COVID-19 Community Based Testing Guide

Project Baseline
by verily

NOTICE

The COVID-19 community-based testing program is a federally supported, state-directed program in collaboration with Verily's Project Baseline.

The testing guide below has been developed to align with guidelines provided by federal and state public health authorities. Parties adopting this guide should work with their clinical operations, environmental health and safety teams, and their state and local authorities to ensure compliance with relevant laws.

This guide includes clinical and operational input from Stanford Medicine, based on their testing protocols and experience addressing COVID-19.

DISCLAIMER

- This guide is provided in an effort to assist agencies in establishing "drive-through" COVID-19 sample collection and testing operations. However, each agency's needs or circumstances may differ from the assumptions behind the practices described in this guide, so we cannot and do not make any warranties or representations about them or anything else in this guide.
- The situation surrounding COVID-19 is evolving almost daily. Verily has endeavored to accurately describe information that may be helpful in connection with "drive-through" COVID-19 sample collection and testing operations as of the date this guide is made available, but does not have any duty to update this guide and does not take responsibility for any errors or inaccuracies.
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- Inclusion in the guide does not mean that Verily supports or recommends a specific treatment, drug, device, physician, test, institution or testing site.

CONTENTS

EXECUTIVE SUMMARY

The importance of testing for COVID-19

COVID-19 is continuing to spread through many communities at a high rate, with public health officials in the United States anticipating a significant increase in cases and mortality over the coming weeks and months. In fact, there are now confirmed cases in every U.S. state, as well as Washington, D.C. Health officials at the World Health Organization have issued an urgent plea for more testing in order to better understand transmission dynamics and inform appropriate public health actions.

The challenge

Based on the high frequency of cases of unknown origin, it is widely believed that mild and asymptomatic cases are prevalent and undocumented in the community (Li et al. 2020, Tian et al 2020). The mild manifestation in many individuals, coupled with the 5-14 day latent period during which individuals may be infectious but not yet manifesting symptoms (Lauer et al. 2020) and the shortage of diagnostic reagents (Politico, STAT), makes it more difficult to assess the extent to which SARS-CoV-2, the virus that causes COVID-19, may be circulating in the community. This is particularly problematic due to the high mortality rates in certain high-risk groups, such as the elderly and those with chronic health conditions (Wu et al. 2020, Zhou et al. 2020).

It is critical to expand efforts to understand the prevalence in the community in order to inform governmental policies that can have, and already have had, significant lifestyle, educational, political, and financial impacts to individuals and businesses (Wang et al. 2020, Politico), and, more broadly, to the global economy (Deloitte, Morningstar). Many efforts are underway to improve the availability of diagnostic reagents, personal protective equipment (PPE), and critical medical equipment for managing acutely ill patients; this guide focuses on scaling and focusing the available capacity to the individuals that are in most acute need of testing.

What is SARS-CoV-2?

SARS-CoV-2 is a betacoronavirus, from the same family as MERS-CoV and SARS-CoV; all three originate from bats (NIH - NIAID online guide on Coronaviruses; Rehnan *et al.* 2020). SARS-CoV-2 is the virus responsible for causing the disease known as COVID-19. The Centers for Disease Control and Prevention (CDC) has reported that the complete clinical picture of patients suffering from this disease is unknown, but it is likely that at least 16% of those infected experience severe illness. Widespread testing is needed to be more confident about these estimates.

Why should we test for SARS-CoV-2?

Testing for SARS-CoV-2 is important for the clinical care of potentially affected individuals. If a person has symptoms of upper respiratory infection, the treatment and recommended behavior may be different depending on whether it is COVID-19 or some other illness.

At the community level it can help inform the government, health systems, clinicians, and individuals about the level of infection among asymptomatic and mildly symptomatic individuals who aren't sick enough to be hospitalized. It's also important for nurses, police officers, and other critical workers who must deal with sick people and the general public so that they are able to continue their work without transmitting infection or self-isolate if they have COVID-19. Having this information informs the implementation of policies to limit further spreading.

Where to test?

Tests can be done in a hospital, a clinic, a community testing site, or, in the near future, through a home kit.

- **Hospitals** focus on significantly ill patients and health care workers. It is important to keep hospitals and emergency departments as free as possible to treat critically ill people.

- **Clinics** focus on people with other medical problems and it is important to avoid infecting people with other conditions.
- **Community testing sites** can provide professionally managed testing for mildly symptomatic or asymptomatic people, sample handling, and transport to laboratories that can analyze the results.
- **Home testing** is being developed but not yet approved by FDA. Samples need to be collected and handled appropriately to derive reliable results.

Why nasopharyngeal swab?

Many sample types have been used for testing for COVID-19 in clinical laboratories. Nasopharyngeal (NP) swabs, which are placed in the back of the person's nasal cavity, have been the most widely recommended because they test a location that is known to have large quantities of the SARS-CoV-2 virus. If the swab doesn't reach the back of the nasal cavity, the virus may not be detected, even if the person is symptomatic and infected.

