

Anchorage COVID-19 Testing Plan

Version: June 29 , 2020

Testing is a vital part of Alaska’s strategy to contain the spread of COVID-19, protect Alaskans from the virus, preserve hospital capacity, and reopen our state’s economy. A working group convened by the Municipality of Anchorage has developed this strategic plan for testing for COVID-19 infection in Anchorage to prioritize groups for testing to help allocate resources. The prioritization was informed by the key factors that accelerated spread of COVID-19 in the US¹ and by the risk to the individual and the public. This prioritization is based on the current situation and is subject to change. The team included representatives from the Anchorage Health Department, State of Alaska Section of Epidemiology, Alaska Native Tribal Health Consortium, Providence Alaska Medical Center, Regional Hospital, Anchorage Neighborhood Health Center, Arctic Investigation Program, the Alaska Hospitalist Group, Medical Park Primary Care, and the University of Alaska, Anchorage.

Goal: Maintain and Improve our ability to detect new cases of COVID-19 as early as possible to limit wider transmission.

Core Principles²:

- Provide a timely and accurate diagnostic test for symptomatic persons.
- Contain and reduce transmission by early case identification, contact tracing and isolation/quarantine.
- Identify and contain new introduction of infection from travelers.
- Detect community spread through a strategic approach that identifies asymptomatic individuals at critical locations, including senior and other congregate living settings and healthcare clinics.
- Detect increases in transmission using monitoring tools such as the Influenza-like Illness syndromic surveillance network, and detect hot spots by using strategic testing of high risk and underserved populations.
- Use data and evidence to drive plan adaptations.

¹ https://www.cdc.gov/mmwr/volumes/69/wr/mm6918e2.htm?s_cid=mm6918e2_w

² Adapted from the CDC, FDA and White House “Blueprint for Testing” April 16, 2020
<https://www.whitehouse.gov/wp-content/uploads/2020/04/Testing-Blueprint.pdf>

The following **Objectives** will lead to the fulfillment of the goal:

1. Continue current testing of symptomatic persons.

- Anyone who needs to be tested should be able to get a test and test results as quickly as possible³.

2. Ensure sufficient testing supplies for all healthcare providers

- Establish real-time reporting of testing capacity from the EOC that includes all testing providers, that includes:
 - Testing Capacity: how much each testing location can or will process.
 - Testing Supplies
- Monitor testing metrics:
 - Number of tests performed weekly
 - Track as “number of tests per week” broken out by risk stratified group.
 - Track per capita to compare with other locations – “number of tests per 10,000 persons per week”.
 - Can be benchmarked with other cities and states. Eg, Oregon’s goal is 30 tests/10,000 persons/week
 - Percent of positive tests
 - WHO recommends this should be <10% as an indication of sufficient testing.
 - What groups in the Priority Table have been tested per time frame.

3. Increase testing accessibility⁴ by:

- Targeted health messaging about the need for testing to different groups.
 - UAA’s COVID19 Needs Assessment for underserved groups can inform this effort.
- Decrease real and perceived physical and financial barriers to testing:
 - Decrease or eliminate the need for provider ordering by using standing orders, where appropriate.
 - Decrease or eliminate the need for insurance or payment for testing.
 - Increase access to testing close/closer to “home” e.g., satellite testing or mobile testing.

4. Expand risk-focused testing of asymptomatic persons.

To rapidly identify undetected clusters, we recommend expanding the testing strategy regardless of symptoms to include:

- Primary priority groups (Group D in table, below)
 - i. Close contacts of confirmed cases

³ CDC Testing Guidelines <https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-criteria.html>.

