2020 Overarching Jurisdictional SARS-COV-2 Testing Strategy

Jurisdiction:	Missouri
Population Size:	6.137m

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

The State of Missouri has a comprehensive testing strategy with multiple lines of effort, which prioritizes vulnerable populations and acknowledges private demand for diagnostic testing. The state is currently developing a plan for serological testing, but as its utility for individual citizens is still unknown, serological testing will be used for research purposes, until more information is available about potential immunity and timelines. Missouri's statewide testing strategy includes:

*Messaging to the public, providers, laboratories, and test collection locations

*Prioritized testing for healthcare workers and first responders

* Box-in Outbreaks at State Facilities (such as those run by the Departments of Mental Health and Corrections)

- * Box-in Outbreaks at Non-State, Public Facilities (such as county jails and shelters)
- * Box-in Outbreaks at Long Term Care Facilities (LTCFs)
- * Box-in Outbreaks at Prioritized Employers (such as meatpacking plants and factories)
- * Community Testing and Prevalence Studies
- * Sentinel Testing of Vulnerable Populations (such as LTCFs and other congregate care settings)
- * Baseline Operations of the State Public Health Laboratory
- * Sector Security (including education and employers)
- * Individual Diagnostic Testing (including anticipated increased demand during cold and flu season)

Testing platforms include contractors who can provide testing throughout the state while others are limited to regional efforts. Each contract will be maximized through coordination with DHSS, local public health partners, and healthcare providers. PCR resources available at the state public health laboratory (SPHL) will provide testing as part of the State's "Box-in" strategy and as the provider of last resort for outbreaks among vulnerable populations. Additional considerations are being made for expansion of SPHL capacities along with the capacities of local public health partners. Point-of-Care machines (currently Abbott ID-NOW) are located in 14 locations throughout the state. POC platforms are used at the discretion of local public health partners and have recently been utilized in response to outbreaks in long-term care facilities. One unit is deployable as a mobile option through collaboration with the Missouri National Guard.

Additionally, the State of Missouri will provide first-round or initial testing of all long term care facilities (LTCFs) with recent or past cases as the payor of last resort. Facilities with cases are the current priority followed by facilities where a case was identified in the recent past. DHSS is working closely with local public health as outbreaks are identified as part of its industry security strategy. As cases are identified where exposures occur within large-scale workplaces, coordination and facilitation of testing resource linkages to employers occur with the employer assuming costs of testing.

Community testing at non-traditional sites began in May and will extend through June and the remainder of 2020. Sentinel testing among populations receiving direct care from State of Missouri agencies will continue as a priority. Discussions are ongoing with non-traditional providers and sites throughout the state.

Throughout May, 2020 a daily average of 750 serology results was reported to the State from non-public health labs. The number of reported serology tests is expected to increase as more serology labs come online. Serology results from commercial labs will be used for surveillance purposes and assessing the prevalence of prior infections as they are available.

Communications, collaboration, and coordination with testing resource contractors will be maintained through usual conduits. Their capacities are monitored to ensure contract maximization through effective and efficient use throughout the state or where regionalization can occur. SPHL communications are disseminated on a regular cadence, and as information changes. The SPHL is part of the Division of Community and Public Health, the applying agency of DHSS.

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*	123,000	159,450							282,450
Serology	20,000	20,000							40,000
TOTAL	143,000	179,450	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)
Barnes Jewish Hospital System	Hospitals or clinical facility	in-house	440			Patients being prepared to undergo various elective surgeries as well as staff
Genetrait	Commercial or private lab	in-house	750			Patients, hospital staff, sentinal testing, congregate settings
Mercy Hospital System	Hospitals or clinical facility	in-house	550			Patients being prepared to undergo various elective surgeries as well as staff

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	Commercial or private lab	in-house	1,400			Patients, hospital staff, sentinal testing, congregate settings, community testing
St. Luke's Hospital System	Hospitals or clinical facility	in-house	300			Patients being prepared to undergo various elective surgeries as well as staff
Truman Medical Center	Hospitals or clinical facility	in-house	200			Patients being prepared to undergo various elective surgeries as well as staff
Gamma Healthcare	Commercial or private lab	in-house	50			Nursing homes
Ten Healthcare	Commercial or private lab	in-house	50			Nursing homes and patients being prepared to undergo various elective surgeries as well as staff
Quest Diagnostics	Commercial or private lab	in-house		800		Patients
SPHL	Public health lab	in-house		500		Surveillance

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)
SPHL	Public health lab	in-house	100			Healthcare workers
Point of Care	Hospitals or clinical facility	in-house	400			Box-in outbreak control (congregate settings)
CVS	Drug store or pharmacy	Unknown	1,000			Diagnostic / community based testing (begins in June date TBD)
Walgreens	Drug store or pharmacy	Unknown	25			Dignostic / community-based
Viracor - Eurofins	Commercial or private lab	in-house	50			Long term care facilities, diagnostic

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.

