throughput testing platforms. These laboratories are going to be routinely surveyed to assess their capability and capacity to test for SARS-CoV-2. Data from these surveys will be fed into a command center to direct resources, minimize barriers to testing, and maximize utilization of available capacity.

In response to collection supply challenges, NC DHHS has implemented a process for providers around the State to request these resources. NC DHHS is distributing collection supplies allocated by the FEMA, as well as those procured on the commercial market, to LHDs, FQHCs, healthcare providers, and community organizations performing specimen collection activities to support expanded testing.

The Test Surge Workgroup meets weekly to review progress toward the State's expanded testing goals, communicate success stories, best practices, and identify barriers to testing and develop solutions. Moreover, the workgroup's Scientific Study Council is accessing multiple new methods to meet increased demands for testing and navigate supply-chain challenges. These new methods include traditional laboratory-based molecular tests as well as new technology, such as antigen detection methods.

To assure use of existing testing capacity, NC DHHS has developed a robust statewide communication plan and an interactive website listing all specimen collection site in the State. Residents can search for the site nearest to their address and learn more about the requirements for testing, including appointment requirements and contact information for the site.

Finally, to strengthen our data infrastructure and streamline submission of specimens and reporting results, NCSLPH is implementing an Electronic Test Ordering and Reporting (ETOR) system. The ETOR will reduce the burden of paper submission forms, maximize accessioning efficiency within the laboratory, and simplify access to results for submitters. Additionally, the NC DHHS Epidemiology Section is working with clinical laboratories to expand electronic laboratory reporting (ELR) to the NC Electronic

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Disease Surveillance System (NCEDSS). The expansion of ELR into NCEDSS will maximize clinical laboratory reporting efficiency into the public health system.

D) A strategy for the use of serology as part of the NC Coordinated Testing Action Plan is still being developed. As the prevalence of NC residents with antibodies and the relationship between antibodies to SARS-CoV-2 and immunity to future infection remains unknown, NC DHHS is partnering with multiple University collaborators to evaluate this relationship. Lessons learned from these studies, as well as, other research efforts will inform modification to the NC Coordinated Testing Action Plan to finalize a strategy for use of serology testing. Currently, the NCSLPH is in the process of implementing serology testing on the laboratories existing multifunctional platform and acquiring additional high-throughput serological instruments. The NCSLPH serological testing capacity will be utilized in support of the State's testing goals.

E) COVID-19 is disproportionately affecting historically marginalized groups and NC DHHS understands the requirements to utilize surveillance (Contact Tracing) to stop the spread of COVID. The coordinated testing action plan is utilizing a decentralized contact tracing model led by LHDs. NC DHHS plans to target tracing resources by making a concerted effort to work with community leaders and organizations who regularly support and engage with these populations as partners. Strategies include:

- Monitor county and local-level data to understand the demographics of COVID-19 spread and to target contact tracing resources effectively
- Ensure in-person contact tracers are from the community being served to the greatest extent possible
- Partner with community-based organizations to deliver resources and supports to individuals in quarantine
- Redirect individuals interested in volunteering as "ambassadors" to amplify DHHS messaging on the importance of contact tracing

NC DHHS Contact Tracing Goals include:

- Increase screening and testing with comprehensive tracking of COVID-19 virus
- Prioritize individuals and streamline access to individuals who need immediate care and/or testing
- Real-time reporting and tracking capabilities for State, local health providers, and external partners to provide insights and support specifically for at-risk communities and vulnerable populations
- Unified data collection for aggregation and analysis by federal, State, and local health systems

NC DHHS is developing testing and contact tracing metrics that will guide and inform the State's relaxing restrictions and community mitigation policies. These metrics will address key questions:

- How many tests are we performing in the State and where are the gaps?

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- Is testing available and accessible to everyone with COVID-19 symptoms and those with high-risk exposures?
- Do we have adequate workforce to reach cases and contacts?
- How quickly are we reaching cases and contacts to conduct case interviews and contact notification?
- Are we reaching cases and contacts equitably?

F) Governor Roy Cooper's Executive Order 116 provided certain procurement flexibilities to the State Agencies, including a waiver of the requirement to post procurement opportunities publicly and the ability to use a single source vendor based on urgency.

In terms of acquiring testing materials, NC DHHS Office of Procurement, Contracts, and Grants has developed the following procedures:

- a. Vendor vetting process for use by the sourcing team to readily identify available vendors who can supply needed materials.
- b. Developed a Web-based form allowing vendors to submit current availability of PPE and other materials.
- c. Stood up a sourcing team which can rapidly identify vendors, obtain quotes and, via the Emergency Operations Center, issue purchase orders.
- d. The Department will be issuing a RFQ to establish qualified vendor pools to further enhance our testing capacity.

For permanent positions identified as COVID-19 critical, NC DHHS has a Human Resources Rapid Response Team that assists the Department's Divisions in sourcing candidates, vet them, and forward these individuals to local offices. Candidates sent to Divisions will be further vetted and teams will have 24-48 hours to make a decision on whether to move forward with or decline a candidate. In addition to hiring permanent positions, NC DHHS works with a temporary staffing services agency to provide rapid identification and on-boarding of staff needed to fill short-term needs for the 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	2	4							6
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	2							2
Volume of additional swabs needed to meet planned testing levels <sup>++</sup>	0	0							0
Volume of additional media (VTM, MTM, saline, etc.) needed to meet planned testing levels <sup>++</sup>	0	75,000							75,000
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
FOR SEROLOGIC TESTING									
Number of additional* equipment and devices to meet planned testing levels	0	0							0

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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

\* 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.