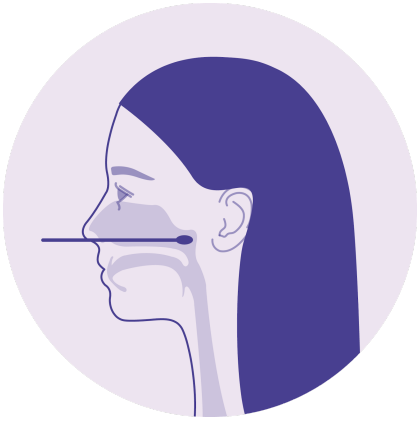

Figure 1. Nasopharyngeal swab placement

Although the Food and Drug Administration (FDA) still believes NP swabs are the preferred swab for SARS-CoV-2 testing, ***if NP swabs are not available*** the FDA recommends oropharyngeal, nasal, or mid-turbinate swabs ***for symptomatic*** patients. There is not enough information to support the use of any other swab location for asymptomatic participant testing. For the most updated information, visit FDA FAQ for SARS-CoV-2 testing.

What happens to the swab after the sample is collected?

1 — The swab is transported to the lab

After the swab has been collected by a medical professional, it is transported to a clinical laboratory. Some health institutions and hospitals have their laboratories onsite.

2 — The swab is processed

The sample is mixed with chemicals to isolate and then make many copies of specific regions of the viral genetic material through Polymerase Chain Reaction (PCR). If there is no virus in the sample, no copies are made.

3 — The sample is analyzed

A fluorescent molecule labels each copy of SARS-CoV-2 created by the PCR and the fluorescent light is detected by a specspecialized instrument.

4 — The results are shared back

Test results are reviewed and shared back to the participant. Positive results are shared back with the county and state public health departments. If the test is ordered by the person's clinician, test results are handled in a confidential relationship.

Figure 2. Sample analysis and return of test results

What can we conclude from these results?

Participants should consult a health care professional to consider what actions should be taken to manage health and prevent further spread of the virus depending on the results received from their test.

Depending on the exact test used and the degree to which proper technique is used in obtaining and transporting the sample to the clinical laboratory, the confidence of

accurately identifying infection status may be different. The participating physicians should understand the rate at which false positive or false negative results occur with the test in order to accurately communicate what types of precautions and actions participants should take after testing.

Why does it take so long to return testing results to participants?

Large clinical testing labs were approved to conduct COVID-19 diagnostic testing in February 2020 by the FDA. However, more and more individuals are now being tested, which is challenging lab testing capacity. New technologies are easing these pressures and allowing testing to increase at some of these test laboratories. Tests with shorter turnaround times are also coming on the market.

What can different tests reveal?

There are currently two methods to test for SARS-CoV-2: 1) detection and measurement of the virus that leads to COVID-19: RT-PCR, and 2) serological (or antibody) testing. RT-PCR looks for the presence of viral genetic material, while serological testing looks for the presence of antibodies the body has made against the virus. Each method has different applications and performance levels.

RT-PCR	Serology or antibody testing
The most popular technique to date, Real Time Polymerase Chain Reaction (RT PCR) has been widely used for acute diagnosis of COVID-19. It is usually performed in samples collected from the back of the throat, nose, and nasopharyngeal space and can detect over 90% of patients with COVID-19 if the sample is collected appropriately (Wang et al., 2020).	Antibodies are proteins found in the blood that recognize antigens such as bacteria, virus, and toxins, and help the immune system fight them. There are 5 subtypes of antibodies, known as immunoglobulins (Igs), that differ from each other in their abundance, localization, and ability to combat different antigens. Serology or antibody testing relies on detecting the patient's antibodies against the virus in blood,

	and therefore requires a blood draw. Serology testing is not currently used as the basis to diagnose SARS-CoV-2 infection or to inform infection status, and these tests are not currently eligible for Emergency Use Authorization by the FDA. For the most up to date information visit FDA FAQ for SARS-CoV-2 testing. A negative result does not rule out infection. A positive result, depending on the specific test, may be due to past or present infection with SARS-CoV-2 or non-SARS-CoV-2 coronavirus strains, such as coronavirus HKU1, NL63, OC43, or 229E. Serological testing will be useful to understand who has been exposed to the virus in the past, and who may have developed immunity.

COVID-19 Community-Based Testing Program

In collaboration with the California Governor's office, federal, state, and local public health authorities, the COVID-19 Community-Based Testing Program has been developed in collaboration with Project Baseline (hereafter referred to as "Baseline COVID-19 Program") in order to expand access to COVID-19 risk screening and testing in California.

The Baseline COVID-19 Program provides a software technology platform to triage people who are concerned about their COVID-19 risk for potential appointments at a community-based testing site. The technology platform includes:

1. **Implementing screening criteria** developed by the California Department of Public Health (CDPH) and based on CDC guidelines, to identify people eligible

for testing through this program. These criteria will change over time as the public health needs of COVID-19 response evolve, and may vary by state.

