Guide to Community-based COVID-19 Vaccination Operations

Lessons and Insights from the Ground

CORE
Community Organized Relief Effort

Partners In Health

March 2021

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Community Organized Relief Effort

www.coreresponse.org

Partners In Health

www.pih.org

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In Los Angeles: City of Los Angeles, Los Angeles Fire Department, Los Angeles County Department of Public Health, Carbon Health, USC School of Pharmacy, Curative, World Central Kitchen, All Hands and Hearts, Herald Christian Health Center, and our many other critical community partners.

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We would also like to thank our dedicated staff and volunteers across the country who have worked tirelessly on the frontlines serving their communities.

Finally, we would like to express our gratitude to our fellow citizens, who have made many sacrifices large and small throughout the pandemic and have done their part to protect each other by masking, social distancing, getting tested, and getting vaccinated. We will get through this together!

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Introduction

This manual is intended to provide real-world guidance to organizations, agencies, and individuals involved, or planning to become involved, in community-based vaccination efforts. The following sections of this guide detail the essential components and considerations necessary to establish and operate vaccination sites in partnership with community stakeholders, and with an eye on equity, access, and cost-effectiveness. This manual can be used in conjunction with other available resources, including the FEMA Community Vaccination Centers Playbook, or as a standalone document.

CORE and Partners In Health (PIH) developed this manual based on lessons learned from CORE's experience operating community COVID-19 vaccination sites in Los Angeles and Atlanta since December 2020 and community testing sites around the country since March 2020, as well as PIH's long-standing global experience strengthening community health and promoting health equity and growing work in the United States, accelerated with the launch of the U.S. Public Health Accompaniment Unit in April 2020.

With the goal of making this guide as accessible and useful as possible, we have organized the content into the following sections:

1. Community vaccination models and examples of each model type from CORE's current vaccination sites
2. Detailed descriptions of recommended staffing, responsibilities, supplies and equipment, and layout for each station at a community vaccination site
3. Guidance and considerations for cross-cutting operational components (i.e., community engagement and outreach, site requirements, staffing, resource coordination and support, information systems and data management, safety, and partner coordination)

As part of this guide, we provide experience-informed recommendations for site operations, as well as operational details from the following vaccination sites as illustrative examples:

- Mobile units throughout Los Angeles (capacity: 300 vaccinations/6-hour day)
- Lincoln Park walk-up site (capacity: 1,300-2,300 vaccinations/8-hour day)
- Dodger Stadium mass drive-through site (capacity: 12,000 vaccinations/12-hour day)

We recognize that there is no "one size fits all" vaccination site model. Reaching the communities most affected by COVID-19 for vaccination requires deliberate attention to address long-standing structural inequities. Solutions will require active community engagement and leadership, thoughtful site selection and inclusive operations, and leveraging opportunities to strengthen long-term health care systems, including addressing health-related social needs through resource coordination. In fact, the most common vaccination models outside of clinical settings, such as mass drive-through sites, can exclude those who need more support to access information, technology, transportation, and ultimately, vaccines. Thus, we provide a menu of modalities for providing vaccination services to various communities with diverse needs and differing local circumstances, and anticipate that users will adapt these options to their local context to support an expedient, efficient and equitable vaccination program.

Community Vaccination Models

Mobile Vaccination Sites

Mobile vaccination sites should be established where healthcare/pharmacy infrastructure is limited or absent, and community feedback indicates a vaccination site would be beneficial based on the logistical (e.g., transportation) and social needs (e.g., grocery store or foodbank) of the community. Community-based organizations, faith-based organizations, and local businesses are best positioned to lead in determining the location and hours of mobile sites and coordinating with medical provider partners and operations organizations.

Communities disproportionately vulnerable to COVID-19 exposure and severe outcomes are also more likely to contain essential workers, have less access to healthcare, and experience higher rates of comorbidities—emphasizing the need to co-locate vaccination opportunities in proximity to employers of essential workers, like grocery stores, and alongside other health and social support, as well as provide additional outreach.

