

ELC ENHANCING DETECTION: AMERICAN SAMOA TESTING PLAN

2020 Overarching Jurisdictional SARS-COV-2 Testing Strategy

Jurisdiction:	American Samoa
Population Size:	55,519

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

American Samoa is the only territory of the United States south of the equator. American Samoa is a remote U.S territory consisting of five main islands and an estimated population of 55,000 people according to the 2010 US Census. The health services are provided by one acute care hospital of 150 beds and five (5) community health centers for outpatient/primary care services. The Lyndon B. Johnson Tropical Medical Center (LBJ) hospital is located on the main island of Tutuila where more than 95% of the population reside. The community health centers under the auspices of the local Department of Health have two (2) clinics on the outer islands and three (3) on the main island. With a Health Professional Shortage Area score of 25, American Samoa has limited health care providers and often require off island referrals for advance care. Due to its rural location, the burden of disease among its residents and local government lead to poor health outcomes. Currently, the main health issue is related to chronic diseases with an increase in the prevalence of obesity. This upsurge in obesity is associated with a number of conditions such as hypertension, cardiovascular disease, type II diabetes, arthritis, gout and various forms of cancer, conditions that have shown to increase risk of severe manifestation symptoms of COVID 19 and death.

Fortunately, American Samoa currently does NOT have any confirmed cases of COVID 19. As of July 10, 2020, a total of 968 individuals have been tested, and all have tested negative. Our Surveillance Office, charged with monitoring number of patients presenting at clinics with Influenza like illnesses and other acute respiratory conditions, reports a decline compared to previous two years. Furthermore, mortality data also indicates no spike of unexplained deaths due to respiratory conditions. On March 26, American Samoa closed its borders to passenger travel and focused our efforts on monitoring our population for any possible introduction of SARS-CoV-2 prior to closing our borders. After two months of enforcing community mitigation strategies (i.e, closure of public places such as schools, churches, public parks, theaters, etc), American Samoa still have no cases of COVID 19. Evidence from testing, data suggesting significantly less patients presenting at clinics with respiratory issues compared to previous years, and no unexplained deaths due to respiratory conditions, suggests no active transmission of SARS-CoV-2 in the Territory.

Prior to April 14, 2020 American Samoa did not have the capability to test for the virus locally. Samples had to be shipped to Hawaii State Lab or CDC Lab in Atlanta, and were subject to strict testing criteria. Furthermore, the average turnaround time for results was 7 to 14 days. This posed a challenge for surveillance and monitoring making quarantine and isolation response difficult. Support from FEMA, Office of Insular Affairs, CDC and the Pacific Islands Health Officers Association, made testing locally possible when we received two Abbott ID Now machine with test kits and swabs, and test kits for the GeneXpert machine in early April. This support saw the arrival of 2,986 tests (1,416 Abbott, 1570

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GeneXpert tests). Currently, only the American Samoa Department of Health (ASDOH) Lab is capable of testing for the virus locally.

Our testing strategy was developed according to these two testing platforms and number of tests available on island. Mainly, Symptomatic patients presenting with fever and sore throat, cough, shortness of breath, or influenza like illness were tested for SARS-CoV-2 infection using the Abbott ID Now machine in the beginning. GeneXpert machine was later used after test kits arrived. By this time, concerns surrounding the accuracy of the Abbott ID Now machine surfaced, prompting a changed in our testing strategy to test all symptomatic patients with the GeneXpert machine, while the Abbott ID Now is being used to test asymptomatic high-risk individuals. Though our borders are closed to passenger travel, cargo ships and aircrafts, medical evacuation flights, and chartered military flights are still permitted. Individuals entering the Territory through these means, with no COVID 19 test in the past 72 hours are considered high risk and are tested using the Abbott ID Now machine. Positive results via Abbott ID Now testing of asymptomatic individuals will be re-tested with the GeneXpert machine. Presumptive positive result via GeneXpert are sent to Hawaii State Lab for confirmatory testing.