2. **Scheduling eligible participants for appointments** at community-based testing sites available in their area, based on test availability and site capacity
3. **Returning testing results** to the individuals, physicians, and government health officials whenever possible
4. **Directing to education and resources** to help people follow authoritative public health guidance around COVID-19

Program goals

The goals of the Baseline COVID-19 Program are to:

- Build a process that can dynamically prioritize millions of participants and determine who should receive testing, based on priorities defined by public health authorities
- Enable centralized screening criteria to avoid unintentional site-by-site variation (e.g., shifting from asymptomatic to symptomatic healthcare workers can happen quickly and centrally versus varying across sites)
- Avoid data entry time, data entry errors, and contamination risk at testing sites due to manual entry or paper-based processes
- Ensure orderly operations at testing sites through our scheduling process, avoiding lines or having to turning people away
- Expedite the testing process with high throughput and low wait times with digitally enabled process for lab integrations, avoiding the need for manually created requisitions and limiting data entry errors during lab processing
- Provide test results to participants as quickly as possible
- Provide educational guidance to participants to empower them to more actively manage their health

Guide structure

This COVID-19 Community-Based Testing Guide (hereafter referred to as “Guide”) is divided into two parts. The first part provides guidance on integrating with the Baseline COVID-19 technology platform (hereafter referred to as “Baseline platform”). The second part is lessons learned for operating COVID-19 community-based testing sites (hereafter referred to as “Site” or “Sites”).

“Part 1: Baseline platform integration requirements” provides:

- An overview of the Baseline platform
- Guidance on integrations required to operate a Site with the Baseline platform

“Part 2: Lessons learned and tips for Site operations” provides:

- An overview of Site operation workflows, which were developed by Verily based on experience setting up Sites in California communities and feedback from other partners operating sample collection and testing programs
- Guidance on how to set up and maintain Sites

For Sites not integrating with the Baseline platform, Part 2 can also serve as a stand-alone guide to standing up new Site operations.

The recommendations provided in this Guide can help communities develop Sites that easily plug into a nationwide program. By building on these documented processes, communities can scale quickly once they have strong support from their local government, local health departments, and law enforcement.

Part 1

Baseline Platform Integration Requirements

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Technology platform overview

The Baseline platform supports the operation of Sites through participant screening, scheduling, lab ordering and integration, label creation and printing support, and return of results (Figure 3). The Baseline platform also provides technical support and general education resources to participants. Site operators must contract with Verily to use the Baseline platform to support their operations.

Access to the Baseline platform will only be provided to staff of the contracted Site operator and will be linked to their unique business, organization, or government email address. Site operators are responsible for training their staff and for authorizing and revoking access to their data in the Baseline platform.