Small, highly nimble mobile vaccination units can also be used to provide in-home vaccinations to home-bound individuals. These in-home units can operate effectively and safely with just one vaccinator, one documenter, and one paramedic who stays in the vicinity to manage the vaccine stock and provide emergency medical care if needed.

BENEFITS

- Brings vaccination services closer to communities in need (especially those who may not be able to, or may not feel comfortable accessing mass vaccination or other vaccination sites outside of their community)
- Leverages existing community resources and networks
- Within the context of variable vaccine supply, smaller mobile units can efficiently distribute smaller numbers of doses where most needed, preventing resource waste

TIP FROM THE FIELD

Mobile vaccination units can be highly effective at reaching underserved communities.

In Los Angeles, 78% of the patients who booked appointments at our mobile sites were people of color and 41% were of Hispanic origin.

We use the following approaches to reach these communities:

1. **Targeted outreach** through trusted community partners (such as churches)
2. **Pre-registration** through community partners
3. **On-site registration** and
4. **Strategic placement** of mobile sites in collaboration with community partners

SITES

- Parking lots of community and faith-based organizations, community centers, parks, schools, senior housing developments, and shopping centers in areas disproportionately vulnerable to COVID-19. Indoor sites can also be considered with sufficient ventilation and space for distancing with mask adherence.
- Sites should be easily accessible by public transit, and ideally available for operations outside of business hours.
- Prioritize and select sites by identifying coverage gaps. With community and government stakeholders, locate and map existing vaccination infrastructure, and layer vulnerability (CCVI or SVI), population distribution and density to visualize and determine tentative locations. Discuss and refine decisions after collecting feedback from the community.

Mobile Site Example:

Mobile Vaccination Units in Los Angeles

CAPACITY: Approximately 300 vaccinations per 6-hour day, per mobile unit

OPERATING HOURS

- Open to the public: 9 a.m. - 3 p.m.
- Staff hours: 8 a.m. - 4 p.m.

PARTNERS

- **CORE:** Support site selection. Operational staff and manage non-clinical operations (overall flow, pre-check/arrival, check-in/registration, and monitoring). Site supplies and equipment (e.g., tablets, computers, safety vests). Community mobilization and liaising with local community partners.
- **Los Angeles Fire Department (LAFD):** Clinical staff (EMTs) and manage vaccine supply, draw doses, administer injections, and respond to adverse reactions. Site supplies and equipment (e.g., trailers/vans, tables and chairs, tents, cones).
- **Carbon Health:** Software for registration, vaccination recording, and reporting.
- **City of Los Angeles:** Vaccines and coordination with community organizations to notify community members of site location and time. LAPD officers for security.
- **Community organizations:** Notify community members of site location and time.