With this strategy in place ASDOH lab is averaging 5 patients swabbed and tested for SARS-CoV-2 infection per day, or about 150 in a month's time. For asymptomatic individuals, we have tested 98 in the past month. At this current pace, ASDOH is testing about 240 individuals per month. Testing 2% of American Samoa's population, estimated at 55,519 during the 2010 US Census, would require testing of roughly 1,100 individuals per month. To reach this number, ASDOH plans to extend testing of asymptomatic individuals to our work force and the community. Community based testing will be based on established priority levels. First priority is given to first responders and healthcare workers. These are specific individuals identified by each Department, Agency, and Office with the highest risk of exposure as their work bring them into constant contact with people. There are roughly 500 to 600 individuals identified in this priority level. Second Priority will be given to the portion of the population 60 years and older. This age group has the highest prevalence of chronic diseases such as diabetes, heart disease, Chronic Kidney Disease, COPD, etc, and with highest risk of severe symptoms and death. According to the 2010 US Census there are about 5,987 individuals in this category. ASDOH also plan to include patients less than 60 years old with pre-existing conditions in this priority level. Third priority will be given to all children 5 years and younger. This population poses the highest risk of transmitting SARS-CoV-2 to the elderly population. Understanding the rate of transmission and distribution of the virus in this population will be crucial in protecting our elderly population. Furthermore, containing the virus early among this group will minimize their likely hood of developing acute inflammatory multisystem disorder as documented in the UK and US. There are about 1,864 children in this age group. The fourth priority will be given to the General population ages 6 – 59 years old. There is an estimated 35,565 in this age group.

To reach these population groups, communications with Dialysis centers, LBJ Hospital, ASDOH Home visiting programs, Elderly homes are established to maximize testing among this population. To reach portion of this population at home, ASDOH Home visiting program will work with the Office of Samoan

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Affairs to test individuals in the village level. Testing will also be made available at Well Baby and Prenatal clinics to capture pregnant women and children 5 years and younger. Since schools are currently suspended, reaching school aged children will be carried out by coordinating with Village and Church youth groups. Media campaigns with the local TV station, radio stations, bill boards, banners and social media will be used to inform the public of the community testing plan.

To conduct community-based testing, a minimum of 15,000 tests is needed. There are currently 2,754 tests on inventory, not enough to sustain testing of the recommended 2% of the population. LBJ Hospital is currently in the process of renovating their lab to house a newly purchased ABI 7500. LBJ have purchased 25,000 tests for the ABI 7500 machine and may be used to test the recommended 2% of the population.

Though we do not have local transmission of the virus, American Samoa is preparing for the event SARS-CoV-2 reaches the Territory. Once on island we expect the virus to spread rapidly because the island is densely populated. To monitor the spread of the virus, contacts of a confirmed case will be placed in Quarantine and tested for the virus. Data from the most recent Measles outbreak that ended March 9, 2020 suggests that each case will have an average of about 15 to 20 contacts in a week's time. Number of tests used to identify and contain the spread of COVID 19 will quickly increase with increase number of cases. If doubling of cases occurs every 2 to 3 days, according to recent data, we can anticipate testing up to 1200 in one month.

To reach individuals who may not have transportation to LBJ or our Community Health Centers, a hot line has been put in place for people to call if they have any symptoms. ASDOH EpiNet Teams, which consists of a Nurse, and Certified Nurse's Assistant (CNA), would then visit their home to assess and collect samples for testing, while following universal protocols for safety. During the assessment, the Nurse will consult the EpiNet Physician for guidance regarding isolation and quarantine protocols. There are currently 6 EpiNet Teams identified with 3 teams on stand-by status. ASDOH also plans to have testing sites at all 5 community health centers, which are strategically placed in rural communities for better access.

To date, all COVID-19 testing is housed and performed at the ASDOH Clinical Laboratory, Tafuna CHC. Plans have been proposed to expand testing services towards non-traditional laboratory sites e.g. air and sea ports, quarantine sites, CHC acute care facilities, POCs. Our testing algorithm to screen asymptomatic individuals will include the ChemBio DPP COVID-19 IgG/IgM system. If serological test results yield negative for both IgM/IgG, testing ends and results are reported to the requesting physician or EpiNet. If either antibody test is positive, testing will proceed with the ABBOTT ID NOW. A positive result of ID NOW will proceed to a confirmation with the GeneXpert Dx, after which either a presumptive positive or invalid result warrants a send-out of the same sample to Hawaii State Lab for further testing. For symptomatic PUI cases, serological and molecular samples will both be collected to test simultaneously for comparison and correlating. ASDOH Lab will recommend monthly meetings with the LBJ Lab team to facilitate an outline of goals and objectives, establish timelines and completion. Ongoing discussions must address sharing across and monitoring of testing supplies, reagent inventories and workforce - including any encountered issues or needs necessary for improvement and an ensured productive progress of the collaborative testing strategy.