Technology platform flow

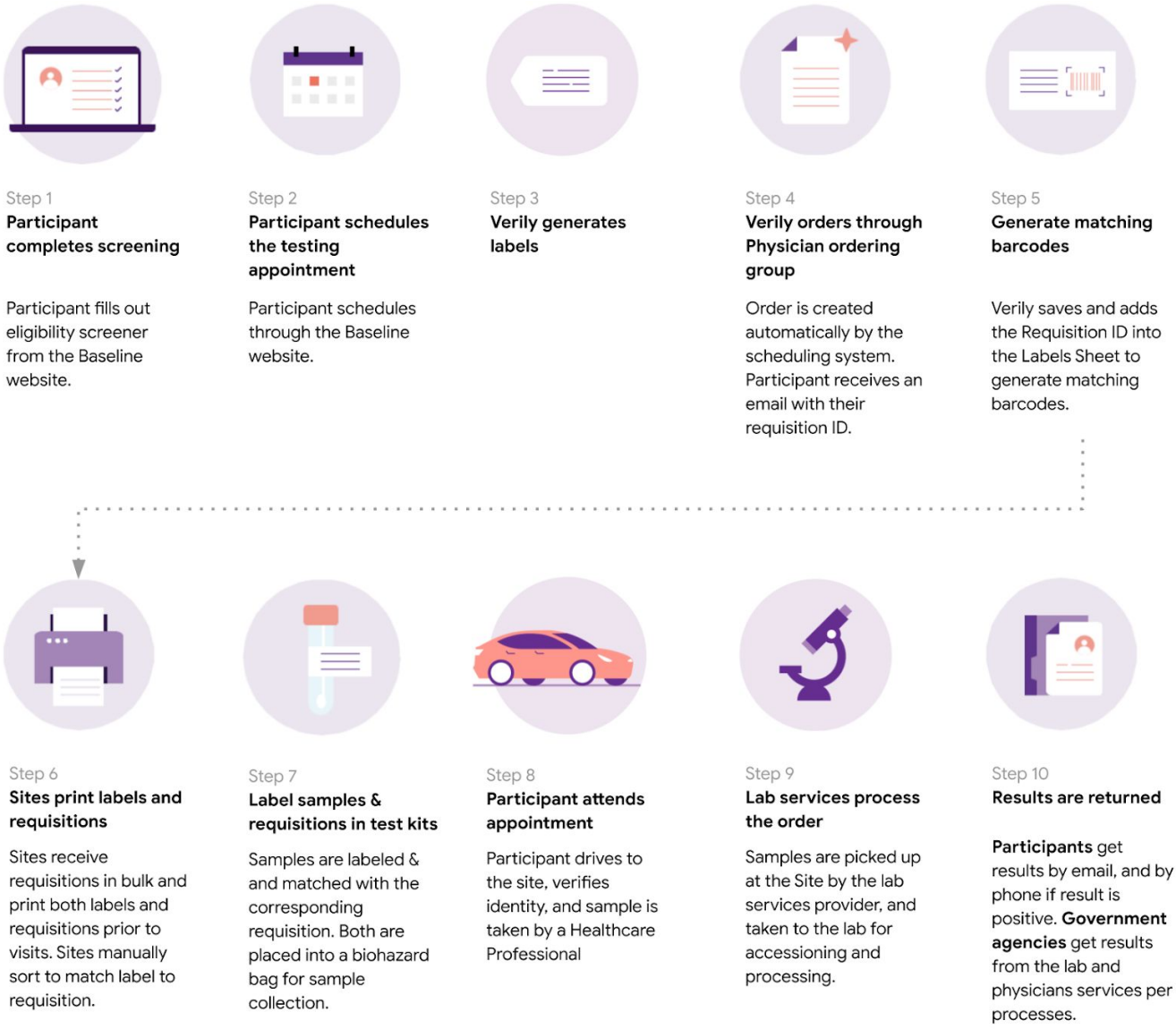

Figure 3. Baseline COVID-19 technology platform flow

Discovery and screening

The Baseline COVID-19 Program recruits and screens participants through the Project Baseline COVID-19 website (www.projectbaseline.com/covid-19), with key steps illustrated in Figure 4. This website provides information about the COVID-19 risk screening and testing program, as well as general information about COVID-19.

Participants qualify for testing if they meet risk criteria developed by health officials; eligibility will change as risk criteria evolve.

After qualification, the participant is invited to create an account for the Baseline COVID-19 Program using a Google Account. This account enables collecting the participant's answers to the screening survey, contacting them for scheduling, and delivering test results back. The data collected by Verily through the testing program will never be joined with the participant's data stored in Google products without their explicit permission.

Then, the participant reviews and signs an authorization form that provides detail about the sample that will be collected, and how the sample will be processed and shared.

After signing the authorization, the participant can take the COVID-19 Screener to determine whether they are eligible for in-person sample collection. The COVID-19 Screener asks for basic information about participants so that they can be identified at the Site, and uses screening criteria developed by the California Department of Public Health (CDPH) and based on CDC guidelines (which can be updated for use by other states based upon their guidelines).

The Baseline platform handles various non-qualifying and non-eligible outcomes due to location, age, need for immediate medical care, and more. Dashboards can be

made available to operators of Sites to show how participants come into and go through the enrollment process, including those who do not fulfill the eligibility criteria for being tested.

Step 1

Discover the COVID-19 Program

Participant can find out whether they qualify for testing **through the landing page and initial survey.**

Step 2

Complete screening

Participant finds out whether they are eligible for testing. This includes: **signing Authorization Form, completing screener and more.**

Step 3

Schedule appointment

Participant finds out about eligibility after Step 2. Eligible participant signs the lab consent and **schedules the onsite appointment.**

Step 4

Attend appointment

Participant drives to the testing site. Participant's identity is verified, and a Healthcare Professional labels the swab collection tube, and **takes sample from nose or throat.**

Step 5

Receive results

Participant receives an email directing them to check results.

Figure 4. Baseline COVID-19 Program Participant flow

Scheduling appointments

Participants who complete the COVID-19 Screener and are determined to be eligible for testing through this program are then offered one or more appointments at participating Sites. The Baseline platform completes scheduling for Sites to ensure that a Site's stated capacity isn't exceeded. Sites receive a daily list of scheduled appointments. If appointments are full, participants are told they are eligible, told that appointments are full, and asked to return later to check if more appointments have become available.

Once scheduled, participants receive an email with appointment details, requirements, and instructions. Participants can see their upcoming appointment after they sign in to their Baseline COVID-19 Program home page.

Every day, each Site must coordinate capacity with the Baseline COVID-19 Program. This must include the days the site is open, the daily hours of operation for the Site, and the number of samples the Site can collect per hour. This forecast can be adjusted on a daily basis.

Any changes in capacity should be communicated to the Baseline COVID-19 Program point of contact. The team is working to provide a mechanism for Sites to provide last-minute capacity updates.

