2020 Overarching Jurisdictional SARS-COV-2 Testing Strategy

Jurisdiction:	Ohio
Jan Barotron.	Office
Population Size:	11.7 Million

- 1. Describe the overarching testing strategy in your state or jurisdiction.
- 1. OVERARCHING STRATEGY NARRATIVE:

Through the leadership of Governor Mike DeWine, the Ohio Department of Health (ODH) and the work of the State of Ohio Testing Strike Force, Ohio has worked to maximize the use of testing platforms by establishing a statewide network of laboratories, linking state and private laborites under a single effort. Recognizing the value of our local partners and science experts the state utilized the existing infrastructure of sophisticated hospital and academic medical center laboratories throughout the state, as well as the existing Ohio Department of Health lab.

This growing coalition of nine cooperating laboratories was created to catalyze testing capacity and increase collaborative scientific, supply-chain, communication and strategy efforts. By establishing a statewide network, laboratories have been able to streamline coordination by creating uniform forms and processes, but also to improve work flow for hospitals and medical centers to use both rapid point of care testing, such as those produced by Ohio based Abbott Laboratories, as well as more accurate and high throughput platforms.

To accommodate the increasing demand for COVID-19 Testing, Ohio engaged Thermo Fisher Scientific (Thermo Fisher) to partner. Through this partnership, Ohio was able to address key elements of a testing strategy, the most significant of which is access to consistent and stable supply of testing supplies, equipment and reagents. The partnership between Ohio and Thermo Fisher was solidified in mid-April, when Governor Mike DeWine and Thermo Fisher CEO Marc Casper agreed to an order for one-million tests for COVID-19. This order solidified access to testing and a burgeoning capacity to be used throughout May. As described below, with the increased stability of multiple supply chains, diversification of testing platforms, increased university and private laboratory test sites, and training of personnel, testing capacity in Ohio has steadily increased. Further, significant progress related to creation and acquisition of testing supplies was made in April and early May. As of May 21, 2020 a total of nearly 300,000 tests had been completed with approximately 10,000 tests a day being performed across Ohio.

Ohio's testing strategy is grounded in four pillars. First, Ohio's efforts must seek to preserve life by flattening the curve in communities and facilities. Second, resulting strategies and guidance must be based on clinical recommendations and Centers for Disease Control and Prevention (CDC) guidance. Third, local partners must be empowered with information and resources to mitigate and control

outbreaks. And finally, for a sustainable response, Ohio must leverage private sector partnerships for best practices, innovations, and solutions. From these pillars, four corresponding strategies emerged to focus Ohio's COVID-19 testing efforts.

- Prioritizing testing tactics in congregate care settings as a priority to preserve life and flatten the curve in communities and facilities.
- Establish tiered priority groups, using clinical recommendations and guidance from the CDC, in managing the testing capacity across the state.
- Establish three state emergency preparedness zones to coordinate testing, outbreak and infection mitigation response efforts and strengthen local capabilities.
- Build testing capacity and expand testing sites by leveraging private sector resources and partnerships.

Ohio has established priorities for testing, modified from the CDC priority groups. The state emphasizes testing of patients who are most severely ill, patients who are moderately ill with a high risk of complications – such as those who are elderly and those with serious medical issues — and individuals who are critical to providing care and service to those who are ill. Expanded test availability will allow individuals in lower risk tiers to be tested and help to further contain and respond to COVID-19 in Ohio.

In the earlier phases of the pandemic, testing was exceedingly limited, and needed to be reserved for those most ill, moderately ill patients at highest risk of complications and those providing service and care to those who are ill. Expanded test availability permits the testing of more individuals and to help further contain and respond to COVID-19, and preserve life. While testing is only one component of Ohio's response to COVID-19, it is essential to identify individuals infected with COVID-19, promptly isolate them, and trace and quarantine any contacts to minimize spread of the virus to others, including spread to those at highest risk of complications and death. The impact and effectiveness of expanded testing is dependent on close collaboration among health departments, hospitals, other healthcare providers and the communities across the state.

To date, the majority of state-initiated testing has utilized nasopharyngeal (NP) swabs due to the increased reliability of these tests. However, we continue to closely monitor developments in swab and other testing technology. More recently, we have begun utilizing a less-invasive swab which is still administered by trained health care workers and submitted to a certified lab for processing.