We anticipated our borders opening to passenger travel in the coming months and are planning accordingly. However, for this to happen local capacity to fully quarantine or isolate 260 individuals in

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ASDOH sites is needed. In our travel advisory, passengers are required to get a negative COVID 19 test within 72 hours of the flight to Am. Samoa. However, many passengers will find it difficult to get tested when asymptomatic. For this reason, ASDOH plans to have tests available to test all individuals coming off these flights. Hawaiian Airlines maximum number of passengers is 280 per flight. To start with reopening our border, ASDOH is recommending 2 flights a month and possibly be testing 560 in this period. To support testing of passengers, ASDOH plans to purchase point of care rapid antibody tests for COVID 19. This will allow for quick results in order to make decisions on quarantine status of each passenger.

Following testing guidance offered by CDC, PIHOA RLC & USAPI we are currently looking into expanding our test strategies to include serological testing as initial screening procedures. We have begun the process of placing orders for a serological antibody rapid test of the ChemBio DPP COVID-19 IgM/IgG system. This additional rapid result testing will allow for more efficient monitoring and surveillance once border restrictions are lifted. Our BioFire Torch FilmArray is in ordering process. With the Biofire respiratory panel available soon, we should be able to rule out potential cross-reactive viral or bacterial agents. In addition to ruling out other respiratory viral/bacterial illnesses, we plan to continue restocking our QuickVue Influenza A+B, Strep A, and adding the RSV10 test to our menu. Serological tests are not yet included in our testing algorithm as test kits are very limited but is considered a major step in the screening process, once available. Serological testing platform would also be used to track and monitor the rate of virus transmission throughout the Territory. Following a similar sampling strategy to assess the coverage of our recent Mass Drug Administration to eliminate Lymphatic Filariasis in July 2019, rapid serological test for COVID 19 will be used survey the spread of the virus through the island chain. Approximately 900 tests would be needed conduct this survey.

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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*	150	500	500						1,150
Serology		700	700						1,400
TOTAL	150	1,200	1,200						

*Each jurisdiction is expected to expand testing to reach a minimum of 2% of the jurisdictional population.

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	Specific at-risk populations targeted (list all)
American Samoa Department of Health Lab	Public health lab		30	30	healthcare workers, symptomatic PUIs, elective surgery patients, healthcare workers, first responders, and travellers (in/out bound).
American Samoa Department of Health Lab	Public health lab		20	20	elderly

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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) American Samoa currently has only one Acute Care Hospital, LBJ Tropical Medical Center, and five Community Health Centers strategically located to serve population groups in rural village settings. To serve the population of Am. Samoa there are 2 labs on island, one at the LBJ Hospital, and a Am. Samoa Department of Health (ASDOH) Laboratory currently housed in one of the Community Health Centers. However, only the ASDOH Lab is being used for COVID 19- Tafuna Community Health Center. ASDOH is working to upgrade the lab capacity by expanding the physical space of the lab to facilitate testing in larger quantities. ASDOH is reassigning an entire building within the Tafuna Community Health Center for the lab work. ASDOH plans to renovate the building space to accommodate PCR molecular testing and rapid screening tests for infectious diseases including several test platforms e.g. ABI7500 Fast Dx, GeneXpert and BioFiore Torch FilmArray. Funds from this COVID19 award will be used to procure the ABI 7500, BioFire, and GeneXpert test machines. Prior to the availability of these test machines, ASDOH and LBJ Labs have to send samples to Laboratory in Hawaii or in the US Mainland for testing. Though grateful for the support, this avenue for testing takes a long time for results to return, delaying the availability of this crucial information to aid response activity. These laboratory upgrades will allow Am. Samoa to test locally with fast results, not only for COVID19 but other infectious diseases. Furthermore, ASDOH will hire 5 additional to support laboratory operations.