DHSS has expanded testing capacity through 14 contracts with 11 laboratories that support statewide and regional testing, testing of vulnerable populations, and outbreak control. Specific contracts have been executed for fast, flexible testing wherein the state can deploy tests at relatively high volumes to either state facilities or those of private partners. The State anticipates entering into additional procurement processes as technologies and collection methodologies change. Statewide throughput capacity exceeds 3.925m tests through mid-October. Western Missouri has access to 124,000 additional tests while eastern Missouri has access to 18,000 additional tests.

Partnerships with community based organizations, including Federally Qualified Health Centers (FQHCs), Local Public Health Agencies (LPHAs), and hospitals have allowed DHSS ample logistics support, and DHSS is always seeking to strengthen and expand partnerships with stakeholders. Testing for racial and ethnic minorities is facilitated through LPHAs and community-based organizations to ensure barriers to testing are eliminated. FQHCs play a crucial role in test facilitation and administration.

Vulnerable and at-risk populations are currently being prioritized through a targeted campaign for the months of May and June to accelerate testing and set baselines for the remainder of the year to test at least 2% of the total state population each month. Healthcare workers and first-responders are currently prioritized for testing at the SPHL with a 24-hour turn-around for test results. The elderly and disabled living in congregate settings are also a priority. The state is funding baseline testing for all residents and staff at long term care facilities (LTCFs) that have had a positive case of COVID-19. Fifty long-term care facilities are known to have at least one case in the past 14 days. These facilities are first to receive facility-wide testing in underserved, rural counties, and in St. Louis and Kansas City neighborhoods which have the highest numbers of cases and hospitalizations. In May, Missouri completed and funded approximately 8,000 community tests, and plans to complete at least 12,000 in the month of June. The State of Missouri will fund testing for all populations through HRSA, provided all other avenues for payment have been examined and exhausted.

Sentinel testing is being offered through June 4 at all state-operated facilities housing vulnerable populations and those in congregate settings: the Departments of Corrections, Mental Health, Youth Services, and the Veterans Commission. Monitoring for efficiencies in testing and assessing any underutilization of available assets will be conducted through partnerships with LPHAs. Three of the state's 14 contracts for testing are in the State's major metropolitan areas, allowing for greater access in the event of supply-chain or processing concerns with other contractors.

Serology testing through the State Public Health Laboratory will focus on surveillance and to estimate the numbers of those previously infected. Additionally, future determinations of any correlation with immunity will make the availability of serology testing to essential workers and those who interact with vulnerable populations more likely. The Liaison XL (DiaSorin) IgG testing instrument is expected online by June 6 under an FDA EUA. Expected throughput is up to 170 specimens an hour. As of May 31st, supplies for processing 10,000 specimens are on hand.

Community mitigation recommendations have been promoted since the pandemic began. Sentinel surveillance efforts among vulnerable populations began May 21 and is expected to generate over 14,000 specimens through June 4. Additional sentinel surveillance efforts are underway among 50 LTCFs known to have one positive resident/staff member. Following facility-wide testing with these 50 facilities others will follow. LTCFs will be required to have a testing plan written, complete with testing resources in place and actionable, by June 26.

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	0							0		
	FOR DIAGNOSTIC TESTING										
How many additional* testing equipment/devices are needed to meet planned testing levels? (provide an estimated number, and include platform details in narrative above)	0	0							0		
Volume of additional swabs needed to meet planned testing levels ⁺⁺	167,000	167,000							334,000		
Volume of additional media (VTM, MTM, saline, etc.) needed to meet planned testing levels ⁺⁺	107,000	107,000							214,000		
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									
FOR SEROLOGIC TESTING											
Number of additional* equipment and devices to meet planned testing levels	0	0							0		

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							

* 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.