The State of Ohio and ODH have worked to create a strategy that utilizes a host of entities to manage COVID testing. While the majority of testing is performed at one of the ten testing laboratories (including ODH lab), a number of Ohio hospital systems, other provider networks, and private labs are providing testing capacity for the citizens of Ohio. For these networks, the state serves a collaboration function, including communicating about the state's testing priorities, assisting with supply chains where needed, and utilizing the private labs in the event that additional capacity is needed. Additional

community-based testing – primarily consisting of swabbing stations – is provided at retail locations throughout the state and through federally qualified health centers. These testing sites generally utilize private supply chains and partnerships with one of the laboratories not included in the state network.

As frontline health care providers, pharmacies are critical in our state's response to COVID-19. As trusted community members and health care providers, they interact regularly in our daily lives giving health care advice and valuable care to Ohioans across the state. At the direction of Governor Mike DeWine, Ohio Board of Pharmacy aligned state regulations and guidance with federal authorization for COVID-19 testing by pharmacists, pharmacy interns and certified pharmacy technicians. Again, the state serves a collaborating relationship to ensure alignment of priorities and to maximize access to testing throughout the state.

Currently, the State of Ohio is designing appropriate workflow for the availability of antibody tests, providing a framework that will utilize multiple types of test as appropriate for the situation (ELISA based tests with correlation from virus neutralizing tests at Ohio State University). Further, the state is in the process of outlining specific workforce, equipment, and supplies required for creating this platform for testing that can be matched with surveillance tracking.

While detection of antibodies to the SARS-CoV-2 virus is possible, scientists are uncertain if the detected antibodies offer protection against COVID-19 infection. Therefore, at this time, antibody testing will not be used by the State of Ohio to determine immunity to or protection against COVID-19.

Early in the disease response, Ohio divided the state into three zones that would act as coordinating points for clinical issues, surge capacity, and testing capacity to ensure a coordinated response across local jurisdictions, alignment on goals, and collaboration on strategies. The guidance below was set forth to assist the zones in understanding their role, key issues they needed to organize, and how the state government would interact and assist them for laboratory testing efforts. In early May, the ODH put together a set of guidelines to provide oversight for communication and accountability for testing. These roles were divided up based on Zone leaders, laboratory, and hospital administrators, testing site directors and administrators, and ODH. This document outlines general guidelines for COVID-19 Testing Logistics for communication with Zone and Testing Sites across the State to ensure appropriate communication, collaboration, and coordination. The goals of this guidance were to:

- 1. Identify an operational outline of roles and responsibilities for ODH.
- 2. Identify an operational outline of roles and responsibilities for each zone leader/institution to ensure that citizens in all 88 counties of Ohio have equivalent access to testing whether in rural or urban settings based on the established priority groups for testing as established by the CDC and as organized by ODH.
- 3. Requirement for workflow from all testing sites.

- 4. Identify plan for distribution of viral collection kit components, viral extraction and amplification equipment and reagent, and designation of testing populations for each zone.
- 5. Provide guidance for emergent situations that might disproportionately impact a specific zone.

Ohio has established a number of mechanisms for communicating its testing strategy and testing progress – as well as other elements of the pandemic – to the public. Governor DeWine, Lt. Governor Husted, and Director of Health Amy Acton, MD hold regular press briefings that are broadcast on www.ohiochannel.org as well as many local television networks. The state has set up a web site – www.coronavirus.ohio.gov – that provides access to data, trends, health orders, and other information related to testing and to pandemic response and recovery. Governor DeWine, Lt. Governor Husted, Director Acton, and other key Administration staff are in frequent contact with stakeholders and community leaders to understand needs, to evaluate priorities, to communicate strategies, and to coordinate implementation.