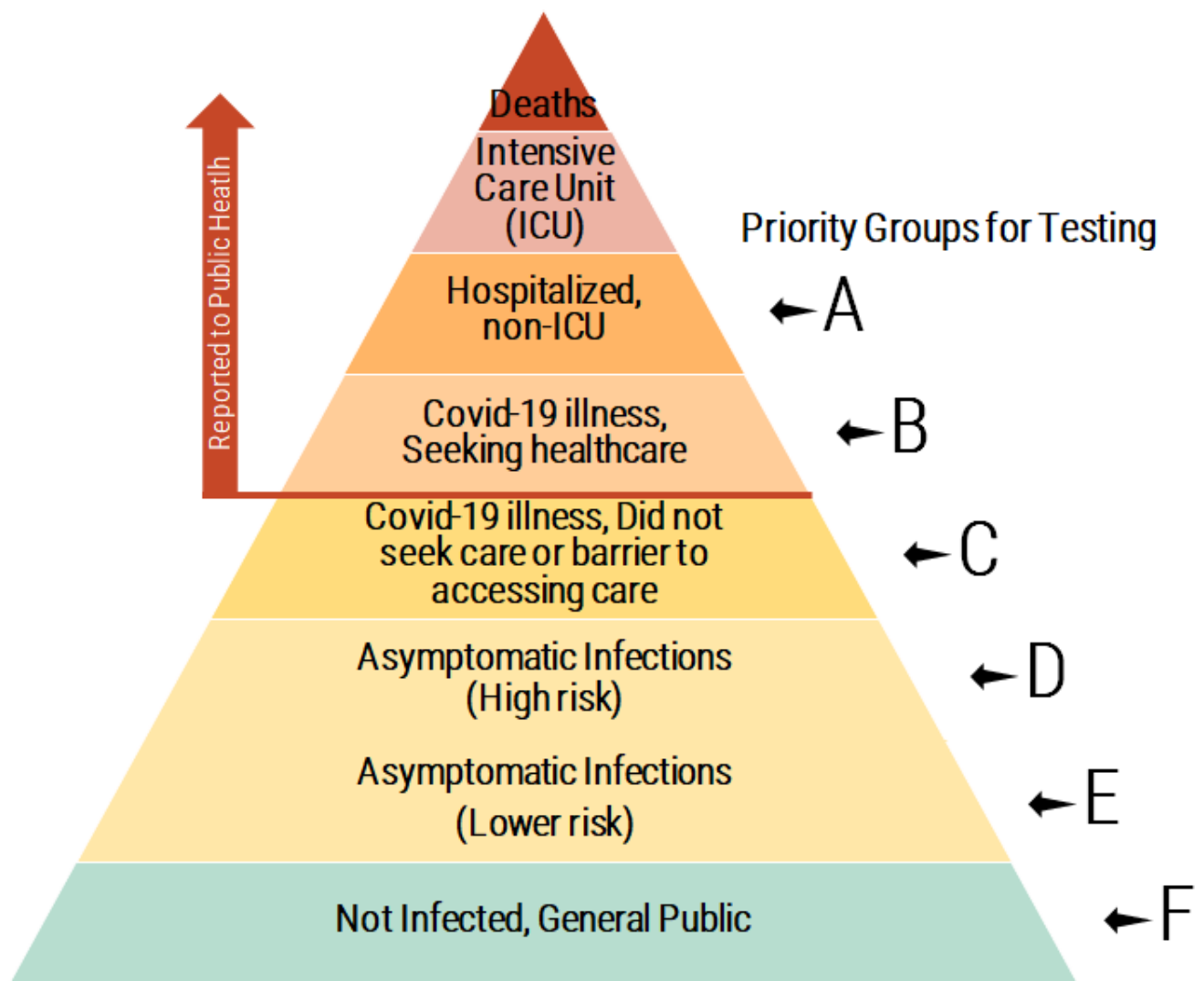
⁴ Rationale for increased access to testing <https://rs-delve.github.io/reports/2020/05/27/test-trace-isolate.html>

