

ELC ENHANCING DETECTION: IOWA TESTING PLAN

2020 Overarching Jurisdictional SARS-COV-2 Testing Strategy

Jurisdiction:	Iowa
Population Size:	3,155,000

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

Testing is a key component for Iowa's plan to recover from the pandemic. Iowa has strived to increase testing capacity since the pandemic arrived here in February 2020. Supply shortages from multiple manufacturers has forced the lab to be able to test for SARS-CoV-2 on multiple platforms. The State Hygienic Laboratory (SHL) provides approximately 50% of all the testing performed in Iowa. At this point approximately, 1 in 32 Iowans have been tested and SHL has performed over 45,000 tests. To reach a goal of at least 66,000 tests performed each month by SHL and ramping up to 99,000 tests performed each month, SHL will need to add staff, supplies and equipment and to restructure where testing is performed to meet the needs of Iowa. Iowa plans to increase incrementally the volume of testing performed from the current (May 2020) 2% of population to 3% of population by November 2020. Goal 1: To increase the volume of testing which is currently at 66,000 per month or 2,200 per day to 99,000 per month or 3,300 per day. Goal 2: To accomplish this, SHL proposes to expand to two additional sites throughout Iowa: 1) The SHL in Ankeny Iowa to service the central and western portion of Iowa and 2) The SHL Lakeside in Milford, IA in the northwestern portion of Iowa to service the rural northwest portion of the state. Goal 3: To increase serology testing from 12,000 per month to 20,000 per month.

1. For the SHL in Ankeny, IA a Cepheid GeneXpert Infinity is requested which will provide the ability to test 2,300 samples per day. A biosafety cabinet is also required and SHL proposes to add 3 additional FTE's to perform the testing.

2. For the SHL in Coralville, purchase additional equipment for the availability to increase efficiency. Including, reagents and consumable supplies for laboratory testing, transport specimens, two King Fisher Presto Extractors, and a gene expert.

3. For the SHL Lakeside in Milford, IA a Cepheid GeneXpert is requested that will provide testing capacity of 125 samples per day. A biosafety cabinet is also required and 1.5 additional FTE to perform the testing.

4. To increase the volume of serology testing performed to 20,000 samples per month, SHL proposes to add 2 additional FTE's to the serology laboratory section. The serology laboratory will then be staffed on two shifts per week day and one shift for weekend days.

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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*	60,000	65,000	70,000	75,000	80,000	85,000	90,000	95,000	620,000
Serology	15,000	20,000	30,000	30,000	30,000	30,000	30,000	30,000	215,000
TOTAL	75,000	85,000	100,000	105,000	110,000	115,000	120,000	125,000	

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)
State Hygienic Laboratory at the University of Iowa	Public health lab	Coralville site	5,000	3,300		

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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)
State Hygienic Laboratory at the University of Iowa	Public health lab	Ankeny site	2,300			
State Hygienic Laboratory at the University of Iowa	Public health lab	Lakeside site		600		

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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) Iowa plans to increase incrementally the volume of testing performed from the current (May 2020) 2% of population to 3% of population by November 2020. Goal 1: Increase testing from the current 66,000 per month or 2,200 per day to 99,000 per month or 3,300 per day. Goal 2: SHL proposes to expand to two additional sites throughout Iowa: 1) The SHL in Ankeny to service the central and western Iowa and 2) SHL Lakeside in Milford to service northwestern Iowa. Goal 3: To increase serology testing from 12,000 per month to 20,000 per month.

1. To accomplish this Ankeny we request Cepheid GeneXpert Infinity which will test 2,300 samples per day. A biosafety cabinet is also required and SHL proposes to add 3 additional FTE's to perform the testing.

2. SHL in Coralville requests additional equipment to increase efficiency. Including, reagents and consumable supplies for laboratory testing, transport specimens, two King Fisher Presto Extractors, and a gene expert.

3. SHL Lakeside in Milford, IA requests a Cepheid GeneXpert that will provide test 125 samples per day. A biosafety cabinet is also required and 1.5 additional FTE to perform the testing.