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*	255,000	317,670							572,670
Serology	1,000	15,000							16,000
TOTAL	256,000	332,670	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 through- put	Daily serologic through- put	Platforms or devices used (list all)	Specific at-risk populations targeted (list all)
Ohio Dept of Health Laboratory	Public health lab		500			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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	Platforms or devices used (list all)	Specific at-risk populations targeted (list all)
Ohio State University	Hospitals or clinical facility		900	100		all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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Battelle Memorial Laboratories	Commercial or private lab		600			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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Cleveland Clinic Foundation	Hospitals or clinical facility		1,250			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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University Hospitals Cleveland	Hospitals or clinical facility		650			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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MetroHealth	Hospitals or clinical facility		220			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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University of Toledo	Hospitals or clinical facility		200			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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University of Cincinnati	Hospitals or clinical facility		500			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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Dayton Children's Hospital	Hospitals or clinical facility		500			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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Cincinnati Children's Hospital	Hospitals or clinical facility		500			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay
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Akron Children's Hospital	Hospitals or clinical facility		83			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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Lake Health	Hospitals or clinical facility		23			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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Magruder Hospital	Hospitals or clinical facility		2			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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Marietta Memorial Hospital	Hospitals or clinical facility		14			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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Mercy Canton	Hospitals or clinical facility		18			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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Mercy Health Cincinnati	Hospitals or clinical facility		119			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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Mercy Clermont	Hospitals or clinical facility		6			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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Mercy Health Lorain	Hospitals or clinical facility		29			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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Mercy Health Toledo Hospitals	Hospitals or clinical facility		112			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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Mercy Health Youngstown	Hospitals or clinical facility		68			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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Adena Health	Hospitals or clinical facility		12			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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Morrow County Hospital	Hospitals or clinical facility		6			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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Nationwide Children's	Hospitals or clinical facility		99			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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	Platforms or devices used (list all)	Specific at-risk populations targeted (list all)
New Vision Medical Laboratories	Hospitals or clinical facility		26			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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OhioHealth	Hospitals or clinical facility		1,051			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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OhioHealth Berger Hospital	Hospitals or clinical facility		13			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay

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TriHealth	Hospitals or clinical facility		52			all Ohio public health testing tiers 1. hospitalized patients / healthcare workers 2. symptomatic LTC, First Responders, 65 and older, living with underlying conditions (special consideration for racial and ethic minorities), residents or staff directly exposed during an outbreak in a congregate facility, other populations deemed by public health professionals to manage outbreaks 3. Ohioans without symptoms but are a) receiving essential surgeries, b) receiving other medically necessary procedures but not require an overnight stay
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AIT Laboratories	Commercial or private lab		76			Private Laboratories were asked to adhere to the Ohio testing priorities when conducting testing on Ohio residents

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ARUP+	Commercial or private lab		217			Private Laboratories were asked to adhere to the Ohio testing priorities when conducting testing on Ohio residents
BioReference*	Commercial or private lab		547			Private Laboratories were asked to adhere to the Ohio testing priorities when conducting testing on Ohio residents
CompuNet Clinical Labs	Commercial or private lab		402			Private Laboratories were asked to adhere to the Ohio testing priorities when conducting testing on Ohio residents
Gravity Diagnostics	Commercial or private lab		225			Private Laboratories were asked to adhere to the Ohio testing priorities when conducting testing on Ohio residents
LabCorp	Commercial or private lab		1,213	100		Private Laboratories were asked to adhere to the Ohio testing priorities when conducting testing on Ohio residents
Mayo Laboratories*	Commercial or private lab		32			Private Laboratories were asked to adhere to the Ohio testing priorities when conducting testing on Ohio residents

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	Platforms or devices used (list all)	Specific at-risk populations targeted (list all)
Quest Diagnostics Laboratories*	Commercial or private lab		318	100		Private Laboratories were asked to adhere to the Ohio testing priorities when conducting testing on Ohio residents
Viracor+	Commercial or private lab		6			Private Laboratories were asked to adhere to the Ohio testing priorities when conducting testing on Ohio residents

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.
- DIRECT PHD EXPANSION

In the early stages of COVID-19, attempts at organizing testing laboratories were centered around helping Ohio laboratories by calling vendors to obtain more reagents, machines, and specimen collection kits in the state of Ohio. As COVID-19 spread across the world, most laboratory vendors very quickly began delaying delivery of important testing equipment or placed facilities and states on weekly allocations of supplies.

The unstable supply of reagents led laboratories to ration testing supplies to ensure that reagents would be available for high-risk individuals. The state's testing priorities, described in the previous section, helped laboratories prioritize specimens submitted. The development of Ohio's relationship with Thermo Fisher – creating a more reliable supply chain for reagents, equipment and other laboratory supplies – changed testing for Ohio and provided a source of stable and consistent supplies. The nine state-sponsored laboratories were invited to participate in the Thermo Fisher deal Ohio had secured and to begin scaling up testing capacity utilizing Thermo Fisher to accomplish increased testing capacity. Through this partnership, Ohio directly expanded testing capacity within its state laboratory and to its network of laboratory partners.

On a recent call between the White House, CDC, and Ohio there was an announcement to regionalize some of the laboratory vendors in a larger scale arrangement, similar to the Ohio Thermo Fisher partnership. Ohio was told that both Thermo Fisher and Hologic would be preferred vendors for the state. As Ohio continues to expand specimen collection efforts across the state, beyond high-risk populations, the state looks forward to building the relationship with Hologic as it has done with Thermo Fisher.