STAFFING: Total staff: 12-20

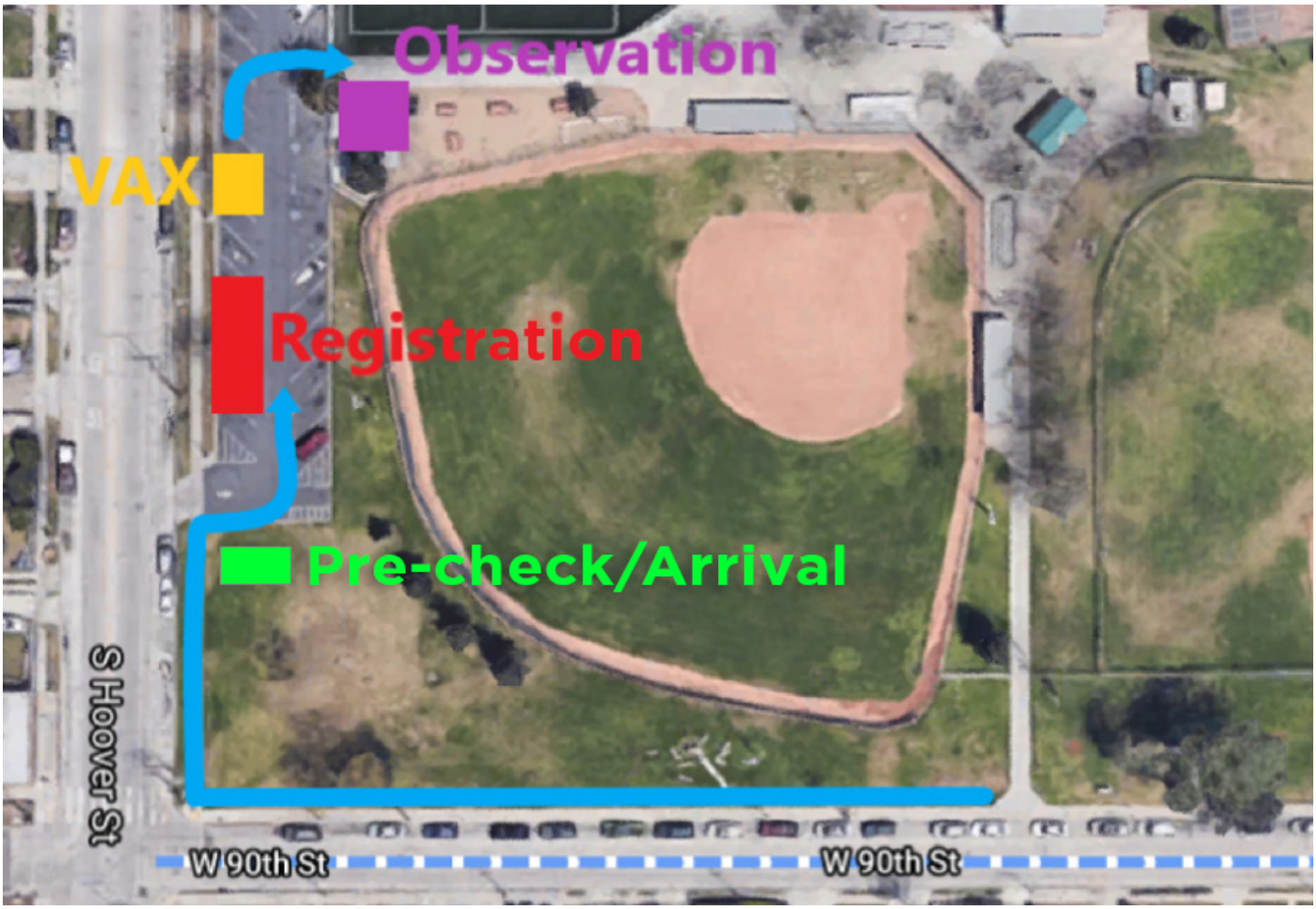
Clinical Staff	Non-Clinical Staff
Clinical/Vaccine Manager: 1	Site Manager: 1
Vaccine Drawers: 1-2	Greeters: 1-2
Vaccinator: 2-4	Check-in Documenters: 3-4
	Monitors: 2-4
	Security Officers: 1-2

Mobile vaccination site in Los Angeles, California, January 2021

SITE ORGANIZATION

Our mobile sites are set up in locations such as public parks and shopping center parking lots. Unlike other vaccination sites, mobile sites must be fully set up and taken down every day. However, the organization of a mobile site is quite straightforward. As seen in the photos below, the pre-check/arrival, registration, vaccination, and monitoring/observation stations can be arranged as needed, depending on the location.

At our outdoor mobile sites, the vaccines are stored and prepared in a van or trailer. Some trailers also include space to set up 1-2 registration stations so that Documenters sit in the trailer and communicate with the patients through a window.



SITE OPERATIONAL FLOW

Like the site organization, the operational flow at a mobile vaccination site is quite simple. Patients pass through each station—pre-check/arrival, registration, vaccination, and monitoring—as traffic and capacity allow. Each of these stations, in addition to the vaccine preparation station, are described in detail in the section *Site Station Operations* on page 13.