- ii. Groups who have been identified as having contributed to accelerated transmission of the epidemic in the US⁵. These included:
 1. Travelers from high risk locations and settings
 2. Group events and large gatherings
 3. High density workplaces and living settings
 - iii. Persons at high risk for catastrophic infection (elderly, persons with multiple comorbidities)
 - iv. Persons at risk for transmission to many other people (e.g., health care workers, grocery workers)
 - v. First responders (Police patrolmen, EMTs/firemen)
 - vi. Persons undergoing aerosolizing procedures, as required by State of Alaska Mandate 15
 - o Secondary priority groups (Group E in the table):
 - i. Sub-populations representing sectors of the community where pockets of the disease may develop or may be occurring undetected. Targeting these groups will enable early detection and a better understanding of infection prevalence in the whole population.
 - o These priority groups were selected using the criteria above and using data on occupation for COVID19 cases in Anchorage and the US Dept of Labor's occupational risk scores. (Appendix A and B, below)
- 5. Implement proactive testing of asymptomatic people in the general public (Group F in table)**
- When supplies are sufficient to test the identified primary and secondary priority groups, increase opportunities for testing of the general public using strategies such as:
- o Testing at businesses (such as pharmacies or groceries) or public locations (libraries)
 - o Mobile testing

⁵ CDC report https://www.cdc.gov/mmwr/volumes/69/wr/mm6918e2.htm?s_cid=mm6918e2_w

Testing Prioritization

With limited supplies for the foreseeable future, testing should be prioritized using the principles described above. It is highly likely that the number of reported cases, hospitalizations and deaths due to COVID-19 represent only a fraction of the total infections in the community. The unknown portion are those with illness who have not been tested and persons with asymptomatic infections. The **Pyramid**, below, is a way to indicate the relative sizes of these groups and shows how a prioritized testing strategy can be applied. The letters (A- F) represent options to target testing for particular groups of interest and are described in more detail in the Table. .



Priority Group	Strategy	Who is tested?	Timing/ frequency of testing	# Persons in this group	% Persons tested in group	Who conducts
A	Hospitalized Patients	Patients hospitalized with symptoms of COVID-19	As indicated by testing guidance	Varies based on outbreak	100%	Clinical provider
B	Symptom- based testing, with access to healthcare	Persons with COVID19 symptoms who seek healthcare	As indicated by testing guidance	Varies based on outbreak	100%	Clinical provider
C	Symptom- based testing, barrier to accessing healthcare	Persons with symptoms but limited access to health care (Immigrants, Refugees, Communities of Color, disabled persons)	Ongoing	Assess demand by deploying mobile testing to multiple sites: i.e. Mountain View community Center, mobile homes, apartment complex.	100% (Everyone who has symptoms should be tested at selected sites)	Municipality of Anchorage (MOA)

D1	Risk-focused testing, high risk	Close contacts of known cases	As defined by public health guidance ^{6,7}	6 per case, average	100%	MOA
D2	SOA Mandate 15, Required	Patients who will undergo aerosolizing procedures (such as surgical suctioning, intubation, or breathing treatments)	48-hours prior to procedure	Unknown, not currently tracked	100%	health care providers
D3	Asymptomatic, high risk	Health care personnel ⁸ (including dental providers) with patient contact or	Weekly or Every other week	21,000	As defined by the policy of health care providers	MOA or health care employer

⁶ <https://www.cdc.gov/coronavirus/2019-ncov/php/principles-contact-tracing.html>

⁷ State of Alaska guidance:
<http://dhss.alaska.gov/dph/Epi/id/SiteAssets/Pages/HumanCoV/AKCOVIDTestingGuidance.pdf>