As new technologies emerge, additional equipment arrives and is launched across the state, the more Ohio's network of laboratories can expand capacity meet the demand for testing for COVID-19. For example, the Ohio State/Battelle partner laboratory site launched the Panther platform and the State has purchased multiple Hamilton platforms that have the advantage of increasing capacity as well as reducing manual work through automation to decrease personnel bottlenecks and human error. As outlined in prior sections, this has been a collaboration led by ODH that includes private labs, university laboratories, non-for-profit teams, hospitals, and academic medical centers.

The state is in the final stages of implementing a universal electronic intake form to reduce administrative time and increase consistency between labs. And Ohio is working closely with the state partnered labs to drive increased staffing to keep up with the testing demand in the state.

Included in Ohio's strategic approach to expand testing is an increased focus on partnerships. Ohio has authorized licensed pharmacists to order and oversee administration of COVID-19 testing, and the state will drive increased testing through work with pharmacists and pharmacies. Ohio is also expanding its work with other retailers, with federally qualified health centers, and with other partners to meet the demand for testing collection. Special emphasis will be given to collaboration with partners who are able to help increase access to testing in underserved communities, and the state will seek innovative partnerships to support and incentivize private sector efforts in this space, and to remove any regulatory barriers to their safe and effective operation.

Ohio's tiered testing priorities support Governor DeWine's Responsible RestartOhio plan by increasing access to both test collection and processing, as well as by integrating with the state's efforts on contact tracing, on developing responsible protocols for various sectors of the economy, and by educating Ohioans on appropriate actions and risk-mitigation.

In this context, Ohio continues to work to increase access to testing in a number of ways. Some of these expansion efforts are highlighted below within the context of Ohio's testing prioritization, and then key elements responsive to these questions are described in more detail afterward.

Priorities 1 & 2: Hospitals and Congregate Care Sites

- Deployment of Ohio National Guard for testing in nursing facilities, prisons, and other congregate care settings
- Continued testing capacity building for local health districts, federally qualified health centers, and other local partners
- Pursuit of contracting or other partnership opportunities with health technology vendors to improve access to streamlined screening, rapid testing, and strategic follow-up.

Priority 2: Minorities and Community outbreaks

- Exploring potential state actions and alternatives for paying for testing for low-income communities
- Increased deployment of state resources, local partnerships, and faith-based partnerships for community testing in underserved communities

Priorities 4 & 5: Low-risk Symptomatic and Asymptomatic

- Expansion to pharmacies and retail settings
- Continued outreach and support of federally qualified health centers, retail, and other community testing opportunities
- Exploration of contracting and partnership opportunities with testing consultants, health care technology companies, and nonprofit organizations to increase community access to testing

On May 28, Governor DeWine announced the expansion of testing into Priority 4, which will significantly increase opportunities for community-based testing.

Testing of high risk groups requires a process that will identify infected individuals within that group to minimize spread of virus and preserve life in those at highest risk of complications. Groups identified at highest risk in Ohio include the elderly, people with multiple medical problems, individuals in nursing facilities, and members of minority communities, all of whom are in priority group 2 in the testing priorities. Although previously, testing focused predominantly on individuals exhibiting symptoms, larger group testing may include individuals without symptoms, some of whom may be "carriers" of COVID and at risk of unintentionally infecting others. Identifying and isolating infected individuals with or without symptoms is key to decreasing spread within these groups and the community at large.

The State of Ohio is proposing a comprehensive testing plan within these high-risk groups. Each involves complexities in testing process, including:

- Testing site selection
- Identifying and encouraging individuals to be tested
- Specimen collection and processing
- Communication of results and response to findings
- Payment

The implementation of testing within the high-risk groups including prisons, residential care facilities, and nursing homes will continue over upcoming weeks in a progressive fashion.

Nursing facilities throughout Ohio have experienced outbreaks of COVID-19, with most counties having at least one affected facility. Once COVID is present in a facility, there is likelihood of spread to both residents and staff and the effects can be devastating. As of May 21, 55% of COVID-related deaths in Ohio have occurred in long-term care facility residents. This can be mitigated to some degree by infection control and prevention activities, however, even with conscientious practices, it can still occur. Minimizing spread requires identification of infected staff and residents, and separating them from

those who are well to decrease risk of transmission. On May 26, Governor DeWine announced a comprehensive plan to test at all nursing facilities in the states, including testing of all facility staff and a strategic approach to testing residents that includes prompt separation of infected, exposed and non-exposed resident and staff, to decrease the potential for further spread. The Ohio National Guard has created 14 teams of trained health care providers to conduct the initial surge testing for these facilities.