Pre-check at mobile sites providing both vaccination and testing

Mobile site trailer for vaccine storage and prep

Community Vaccination Models

Medium Walk-up Vaccination Sites

Medium walk-up sites leverage existing infrastructure to provide community members with centrally located vaccination access at familiar venues within communities. These sites can be set up at both non-clinical locations and existing clinics. Community-based clinical sites, such as Federally Qualified Health Centers (FQHCs), draw on established relationships and connections to reach patients and other vulnerable community members living in close proximity to their site, and to repurpose their facilities to increase their ability to deliver vaccines, depending on layout/ physical capacity. For example, CORE's operational support to a FQHC in Los Angeles County has increased the clinic's throughput from 300 to 800 vaccinations per day.

BENEFITS

- Brings vaccination services closer to communities in need
- Offers communities a consistent site that can serve many individuals at once
- Offers an option for individuals who cannot access sites that require a car
- Benefits those who already obtain medical care/ services from the community clinic (when operated in partnership with a community clinic) and builds on existing relationships and trust in those institutions
- Reduces access barriers for individuals who may not be able to, or may not feel comfortable accessing mass vaccination or other vaccination sites outside of their community
- Leverages existing community-based clinical infrastructure (when operated in partnership with a community clinic)

SITES

- School gyms, recreation centers, parks, shopping center parking lots, conference centers, and community clinics
- Locations that are easy to access for community members, with specific consideration for elderly and essential workers. ADA compliant, located near public transit or major roads.
- Prioritize and select sites by identifying coverage gaps. With community and government stakeholders, locate and map existing vaccination infrastructure, and layer vulnerability (CCVI or SVI), population distribution and density to visualize and determine tentative locations. Discuss and refine decisions after collecting feedback from the community.

Medium Walk-up Site Example:

Lincoln Park Walk-up Vaccination Site in Los Angeles

CAPACITY: 1,300-2,300 vaccinations per 8-hour day

OPERATING HOURS

- Open to the public: 8 a.m. - 3 p.m.
- Staff hours: 7:30 a.m. - 3:30 p.m.

PARTNERS

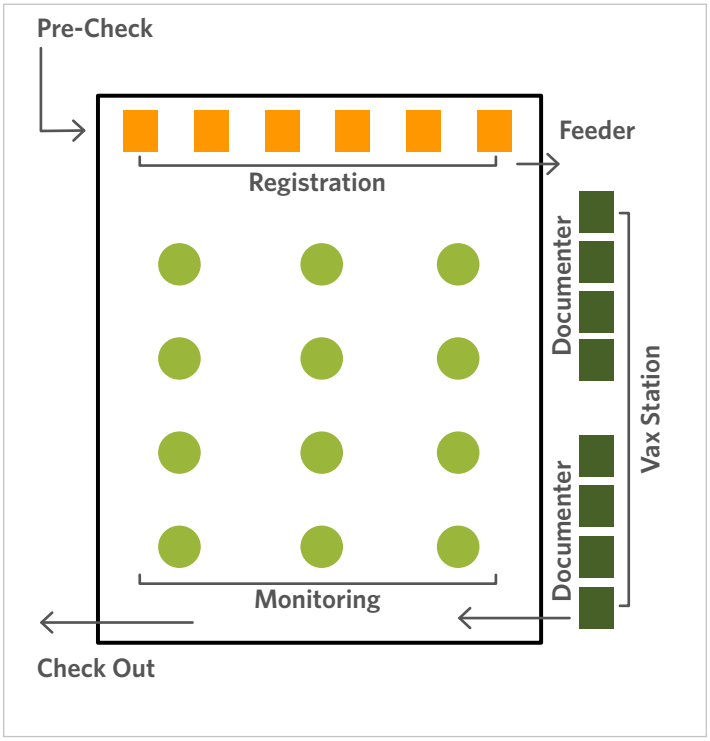
- **CORE:** Non-clinical staff and manage site operations (overall flow, pre-check/arrival, check-in/registration, vaccine documentation, and monitoring). Site supplies and equipment (e.g., tablets, computers, safety vests, etc.).
- **LAFD:** Clinical staff (EMTs) and manage vaccine supply, draw doses, administer injections, and respond to adverse reactions. Site supplies and equipment (e.g., trailers/vans, tables and chairs, tents, cones, etc.).
- **Carbon Health:** Software and tech support for registration, vaccination recording, and reporting.
- **City of Los Angeles:** Vaccines and coordinate with community organizations to notify community members of site location and time. Overall management of appointments and lead agency for the City of Los Angeles.
- **University of Southern California:** Clinicians and nursing students to administer the vaccine.