⁸ CDC defines healthcare personnel as: Healthcare Personnel (HCP): HCP include, but are not limited to, emergency medical service personnel, nurses, nursing assistants, physicians, technicians, therapists, phlebotomists, pharmacists, students and trainees, contractual staff not employed by the healthcare facility, and persons not directly involved in patient care, but who could be exposed to infectious agents that can be transmitted in the healthcare setting (e.g., clerical, dietary, environmental services, laundry, security, engineering and facilities management, administrative, billing, volunteer personnel). For this guidance, HCP does not include clinical laboratory personnel. From <https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assesment-hcp.html>

		potential exposure to infectious agents				
D4	Asymptomatic, high risk	Nursing home residents and staff.	Baseline test for all, then all staff weekly (or less often). Consider testing all new admissions or returnees from hospital.	To be determined by contact with ASHNA	All, at baseline. 100% of staff, weekly, thereafter	State of Alaska or members of Alaska State Hospital and Nursing Home Association SOA/ASHNA

D5	Asymptomatic, high risk	Assisted living residents and staff	<p>Baseline test for all, then all staff weekly (or less often). Consider testing all new admissions or returnees from hospital.</p> <p>(https://www.cdc.gov/coronavirus/2019-ncov/hcp/nursing-homes-testing.html)</p> <p>State of Alaska guidance:</p> <p>http://dhss.alaska.gov/dph/Epi/id/SiteAssets/Pages/HumanCoV/AKCOVIDAsymptomaticTesting.pdf</p>	<p>2773</p> <p>1857 residents in facilities with < 10 persons.</p> <p>(916 residents in 31 facilities with 10 or more people)</p> <p>Need staff numbers</p>	<p>All, at baseline.</p> <p>100% of staff, weekly, thereafter</p>	MOA
D6	Asymptomatic, high risk	Travelers coming into Alaska	<p>State Mandated Quarantine is 14 days through June 5, 2020.</p> <p>Policy starting June 6. On arrival at airport, passengers need to show proof of a</p>	1500+ persons per day at ANC	100% that arrive without a test result.	SOA

			negative PCR test within 72 hours prior to travel. Or, get tested on arrival at airport and self quarantine until test results confirm no infection. Or, undergo a 14 day quarantine period.			
D7	Asymptomatic, high risk	Residents and staff of jails and prisons	Weekly or every other week	Anchorage Correctional Complex 845 offenders, 300 staff. Hiland, ~400 inmates, 100 staff	Sample Strategy	SOA
D8	Asymptomatic, high risk	Anchorage First Responder: Police patrolmen, EMTs/firemen.	Weekly or every other week	1000	As needed based on MOA policy	MOA

D9	Asymptomatic, high risk	Grocery stores workers	Weekly or every other week	6000, 30 grocery stores in Anchorage	Cluster sample of 5 grocery sites per week, 150 total, See appendix C	MOA
D10	Asymptomatic, high risk	Pilots, flight attendants based in Anchorage	Weekly or every other week, if working	3300	As defined by employer policy.	Employer
D11	Asymptomatic, high risk	Sheltered persons in special settings and those experiencing homelessness ^{9, 10}	Weekly	265 in Boeke (95) Sullivan (170) 270 in 7 other sites	Sample strategy, see appendix C	MOA

⁹ CDC Report on testing for COVID19 infection in shelters:
<https://www.cdc.gov/mmwr/volumes/69/wr/mm6917e1.htm>

¹⁰ CDC Guidance for Shelters: <https://www.cdc.gov/coronavirus/2019-ncov/community/homeless-shelters/unsheltered-homelessness.html>

E1	Asymptomatic, lower risk	Child care providers, teachers, teachers aides	Weekly or every other week	4100 teachers 3300 child care/ early education workers	Sample Strategy	MOA
E2	Asymptomatic, lower risk	Staff of houses of worship	Weekly or every other week	750	Sample Strategy	MOA
E3	Asymptomatic, lower risk	Bus drivers	Weekly or every other week	150	Sample	MOA
E4	Asymptomatic, lower risk	People being hospitalized who do not have symptoms of COVID-19 or a known exposure	At time of hospital admission. This is healthcare institution discretionary policy, not a public health recommendation	Not tracked at this time	As defined by hospital policy	Healthcare providers