LBJ Hospital are also working to upgrade their lab to accommodate the ABI 7500 PCR machine. These upgrades include building a negative pressure room and ventilation systems to facilitate testing for SARS CoV-2. This renovation is set to be completed sometime in June. American Samoa LBJ is currently working with the Army Medical Lab (AML) to request training on testing for SARS CoV-2 using the ABI machines. ASDOH will work closely with LBJ Hospital to procure any further equipment/supplies to ensure testing can be sustained in time of an outbreak. Funds from this award will also be used to support LBJ Hospital testing as well. Once laboratories at LBJ and ASDOH are operation, diagnostic testing via high complexity lab will be possible in American Samoa.

B) To reach vulnerable and at risk populations, ASDOH plans to extend testing of asymptomatic individuals to our work force and the community. Community based testing will be based on established priority levels. First priority is given to first responders and healthcare workers. These are specific individuals identified by each Department, Agency, and Office with the highest risk of exposure as their work bring them into constant contact with people. There are roughly 500 to 600 individuals identified in this priority level. Second Priority will be given to the portion of the population 60 years and older. This age group has the highest prevalence of chronic diseases such as diabetes, heart disease, Chronic Kidney Disease, COPD, etc, and with highest risk of severe symptoms and death. According to the 2010 US Census there are about 5,987 individuals in this category. ASDOH also plan to include patients less than 60 years old with pre-existing conditions in this priority level. Third priority will be given to all children 5 years and younger. This population poses the highest risk of transmitting SARS-CoV-2 to the

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elderly population. Understanding the rate of transmission and distribution of the virus in this population will be crucial in protecting our elderly population. Furthermore, containing the virus early among this group will minimize their likely hood of developing acute inflammatory multisystem disorder as documented in the UK and US. There are about 1,864 children in this age group. The fourth priority will be given to the General population ages 6 – 59 years old. There is an estimated 35,565 in this age group. American Samoa is a small island with a tight nit community experiencing NO homelessness on island.

To reach these population groups, communications with Dialysis centers, LBJ Hospital, ASDOH Home visiting programs, Elderly homes are established to maximize testing among this population. To reach portion of this population at home, ASDOH Home visiting program will work with the Office of Samoan Affairs to test individuals in the village level. Testing will also be made available at Well Baby and Prenatal clinics to capture pregnant women and children 5 years and younger. Since schools are currently suspended, reaching school aged children will be carried out by coordinating with Village and Church youth groups. Media campaigns with the local TV station, radio stations, bill boards, banners and social medical will be used to inform the public of the community testing plan.

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Pockets of hard to reach population groups and minorities will be coordinated through the Office of Samoan Affairs, which is comprised of all Village Cheifs who have been assigned as Village mayors. These village mayors serve as a Liaison between villages and the American Samoan Government. To reach minority groups, ASDOH has a solid working relationship with Community Leader of various racial groups, i.e Chinese, Korea, Filipino, Tongan, Fijian, and Vietnamese communities. Testing will be coordinated through these leaders to reach their specific population groups, which comprises of about 7 - 8 % of the total population. Furthermore, there are is only one homecare facility (Hope House of American Samoa) for the infirm, disabled and elderly in Am. Samoa. Testing of health care workers for the facility is also part of the priorities listed previously. Residents of the Hope House will be tested for COVID19 in the event symptoms consistent with COVID19 are presented. Isolation and Quarantine protocols are also in place which calls for the testing of all residents if a PUI is identified at the Hope House facility.

C) Multiple strategies will be put into place to identify barriers. First, ASDOH will enhance collaboration with LBJ Lab to sustain partnering efforts as we aim to upscale testing capabilities and join workforces to accomodate an imminent increase in testing demands. This will be done by establish a laboratory working group consisting of both LBJ and DOH management/testing staff to address 1) goals, objectives, and timelines 2) local/off-island vendor options, 3) the procurement processes of test equipment and

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supplies, and 4) increasing test methods and supplies (ChemBio DPP IgM/IgM rapid tests). These meetings will be held on a monthly basis. Second, ASDOH will be involved in weekly meetings with local government and external partners to determine the challenges facing the response. Third, ASDOH will work with local partners to simulate drills focused on SARS CoV2 scenarios on a monthly basis to determine strengths and weaknesses of the response.