Lab ordering and integration

Sites that use the Baseline platform are provided with a working solution for lab ordering through the integrations described here. Sites that don't use the Baseline platform will need to follow the appropriate steps to integrate with another lab provider and physician ordering network.

Label and printing integration

Every day, the Baseline platform generates a set of requisitions and sample labels that can be printed. Sites must integrate with the Baseline COVID-19 Program and support the IT requirements necessary to obtain and print these labels and requisitions as described in Part 2 of this Guide. Site operators must identify a Kit Assembly Lead to print labels each night and assemble test kits (containing a labelled sample and the lab requisition order) in preparation for the next day's scheduled appointments.

Resources

COVID-19 Requisition and Label Preparation

Return of results

Results are returned to health departments by the physician ordering group and lab services provider. The physician ordering group will call participants who receive positive test results, and all participants will receive an email directing them to a portal to check their test results.

Call center support for Sites

Each Site will have access to a call center from Verily to provide technical support during setup and operations, should Site staff need additional assistance.

Note: This call center support is reserved for Baseline-enabled Site staff, lab, and health care vendors only. Do not share with participants.

Resources

COVID-19 Requisition and Label Preparation

COVID-19 Drive-Through IT Details

COVID-19 Non-Clinical/Clinical Operational Supplies and IT Equipment

Part 2

Lessons Learned & Tips for Site Operations

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Site operations overview

This section provides operational recommendations for health care providers, government officials, public health departments, local communities, and labs to establish and operate new drive-through Sites.

This Guide is designed to allow communities to scale Sites quickly, once they have strong support from the local government, health departments, and law enforcement.

Example timeline of a Site launch

***Note**: Your Site timeline may vary. This is just an example.*

Day 0: Establish Site location, partnerships, and supplies

- ❏ Confirm partnerships and points of contact
- ❏ Choose location that meets all requirements (e.g., size, connectivity, security)
- ❏ Obtain appropriate clearances (e.g., municipality, county, state)
- ❏ Source and schedule equipment, supply, security, and staff (ongoing)

Day 1: Set up Site and conduct dry run

- ❏ Schedule participants for Day 2 (25% of Site capacity)
- ❏ Install connectivity and run print test for sample labels and signage
- ❏ Set up facility, Checkpoints, signage, and traffic control
- ❏ Train staff and execute a dry run

Day 2: Open to first participants

- ❏ Run at 25% capacity to identify areas for improvement
- ❏ Schedule next day participants (50% of Site capacity)
- ❏ Manage inventory and staff

Day 3: Ramp up to 50%

- ❏ Run at 50% capacity to identify areas for improvement
- ❏ Schedule next day participants (100% of Site capacity)
- ❏ Manage inventory and staff

Day 4+: Maintain steady state

- ❏ Run at 100% capacity
- ❏ Manage inventory and staff

Site checkpoint workflow

Checkpoint 1: Appointment Confirmation

Step 1

- Staff 1 holds sign “Keep Windows UP”. Vehicle entry is blocked with signs or cones

Step 2

- Staff 2 approaches vehicle with closed windows with sign “Do you have an appointment?”
- Staff 2 waves through participants with appointment confirmation paperwork or e-mail to Checkpoint 2, and redirects other traffic to an egress or appropriate vendor receiving location
- [Optional] Staff 2 confirms identity with participant list before waving through

Checkpoint 2: Participant Identity Verification

Step 3

- HCP 1 approaches vehicle with “Windows Up” sign
- HCP 1 asks for photo ID as well as confirmation email containing Reference ID
- HCP 1 confirms identity with participant list
- HCP 1 relays information to HCP 2 for recording
- HCP 1, with sticker or post-it, marks vehicle window on the side with the participant
- HCP 2 fills out time on participant specimen bag, confirms participant identity
- HCP 2 hands requisition form and labels in specimen bag to HCP 1
- HCP 1 places labeled specimen bag under windshield wiper on the side with the participant

Sample Station

Step 4

- Staff 3 slowly escorts vehicle (<5 miles per hour) to the designated open bay Volunteer should not stand directly in front of vehicle, but in front and to the side.
- HCP 3 staff member takes over and motions for vehicle to slowly pull forward
- HCP 4 retrieves specimen bag from windshield wiper
- HCP 3 explains to the participant what the swab is and where it will be placed

Step 5

- HCP 3 collects sample from participant
- HCP 4 places participant’s requisition in 1st compartment of specimen bag and holds bag open
- HCP 3 places contaminated specimen into the 2nd compartment of specimen bags
- HCP 3 stores sample in cold storage

Exit

- Staff 4 shows participant to exit
- Specimens remain in cold storage until pick up from Lab partner
- Lab partner processes sample
- Results are returned to participant and public health department

Figure 5. Baseline COVID-19 Site checkpoint workflow

Location selection

Choosing a good location will help ensure proper access, security, and operations for sample collection. Work with your local government partners to find and reserve an appropriate venue, such as a community center, exposition hall, fairground, stadium, parking garage, event center, park, or other recreational area.