E5	Asymptomatic, lower risk	Household members of health care workers	As determined by health care providers. This group may be prioritized by healthcare organizations, but is not identified as a priority group by public health.	No known data source	As defined by organization or healthcare provider policy.	Healthcare facility or organization, if this is an organization priority
F1	Proactive testing of general public	Asymptomatic persons in locations where high rates of disease have been identified.	To be defined as testing capacity becomes more available.	To be defined based on which locations or groups are determined to be at high risk	To be defined	MOA
F2	Proactive testing of general public	Sample of the general asymptomatic public at pre-established locations or events	To be defined as testing capacity becomes more available.	tbd	To be defined	MOA

REFERENCES

[The CIDRAP Viewpoint](#)

[CDC Activities and Initiatives Supporting the COVID-19 Response and the President's Plan for Opening America Up Again May 2020](#)

[Targeted surveillance testing starts this week](#)-Nelson Marlborough Health News and Notices, New Zealand

[COVID-19 testing in Alert Levels 3 and 2 to support New Zealand's elimination strategy](#)

[Evaluating and Testing for Coronavirus Disease 2019 \(COVID-19\)](#)
(Minnesota)

[OHA 2327 Oregon COVID-19 Testing and Contact Tracing Strategy](#) (Oregon)

[The Commonwealth of Massachusetts](#) (Massachusetts)

[Michigan expands coronavirus \(COVID-19\) testing criteria as economy begins to reopen](#)
(Michigan)

[Maine CDC eliminates COVID-19 testing prioritization, says anyone can now seek testing](#)

[Updated COVID-19 Testing Guidance](#) (Ohio)

Appendix A. Incidence of COVID-19 infection in Occupational Groups, Anchorage, through 5/24/2020. (Does not imply that infection was acquired in the workplace) Data missing for 159

Group	Cases	Population	Cumulative Incidence per 100,000 (95% Confidence Interval)
Total	206	291000	71
Health Care Workers	25	21,000	119 (80 - 180)
Grocery	5	6000	83 (30 - 190)
Military	5	?	JBER (right?)
Restaurant fast food	3	?	
Retail	3	?	
Airlines	2	3300	60 (10 - 240)
College student	2	?	
School	2	4100	48 (10 - 200)
Correctional Worker	1	7500? This includes inmates	
Grocery Warehouse	1	unclear if are included in 6000 grocery workers	
Grocery health care	1	not sure if included in 6000 grocery workers	
Office	1	?	