D) Following testing guidance offered by CDC, PIHOA RLC & USAPI ASDOH is currently looking into expanding our test strategies to include serological testing as initial screening procedures. We have begun the process of placing orders for a serological antibody rapid test of the ChemBio DPP COVID-19 IgM/IgG system. This additional rapid result testing will allow for more efficient monitoring and surveillance once border restrictions are lifted. Serological testing will mainly be used for surveillance purposes to determine rate of transmission of the virus once it hits our shores. Serological testing will also be used to screen passengers arriving with no evidence of COVID 19 test prior to boarding a flight or vessel, when borders open up again.

Strategy is as follows: 1) Develop and implement testing algorithms to include serology testing performed in parallel with PCR confirmation to compliment initial screening tests. 2) Provide accessibility for serology testing in all testing facilities, alternate and retail test sites, dispensaries, quarantine facilities, and ports of entry (Air and Sea) for convenience. 3) Ensure adequate testing supplies (test kits, lab consumables) for the use of EpiNet teams (Case Investigators/Contact Tracers) to conduct surveillance and monitoring of asymptomatic individuals and seroprevalence monitoring. 4) Distribute and monitor sharing of test kits and supplies for increased disease surveillance.

E) Under the umbrella of ASDOH, are the Community Health Centers (CHCs) of American Samoa. There are a total of 5 CHCs strategically located to provide access to healthcare for individuals living in rural villages. Because of the current response to COVID 19, two of the CHCs on the main island of Tutuila are currently closed as personnel have been re-assigned. Extra staff hired through funding made available will allow ASDOH to reopen these CHCs where testing will be made available in all Districts of American Samoa, 3 in Tutuila and 2 in Manu'a. Having tests available in all districts will allow for testing while adhering to social distancing policies in place by minimizing the number of people gathering in one place to get tested. These sites will also serve as sentinel sites for surveillance in these districts.

For our vulnerable populations, coordination with the Office of Samoan Affairs and Territorial Administration on Aging will be crucial. ASDOH EpiNet teams will work with these entities to identify pockets in the community where these individuals live. EpiNet teams will identify and schedule home visitations to assess for symptoms and possible collect samples for testing. Community Health Centers will also be screening and testing patients with chronic conditions such as diabetes, heart disease, hypertension, etc.

AS ASDOH and LBJ Hospital moves to improve their Laboratory facility to be able to test for COVID19, testing capacity will be expanded out to the 5 Community Health Centers in Am. Samoa. These 5 Community Health Centers will serve as sentile surveillance sites where staff and swabs will be made

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available to collect samples from symptomatic individuals. These sites will also provide education and educational materials about COVID19 through outreach campaigns. In the event that SARS-COV-2 is transmitted locally, village quarantine policies will be put in place with these Community Health Centers serving as the main area for sample collection and testing.

F) The local hiring process involves three departments within the American Samoa Government- ASDOH, AS Budget Office (ASBO), and AS Department of Human Resources (ASDHR). The emergency onboarding process is as follows: ASDOH generates Form 35 entailing the position description, time frame, and responsibilities. ASDHR drafts contracts based upon the Form 35 and requests budget approval from ASBO. Immediately after the approval from ASBO, ASDHR will notify applicants that they have been approved for hire. Following the notification, hirees will undergo normal clearance process- drug testing and medical clearance.

The normal hiring process takes a minimum of four to eight weeks weeks. ASDOH will expedite the hiring process through the emergency hire route which takes a minimum of three weeks at best. The emergency route excludes the interview and advertisement required in the normal hiring process. ASDOH and ASDHR will pull potential hires from referrals and from existing pool of applications within ASDOH and ASDHR.

With regards to the procurement of equipment and supplies, ASDOH has worked previously with ASBO in expediting the order supplies needed for the measles outbreak in the last quarter of 2019. ASDOH will inform government partners involved in the procurement process to order supplies and equipment in a similar fashion to measles.

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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		8							8
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)	2	11							13

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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 swabs needed to meet planned testing levels ⁺⁺	1,000	3,000							4,000
Volume of additional media (VTM, MTM, saline, etc.) needed to meet planned testing levels ⁺⁺	1,000	3,000							4,000

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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)		30/day GeneXPert 30/day ABI 7500							
FOR SEROLOGIC TESTING									
Number of additional* equipment and devices to meet planned testing levels	0	2							2

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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	100/day ChemBio DPP COVID-19 IgM/IgG rapid test kits							

* 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.