Ohio's Minority populations have also been hard-hit by the COVID pandemic. Issues with health disparities within minority communities that existed prior to COVID have been highlighted. Minority group members are disproportionately infected with COVID and have higher-than expected hospitalization and death rates. On May 21, Governor DeWine announced the preliminary results of his Minority Health Strike Force, which included a recommendation to expand testing capacity and access for minority communities. Ohio is in the planning stages of a broad testing plan in minority communities around the state under the leadership of the Minority Health Working Group, chaired by Directors Ursel McElroy and Alisha Nelson. This will include testing occurring in local health centers and pharmacies as well as possible sponsored drive-up or walk-up testing events.

Many individuals have had surgical procedures delayed in response to the COVID-19 pandemic in order to preserve personal protective equipment (PPE) and create hospital capacity in the event of a surge. It is important to resume such surgeries for the overall health of the patient. Such individuals may require testing for COVID prior to surgeries or other procedures to decrease the risk of transmission of infection to others in the setting where the procedure is to occur and to avoid post-procedure complications. Currently this includes only essential and medically outpatient necessary surgeries and procedures, but will eventually be expanded to all surgeries and procedures.

To effectively contain the virus in the community, identifying those asymptomatic individuals with COVID will be important for accurate diagnosis, to isolate the infected person and to quarantine close personal contacts in order to decrease community spread. Currently this is not a priority testing group, but clinicians may choose to provide testing based on the availability of testing and their assessment of the patient.

Some asymptomatic individuals will be tested through the high-risk population testing described above, or as part of syndromic surveillance, and should not be denied testing in those situations nor if a treating clinician deems this necessary. While Ohio is not yet at a point of "testing on demand" for all, as this becomes available, testing to identify individuals who are infected but asymptomatic for the purposes of isolation of the person and quarantine of close contacts will further enhance Ohio's ability to contain COVID until an effective vaccine is available.

Moving into the future, the administration is engaged in intensive planning, including demand modeling, to identify ongoing testing priorities. Utilizing health care consultants and innovative testing delivery

models for specimen collection to increase testing and improve data collection is an important part of expanding community based testing. The combined work of all these groups will supplement the existing testing regime with a longer-term strategic approach.

ODH and the State organize nearly daily conference calls with Zone clinical and testing leaders to coordinate both strategy and operations related to specimen collection and testing. Barriers have been significantly reduced with the identification of key accountability leaders for Zones, testing sites, local health departments, prison systems, etc. In addition, as described earlier, a successful testing program will be the result of state efforts combined with those of private sector actors, local health departments, community organizations and other partners. Governor DeWine and his key Administration officials are in near-constant contact with these partners to identify and address opportunities, needs, and barriers to increased strategic testing.

Ohio's current approach to serology testing are outlined in the prior section, but ODH is actively involved in both establishing platforms as well as population testing. For example, ODH in partnership with Ohio State has designed a seroprevalence study to assess a representative sample of Ohioans to better understand current and past infections with coronavirus. This study has a significant laboratory component and will not only collect samples for PCR testing, but also for serological analysis. ODH will be testing approximately 1,200 adults for current and past infection. The results will help Ohio's leaders make informed decisions about the physical health and economic well-being of Ohioans. Data collection will begin in early June.

ODH has provided significant effort to provide new resources and personnel both for global COVID management as well as logistical support and providing new supplies and workforce to manage the state's response. Examples include utilization of volunteers for viral swabbing across Ohio, utilization of the Ohio National Guard and Ohio State Highway Patrol for delivery of swabbing kits, volunteering of all academic medical center teams for test site management, medical student support for swab sterilization, etc. For supply procurement, this is being managed through state procurement system in collaboration with supply chain teams from Zone leaders and Testing Sites.

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	11							11			
	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)	11 7500DXs (Thermo) 5 King Fishers (Thermo) 8 Hamilton Star (Hamilton & Thermo)	1 Hologic Panther 1 Hamilton Starlet 4 Thermo Fisher 7500 FAST Dx							0			
Volume of additional swabs needed to meet planned testing levels ⁺⁺	64,400	317,670							382,070			
Volume of additional media (VTM, MTM, saline, etc.) needed to meet planned testing levels ⁺⁺	164,082	317,670							481,752			

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)	purchased 1 million tests (Thermo) 2 months								
		FOR SE	ROLOGIC TE	STING					
Number of additional* equipment and devices to meet planned testing levels	0	0							0
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							

^{*} 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.