Appendix B. Occupational Risk Categories, US Dept of Labor

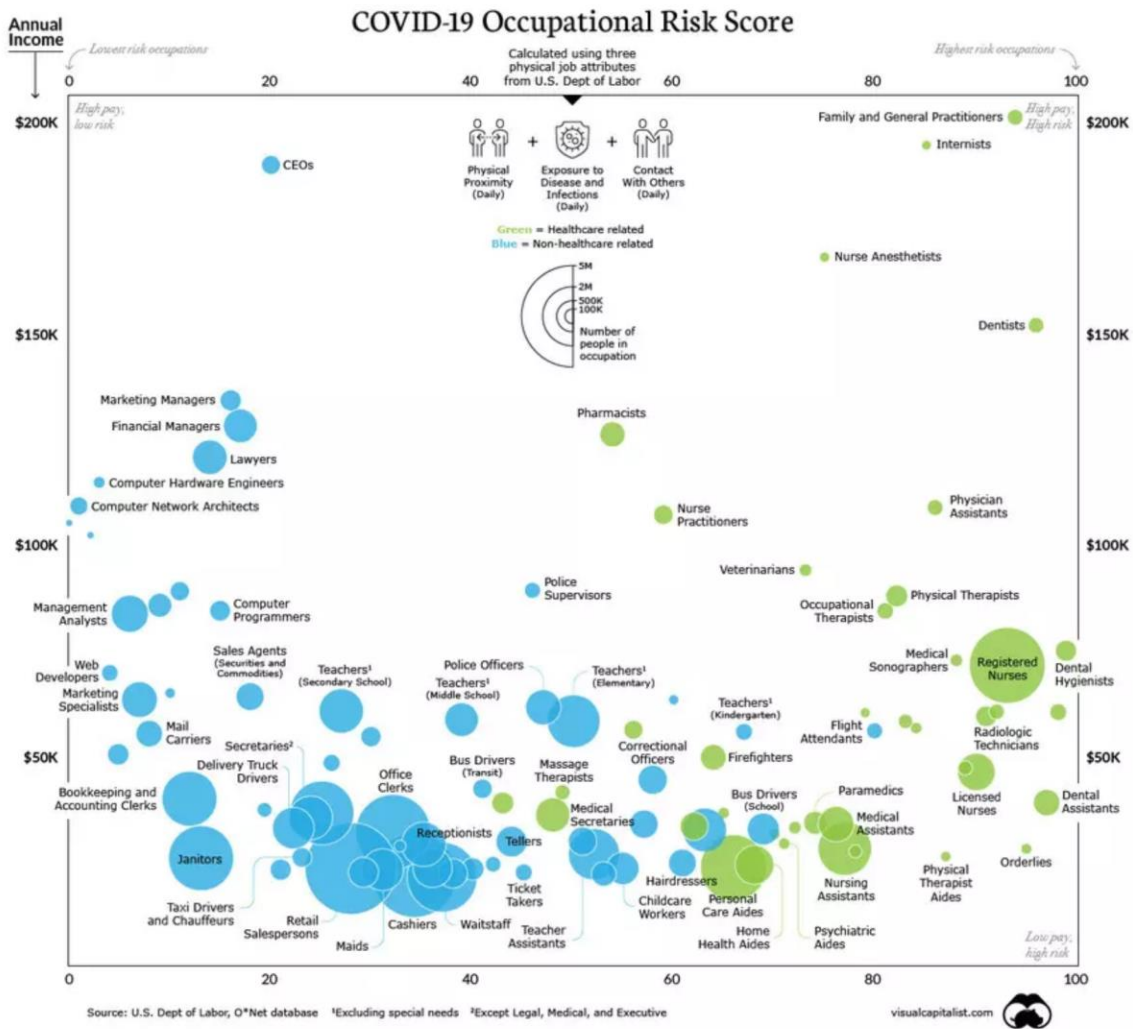


Image: U.S. Dept of Labor

Appendix C. Statistical Sampling strategy for testing of Asymptomatic Priority group for COVID19 infection in Anchorage.

Cluster sample example for Grocery Workers in Anchorage

Population 6000

Expected frequency 5%

Confidence level: 95%

Margin of Error: True proportion is between 0 – 10%

Design effect: 2

Clusters (stores), overall: 30

Sample: 5 Clusters, total sample 150

So, this would lead to testing at 5 locations each week for a total of 150 persons. Ideally, persons at each location would be randomly selected, but more practical to offer it to workers who want to be tested.

Testing for Nursing Homes

CDC recommends a re-opening strategy that all residents and staff have a baseline test, then staff are to be tested weekly. A sampled strategy doesn't work here, since a baseline level is needed of all residents.

Residents: 2773. For the 31 LTC facilities with 10 or more residents that = 916 residents. For those < 9 residents, = 1857 persons.

Staff, population to be determined

Testing for Persons Experiencing Homelessness who are sheltered in Anchorage

CDC investigations of two shelters where zero or no cases of COVID19 had been detected in the previous 2 weeks showed a prevalence of 4 -5% PCR +. Where 2 or more cases had been identified among residents in the preceding 2 weeks, a much higher proportion of residents were positive for SARS-CoV-2 (17%- 66%). Reference: <https://www.cdc.gov/mmwr/volumes/69/wr/mm6917e1.htm>

Testing of approximately 100 Anchorage shelter residents in May 2020, when no residents were known to be infected showed zero positive tests. (Bruce Chandler, MD, personal communication).