STAFFING: Total staff: 29-40

Clinical Staff	Non-Clinical Staff
Clinical/Vaccine Manager: 1	Site Manager: 1
Vaccine Drawers: 4	Greeters: 3-4
Vaccinators: 8-12	Check-in Documenters: 4-6
	Monitors: 2-4
	Feeders: 3-4
	Information System Assistant: 1
	Security Officers: 2-3

SITE ORGANIZATION

The Lincoln Park walk-up vaccination site is situated in a public park that includes a large, covered picnic shelter. The vaccination operations are centered around the picnic shelter, with patients coming through one end of the shelter to get registered, exiting back out to get an injection at one of the vaccination stations situated along the side of the shelter, coming back into the shelter to sit at a picnic table during the monitoring period, and then exiting the shelter at the opposite end from the initial entry.



SITE OPERATIONAL FLOW

The operational flow at the Lincoln Park walk-up site is very similar to the mobile sites but at a larger scale. To accommodate a larger volume of patients, Lincoln Park has more staff and tables for each station. In addition, Lincoln Park uses a slightly different model at the vaccination stations. Instead of only Vaccinators at the vaccination stations, 1 Documenter works with every 4 Vaccinators to confirm patient name, arm for vaccination, and start the monitoring timer in the information system. In addition, Feeders stand next to the registration station tables to feed patients into the 8-12 vaccination stations as they free up. These positions expedite the flow of patients through registration and vaccination. Each of these stations, in addition to the vaccine preparation station, are described in greater detail in the section *Site Station Operations* on page 13.

Community Vaccination Models

Mass Vaccination Sites

Mass vaccination sites are large sites that are centrally located in populous areas and able to vaccinate large numbers of individuals. Mass sites situated in large venues, such as stadium parking lots or convention centers, can provide up to 15,000 doses per day. Operations organizations and medical organizations must have significant planning and coordination capabilities, as well as reliable staffing/volunteer resources to ensure efficiency and effectiveness. While often established to provide vaccinations to those in vehicles via drive-through processes, accommodation should be made to ensure such sites (or nearby sites) also offer walk-up options and are linked with available public transit lines to ensure access for those who do not have a vehicle.

BENEFITS

- Vaccinate large volumes of individuals where community/municipality demand is very high and consistent

SITES

- Parking lots of stadiums, stadium grounds, fairgrounds, convention centers, and other large sites, ideally within walking distance or close to major public transit sources (for walk-up patient accessibility)

Mass drive-through vaccination site at Dodger Stadium, Los Angeles, California, December 2020

Mass Site Example:

Dodger Stadium Mass Drive-Through Vaccination Site in Los Angeles

CAPACITY: 12,000-15,000 vaccinations per 12-hour day

OPERATING HOURS

- Open to the public: 8 a.m. - 8 p.m.
- Staff hours: 6:30 a.m. - 9 p.m.