Checklist for location requirements

- ❏ Access to electricity, WiFi connectivity, and cell service
- ❏ Possible to set up a single designated, controllable entry point for participant cars and a single designated, controllable exit point, with a clear and direct path for cars to travel between them
- ❏ Enough space for a dozen or more cars to wait between Checkpoints
- ❏ Enough space at each Checkpoint for cars to turn around before entering if needed (with exception of the last Checkpoint)
- ❏ Enough traffic control to efficiently direct cars into and away from Sample Stations, ideally with separated entry and exit points
- ❏ Enough space for one car to pass through each Sample Station
- ❏ Enough space to set up multiple Sample Stations far enough apart to adhere to social distancing guidelines and clinical protocols for sample collection
- ❏ Enough space to set up a command center (e.g. office, bus, or trailer) away from the Sample Station
- ❏ Well-ventilated, covered space or enough space for large tents to protect staff and participants from the elements
- ❏ Central location within the community that's easy to find and accessible by public transportation, highways, or ride-sharing apps
- ❏ Clean restrooms, handwash facilities, and rest area available to Site staff (not participants)
- ❏ Possible to set up a secure perimeter (e.g., fences, walls, traffic cones)

- ❏ Ability to secure supplies at Sample Stations overnight (ideally enough space to store seven days' worth of supplies if they are available)
- ❏ Ability to clearly delineate areas requiring PPE from "clean" zones, such as using yellow caution tape or barriers
- ❏ Arrangements for appropriate collection and removal of biohazardous waste, including PPE and collection supplies

Site organization

Expect to start organizing your Site two to four days before sample collection starts.

Teams and roles

The Site Lead (Incident Commander) should designate a Leadership Team, a Clinical Team, and an Operations Team. The leads for each team should assign roles within their team (Resource: 'COVID-19 Recommended Site Roles and Responsibilities').

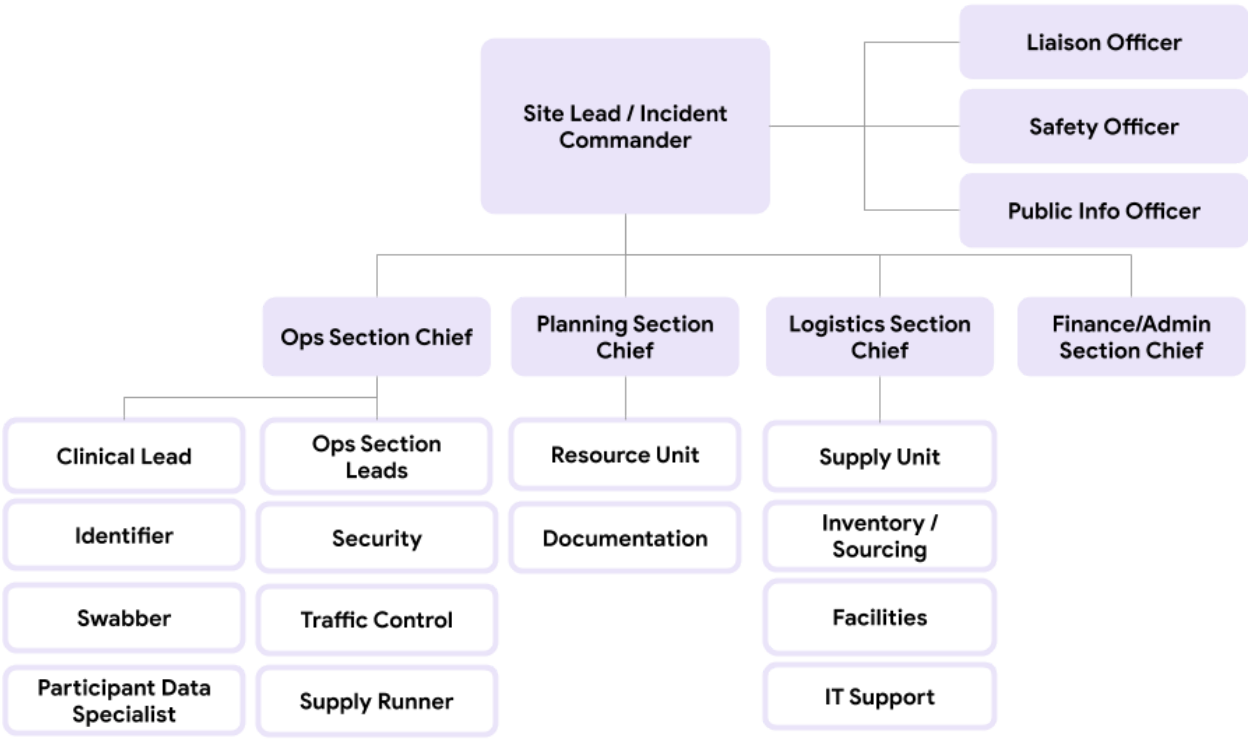

Figure 6. Recommended Site Roles and Organization

Resources

COVID-19 Recommended Site Roles and Responsibilities

Third-party vendors

Each Site will likely need a number of critical third-party support providers to successfully establish and maintain sampling, including:

1. An employer of health care providers to provide staff that will collect samples from participants
2. A lab services provider
3. A physician ordering group or standing orders from the county health director
4. Biohazardous waste management
5. Security during daily operations, traffic management, and overnight security if supplies or other equipment are kept onsite. Local law enforcement may provide some of these functions but other providers may be required.
6. [Optional] Supply chain manager
7. [Optional] Logistical communications (e.g., WiFi) management
8. [Optional] Comfort management (e.g., food services)
9. [Optional] Onsite foreign language translation services

Testing provider selection

These are some of the recommended considerations for finding a clinical test provider that matches your Site's requirements.

- ❏ Does the test provider's capacity for COVID-19 testing match your current and future plans for the number of patients tested?
- ❏ Does the type of test the test provider is running meet the sensitivity requirements you need for COVID-19 diagnosis?
- ❏ What kind of swab collection materials and practices are needed to work with the test? For example, what are the acceptable collection media, specimen collection tools (e.g., swabs), and specimen transport and storage conditions required for the test?

A selection of commercial laboratories that are able to perform RT-PCR are detailed below. Please note, we are providing the list below as a courtesy. We do not endorse or provide any guarantee in regards to the use of any of the commercial laboratories listed.

- Quest Diagnostics
- LabCorp

Site setup

Site safety considerations

Checklist for partnering with local officials

- ❑ If the Site is in a building, contact local fire services to review a plan for driving cars inside, including carbon monoxide management strategies
- ❑ Contact local police and county sheriff's office to coordinate sufficient law enforcement staffing onsite (plan four to six officers per day when staff are onsite, although this number may depend on site layout)
- ❑ Coordinate onsite visits with local responders and invite them to the daily briefing
- ❑ Coordinate with local EMS to be ready to respond to medical needs onsite
- ❑ Contact county and state Office of Emergency Services to ensure that they are aware of incident plans
- ❑ Include all local agencies in the daily dissemination of ICS 201 briefing (see Link: 'FEMA ICS 201: Incident Command System Form: Incident Briefing') for the previous day's operation
- ❑ Establish a communications plan in partnership with local officials and local health systems and providers

Link

FEMA ICS 201: Incident Command System Form: Incident Briefing
FEMA National Incident Management System (NIMS)

Site supplies and infrastructure

Securing the right supplies at the right quantity, and maintaining inventory while your Site is operational, is critical to making sure your Site runs safely and smoothly. The Resources for this section include important, detailed recommendations for:

- Clinical operations supplies, including PPE and testing kits
- IT equipment and infrastructure needs
- Physical Site setup
- Site supplies, such as tents, office equipment, and printed signs

Clinical operation supplies

The supply of PPE is dependent on local availability and demand, which may change over time. The Resource: 'COVID-19 Personal Protective Equipment' represents Project Baseline's best practices at the time of writing and will evolve with time. Your Site's Clinical Lead should determine how to best allocate PPE on a regular basis.

Sample collection supplies depend on the diagnostic test requirements and provider. Additionally, testing capacity and test types are evolving quickly. You should confirm appropriate collection supplies with your testing provider prior to ordering and the start of testing.

Resources

COVID-19 Non-Clinical/Clinical Operational Supplies and IT Equipment

COVID-19 Personal Protective Equipment

IT equipment and infrastructure needs

Reliable Internet access is essential to process participants in a timely and accurate manner. If your venue doesn't have existing IT infrastructure, or you can't contact the venue's tech team, you should reach out to a provider who can deploy Wi-Fi and physical connections, and potentially support daily tech operations. Consider having a backup tech plan as well.

Checklist for IT infrastructure planning (can be shared with your local provider)

- ❏ Active Internet service in place (100-150 Mbps) *or* ability to set up Wi-Fi
- ❏ Wi-Fi available at participant Checkpoints
- ❏ Patching infrastructure (e.g., network jacks and cables)
- ❏ Network support team (provided by Site venue or third-party vendor)
- ❏ Onsite tech support (provided by Site venue, third-party vendor, or your team)
- ❏ IT should support the printing of labels and requisitions (may need 2 printers)

Resources

COVID-19 Drive-Through IT Details

COVID-19 Requisition and Label Preparation

Signage

To ensure the safety of staff and participants, we recommend the use of clear, specific signage to communicate to participants where to drive, and what to do at each checkpoint. The COVID-19 Mobile Testing Site Signage Kit is meant to aid COVID-19 testing site organizers in setting up physical signage at their drive-through testing sites. The kit contains designs for posters and hand signs for use onsite as well as recommendations for how the signs should be used and where they can be printed.