4. To increase the volume of serology testing performed to 20,000 samples per month, SHL proposes to add 2 additional FTE's to the serology laboratory section. The serology laboratory will then be staffed on two shifts per week day and one shift for weekend days.

b) With three locations providing SARS-CoV-2 testing, SHL, the vulnerable and at risk populations are better served because it brings the testing closer to locations where these vulnerable populations are located.

c) With all three locations, SHL will have capacity to test 10,725 samples per day and operate a 24 hour per day 7 day per week schedule. This plan also removes concerns of supply chain difficulties because there will now be four platforms available for testing. In this manner, SHL can be flexible with the resources and provide backup capacity at other sites when needed.

d) SHL has on-boarded the Abbot IgG serology assay for the Architect platform and the Euroimmun IgA and IgG ELISA assays. SHL continues to look at other platforms to provide more capacity and flexibility including Diasorin and Beckman. SHL has collaborated with Iowa State University's Veterinary Diagnostic Laboratory which has brought the Euroimmun test in house to provide high through put testing capacity.

e) The Iowa Department of Public Health (IDPH) will continue to monitor healthcare and testing resources in association with COVID-19 virus activity. Community mitigation policies will be adjusted as disease activity increases or decreases at the local, regional and state levels. Virus activity will be informed by diagnostic testing among symptomatic vulnerable populations in high-risk settings including hospitalized individuals, residents of congregate living facilities, older adults with underlying conditions,

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healthcare workers, first responders and critical infrastructure workers, and staff and children in daycare facilities. Additional sentinel surveillance will be performed among symptomatic persons in a network of hospitals and clinics as well as a sample of symptomatic or asymptomatic long-term care facility staff, offenders in jails and prisons, young adults in colleges and universities, and in collaboration with selected high-density occupational sites such as manufacturing.

f) Since the State Hygienic Laboratory is connected with the University of Iowa, recruitment and filling of positions has not be a problem when there are funds available. Supplies continue to be a problem, however, SHL has established standing orders with several manufacturers and will continue to work to have sufficient inventory available. SHL has the capacity to make viral transport media and has been doing so for several weeks.

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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	3	4	0	0	0	0	0	0	7
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)	6	0	0	0	0	0	0	0	6
Volume of additional swabs needed to meet planned testing levels ⁺⁺	60,000	65,000	70,000	75,000	80,000	85,000	90,000	95,000	620,000
Volume of additional media (VTM, MTM,	60,000	65,000	70,000	75,000	80,000	85,000	90,000	95,000	620,000

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BY MONTH:	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	TOTAL
saline, etc.) needed to meet planned testing levels ⁺⁺									

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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)			ThermoFisher reagents and supplies to perform 60K tests/month Hologic reagents and supplies to perform 7500 tests/month Cepheid cartridges to perform 2500 tests/month	ThermoFisher reagents and supplies to perform 60K tests/month Hologic reagents and supplies to perform 10,000 tests/month Cepheid cartridges to perform 5000 tests/month	ThermoFisher reagents and supplies to perform 65K tests/month Hologic reagents and supplies to perform 10,000 tests/month Cepheid cartridges to perform 5000 tests/month	ThermoFisher reagents and supplies to perform 65K tests/month Hologic reagents and supplies to perform 15,000 tests/month Cepheid cartridges to perform 5000 tests/month	ThermoFisher reagents and supplies to perform 70K tests/month Hologic reagents and supplies to perform 15,000 tests/month Cepheid cartridges to perform 5000 tests/month	ThermoFisher reagents and supplies to perform 70K tests/month Hologic reagents and supplies to perform 15,000 tests/month Cepheid cartridges to perform 10,000 tests/month		
	FOR SEROLOGIC TESTING									

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BY MONTH:	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	TOTAL
Number of additional* equipment and devices to meet planned testing levels	1								1

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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)	Abbott Reagents and controls to perform 15,000 tests per month.	Abbott - reagents and controls to perform 15,000 tests per month Euroimmun - reagents to perform 500 tests/month (confirmatory for CCP) Liaison - reagents and supplies to perform 5,000 tests/month	Abbott - reagents and controls to perform 25,000 tests per month Euroimmun - reagents to perform 500 tests/month (confirmatory for CCP) Liaison - reagents and supplies to perform 5,000 tests/month	Abbott - reagents and controls to perform 25,000 tests per month Euroimmun - reagents to perform 500 tests/month (confirmatory for CCP) Liaison - reagents and supplies to perform 5,000 tests/month	Abbott - reagents and controls to perform 25,000 tests per month Euroimmun - reagents to perform 500 tests/month (confirmatory for CCP) Liaison - reagents and supplies to perform 5,000 tests/month	Abbott - reagents and controls to perform 25,000 tests per month Euroimmun - reagents to perform 500 tests/month (confirmatory for CCP) Liaison - reagents and supplies to perform 5,000 tests/month	Abbott - reagents and controls to perform 25,000 tests per month Euroimmun - reagents to perform 500 tests/month (confirmatory for CCP) Liaison - reagents and supplies to perform 5,000 tests/month	Abbott - reagents and controls to perform 25,000 tests per month Euroimmun - reagents to perform 500 tests/month (confirmatory for CCP) Liaison - reagents and supplies to perform 5,000 tests/month. Total tests per month: 30,000	

* Report new monthly additions only, not cumulative levels

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++ For May and June, only include needs beyond the supplies provided by FEMA. Report new monthly additions only, not cumulative levels.