PARTNERS

- **CORE:** Non-clinical staff and manage site operations (overall flow, pre-check/arrival, check-in/registration, vaccine documentation, and monitoring). Site supplies and equipment (e.g., tablets, computers, safety vests).
- **LAFD:** Overall management of appointments and lead agency for the City of Los Angeles. Clinical staff (EMTs) and manage vaccine supply, draw doses, administer injections, and respond to adverse reactions. Site supplies and equipment (e.g., trailers, tables and chairs, tents, cones).
- **Carbon Health:** Software and technical support for registration, vaccination recording, and reporting. Clinical staff to administer injections.
- **Local universities:** Clinical staff and nursing students to support drawing of doses and injections.
- **Curative:** Clinical staff to support drawing of doses and injections.
- **City of Los Angeles:** Vaccine supply and advocate for increased supply. Determine opening and closing of sites and changes in site capacity. Financially support some equipment and logistical needs.
- **Community organizations:** World Central Kitchen donates meals for staff, volunteers, and patients. All Hands and Hearts provides long-term volunteers.

STAFFING: Total staff: 222-250 per shift

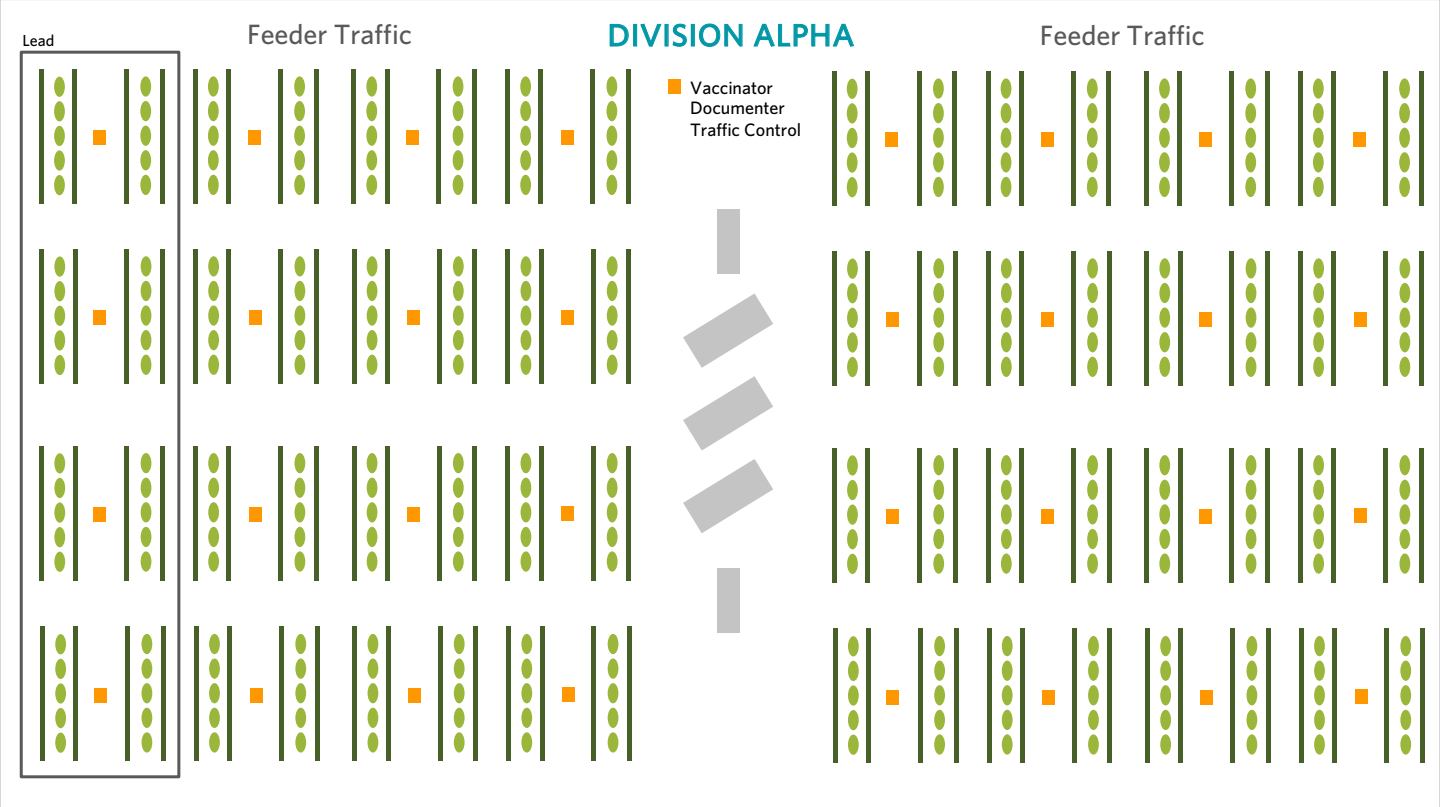
Clinical Staff	Non-Clinical Staff
Clinical Manager: 1	Site Manager: 1
Vaccine Managers: 3-6	Division Supervisors: 6 (2 per division)
Vaccine Drawers: 30-40	Runners: 12 (4 per division)
Vaccinators: 48 (16 per division)	Greeters: 10-13 (but can be fewer if not checking documents for eligibility)
	Documenters/Monitors: 48 (16 per division)
	Traffic Control: 30-40 (4 per division and throughout line)
	Leads: 12 (4 per division)
	Schedulers: 8 (2 per division and 2 to help oversee scheduling)
	Scribes: 6-8 (this number decreases throughout the day)
	Syringe assembly: 3
	Information System Assistants: 2
	Security Officers: 2