Resources

COVID-19 Mobile Testing Site Signage Kit

Inventory maintenance

Every Site is different in its inventory capacity and limitations. Refer to your Clinical Team Lead to understand how to make your PPE supplies last.

All supplies should be counted and documented before sampling begins and should be updated on a regular basis, no fewer than three times every 24 hours. Inventory should be logged in a central document that is accessible by a central purchasing or logistics organization so that stocks can be replenished as needed.

Sites partnered with the Baseline COVID-19 program will be provided with a 'COVID-19 Supply Forecast Calculator' to use and update as needed.

Resources

COVID-19 Supply Forecast Calculator

Staffing needs and allocations

You can plan the number and type of onsite staff you'll need depending on the location of your Site and your expected capacity. Daily needs may change as the number of participants fluctuates. To help your Site regularly forecast your staffing and allocation needs, you can use the Resource: 'COVID-19 Staff Capacity Planning and Onsite Allocations.'

Resources

COVID-19 Staff Capacity Planning and Onsite Allocations

Incident Command System (ICS) Basics

Link

FEMA Incident Command System (ICS) Requirements

Site operations

During operation, the Site will require effective management of personnel, sampling kits, and supplies. The key components for a successful operation include:

- High integrity of sampling kits and associated requisitions
- Appropriate management of sensitive personally identifiable information (SPII)
- Appropriate training of staff who will have access to SPII
- Strict adherence to operating procedures and protocols
- Strict adherence to manufacturer and lab test requirements for supplies and collected specimens
- Efficient flow of participants for sampling
- Sufficient personnel, while avoiding overstaffing
- Focus on safety for both the physical site and staff, including health care workers

Information handling

During operation, sampling kits with SPII of the participants must be appropriately and securely managed and stored. Information must be verified by qualified health care professionals throughout the sampling process and when the sampling kits are collected for processing by your lab partner at the end of each day.

Efficiency

Sites are encouraged to complete the highest number of tests possible given personnel, process, and supply constraints. To increase capacity, Sites are encouraged to:

1. Have volunteer personnel track timing at and in between each Checkpoint, and to find ways to improve at the bottlenecks
2. Ensure efficient PPE consumption by matching Checkpoint and Sample Station capacity to anticipated demand

3. Ensure adequate relief personnel are available to enable staff to take breaks
4. Define and share a traffic flow map

Law enforcement and emergency response support

At the beginning of each day, the Site Lead or Liaison Officer should confirm that law enforcement (state, local, and/or county) are present onsite. Officers should work in pairs.

PPE requirements and usage

The safety of all members of the health care team is a top priority while operating Sites. Sites will need to navigate the rapidly evolving clinical and supply situations around COVID-19, sometimes requiring rapid adoption of new operating procedures and practices.

Resources

COVID-19 Participant Workflow

COVID-19 Personal Protective Equipment

COVID-19 Handling Clothes Post Shift

COVID-19 Requisition and Label Preparation

Clinical protocol

The Resource: 'COVID-19 Sample Collection and Transfer' describes steps for processing participants through nasopharyngeal swab collection at Sites, after which the swabs are sent to a clinical lab for COVID-19 testing. The collection process is dependent on the test type and testing provider. Before implementing the collection protocol and training the staff, confirm that it is consistent with the requirements of the testing provider you will be using.

Integrity of requisitions

To ensure the integrity of requisitions, the Site Clinical Team should ensure that orders and sample labels are:

- ❏ Printed on a daily basis and added to sampling kits
- ❏ Matched to the Site appointment schedule for the day
- ❏ Verified during the sampling process
- ❏ Confirmed prior to transferring to local lab partner at the end of the day

Protocol adherence

The Resource: 'COVID-19 Sample Collection and Transfer' and the Resource: 'COVID-19 Medical Biohazard Waste Instruction' should be adapted to meet the requirements of the Site.

Resources

COVID-19 Sample Collection and Transfer

COVID-19 Medical Biohazard Waste Instruction

Project Baseline Specimen Log

Clinical training

Site Clinical Teams should be trained per the Resource: 'COVID-19 Clinical Training for Drive-Through Testing Sites.' Sites may adapt training per your needs and workflows, but daily training and acknowledgement of training (e.g., Resource: 'Project Baseline Training Log) by the Clinical Lead is essential.

Clinical workflows

The Clinical Team should review all referenced procedures before coming onsite. The Clinical Team Lead will provide onsite training on safety and universal precautions, appropriate use of PPE, and workflow operations.

The Clinical Team Lead, Operations Chief, or Incident Commander may halt operations at any time to ensure safety, security, or sample integrity. Other staff should report concerns to the Clinical Team Lead or the Incident Commander.

Useful training video

Technique for don/doff of personal protective equipment

Resources

COVID-19 Clinical Training for Drive-Through Testing Sites

Project Baseline Training Log