Data on shelters and occupancy can be found here: <https://muniorg.maps.arcgis.com/apps/opsdashboard/index.html#/96ae366ac5944af4afcd0ceab1998130>

Testing plan in absence of known cases:

MOA operated shelters (Boeke, Sullivan), Resident population: 265, Boeke (95), Sullivan (170)

Expected frequency 5%

Confidence level: 95%

Margin of Error: True proportion is between 0 – 10%

Design effect: 2

Sample: 60 in each facility

Other shelters: 270 persons in 7 other sites (range 9 – 70 persons)

Simple random sample: 25% of residents

Anchorage Gospel Rescue Mission: 40 bed capacity, 26 occupants on June 3: sample 7

Brother Francis: 114 capacity, 74 occupants: sample 19

Clare House:20 capacity, 48 occupants: sample 12

Covenant House: capacity 60, occupants 46, sample 12

Downtown Hope Center: capacity 40, occupants 33, sample 8

McKinnell House capacity 16, occupants 8, sample 2

Church-based family shelter capacity 60, occupants 46, sample 12

Appendix D. Testing Capacity by Location (As of June 2020)

Method	Instrument	Facility Type	Community	Facility Name	Number Instruments	Asset Owner
PCR	Cepheid GeneXpert	Hospital	Anchorage	Alaska Native Medical Center	1	ANTHC
PCR	Biofire	Hospital	Anchorage	Alaska Native Medical Center	1	ANTHC
PCR	Abbott M2000-High throughput	Hospital	Anchorage	Alaska Native Medical Center	1	ANTHC
PCR	Hologic Panther	Tribal	Anchorage	Alaska Native Tribal Health Consortium	1	ANTHC
PCR	Cepheid GeneXpert	Hospital	Anchorage	Alaska Regional Hospital	1	Private
PCR	ThermoFisher7500	Environmental Lab	Anchorage	Alaska State Environmental Health Laboratory	1	State
PCR	Abbott ID Now	Public Health Lab	Anchorage	Alaska State Public Health Laboratory	1	State
PCR	ThermoFisher7500	Public Health Lab	Anchorage	Alaska State Public Health Laboratory	2	State

PCR	Cepheid GeneXpert	Public Health Lab	Anchorage	Alaska State Public Health Laboratory	1	State
PCR	Hologic Panther	Public Health Lab	Anchorage	Alaska State Public Health Laboratory	1	State
PCR	ThermoFisher7500	Research Lab	Anchorage	CDC Arctic Investigations Program	1	Federal
PCR	Abbott ID Now	Clinic	Anchorage	First Care Huffman	1	Private
PCR	Cepheid GeneXpert	Clinic	Anchorage	Independence Park Medical Services	1	Private
PCR	Cepheid GeneXpert	Hospital	Anchorage	JBER Hospital Lab	1	Military
PCR	Biofire	Hospital	Anchorage	JBER Hospital Lab	1	Military
PCR	Abbott ID Now	Clinic	Anchorage	Medical Park Family Care	5	Private
PCR	Cepheid GeneXpert	Clinic	Anchorage	Medical Park Family Care	3	Private
PCR	Biofire	Clinic	Anchorage	Medical Park Family Care	1	Private
PCR	Biofire	Hospital	Anchorage	Providence Alaska Medical Center	1	Private
PCR	Cepheid GeneXpert	Hospital	Anchorage	Providence Alaska Medical Center	1	Private
PCR	Cepheid Infinity-High throughput	Hospital	Anchorage	Providence Alaska Medical Center	1	Private
PCR	Cepheid GeneXpert	Clinic	Anchorage	US HealthWorks Medical Group of Alaska	1	Private