SITE ORGANIZATION

The mass drive-through site at Dodger Stadium is located in the parking lot. As seen in the photo below, the site is divided into three divisions. Each division functions as its own self-contained vaccination site, with the exception of the vaccine storage and drawing station.

Each division is organized around the vaccination carts that contain the vaccination supplies.

In each division, a team of 1 Vaccinator, 1 Documenter, and 1 Traffic Control works alongside each vaccination cart. Each vaccination cart team is able to serve one "pod" of patients in cars at a time. Each pod consists of 10 cars of patients. Each Lead supervises and supports 4 vaccination cart teams. Each division consists of 16 vaccination cart teams, for a total of 48 vaccination cart teams when Dodgers Stadium is operating at full capacity.



SITE OPERATIONAL FLOW

Pre-check/Arrival Station

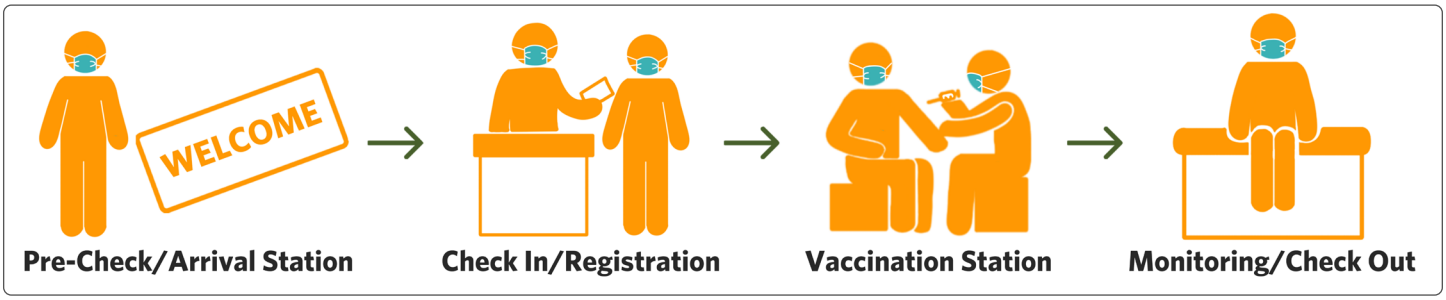
Greeters briefly confirm that each arriving patient has an appointment for that day, ask how many passengers in the car are getting vaccinated that day, and inquire whether the patient has a history of anaphylactic shock. Patients who have a history of allergic reactions are directed to the "medical" line. Greeters write the number of patients and dose number on the front windshields of the cars using washable window markers (e.g., 1SD = 1 patient, second dose). Greeters also flag the patients requiring a clinical consultation and/or a longer monitoring period by writing an "M" on the front windshield and/or affixing a small cone to the roof of the car. Traffic Control directs patients to divisions and specific pods, according to availability.

Check-In/Registration, Vaccination and Monitoring/Check Out Stations

Once a car has entered a pod, a Documenter pulls up their record on a tablet and completes the registration process for each patient in the car. The Vaccinator follows the Documenter and injects each registered patient. The patients then wait in their pod for their 15- or 30-minute monitoring period, while being observed by the Documenter, Vaccinator, and Traffic Control. Traffic Control releases the cars in the pods after the monitoring period has ended.

Site Station Operations

During their visit to a vaccination site, patients typically pass through the following stations: Pre-check/Arrival, Check-in/Registration, Vaccination, and Monitoring/Check-out. Additional areas at the site include: vaccine preparation station, staff break area, bathrooms, and a parking lot. The subsequent pages describe the roles and responsibilities, supplies and equipment, and layout options at each of these stations.



Additional Site Areas


Vaccine Prep Area


Restrooms

Parking

Staff Break Room

Pre-check/Arrival Station

At this station, patients are welcomed and screened for eligibility, and their appointment is confirmed. Following pre-check, patients are directed to the appropriate line or area to await check-in/registration.

ROLES AND RESPONSIBILITIES

GREETER

Qualifications

- Non-clinical
- HIPAA-trained
- Strong customer service (friendly and polite with patients)
- Representative of community where vaccination is taking place
- Bilingual, depending on site location
- Self-motivated and self-starter (jumps in to support all aspects of operations, including during slower periods)
- Has energy and stamina to stand for long periods of time, including in heat and poor weather conditions
- Computer literate (if using a tablet at this station)

Responsibilities

Greets individuals as they arrive and manages overall flow of patients at site, making sure that physical distance is maintained, and patients are directed to the next station when appropriate. Greeter also plays an important role in sharing important vaccine information, answering questions for patients with concerns, and explaining any wait times or delays.

Greeters should:

- Check that patient is eligible based on open tiers and confirm that patient has ID
- Confirm that patient has appointment
- Provide patient with appropriate vaccine information sheet/Emergency Use Authorization (EUA) fact sheet in the appropriate language
- Direct patient to check-in/registration station
- Maintain physical distance between patients

SECURITY OFFICER

Qualifications

- Non-clinical
- Security experience
- Representative of community where vaccination is taking place (ideally)
- Bilingual, depending on site location

Responsibilities

- Monitor security in line, as well as other stations throughout the site
- Address security issues as needed

SUPPLIES AND EQUIPMENT

- Signage (e.g., "Vaccination Line" poster, "COVID-19 Vaccination Site" banner)
- Safety vests for staff
- Printed lists or tablets with lists of pre-registered patients for the day
- Cones and flagging tape for lines
- Vaccine information sheet/Emergency Use Authorization fact sheets for all patients approved to proceed to check-in station
- Chairs for seniors and others in need of seating (socially distanced)
- PPE
- Wheelchairs for those who have trouble standing in line
- Hand sanitizer/handwashing stations
- Charging outlets
- Radios for communication
- Tents for patients and staff (if outdoors and needed due to weather conditions)

TIP FROM THE FIELD

Color-coded safety vests for staff are very helpful visual cues for patients looking for help and for supervisors monitoring the site.

STATION LAYOUT

- The pre-check station layout should allow for socially distanced, potentially long lines that minimize interference with pedestrian and vehicular traffic.
- Special accommodations should be made to bring patients with disabilities to the front of the line to move through as quickly and comfortably as possible. For example, greeters can direct patients with disabilities to an express lane that avoids the longer lines.

TIP FROM THE FIELD

Walk-up sites should include a parking area for non-ambulatory patients, including non-ambulatory patients brought by bus or van to the site. Staff can go directly to the patients' cars/bus to register, vaccinate, and monitor them in their vehicles.

Transporting low-income senior housing community patients to a mobile site in Los Angeles, California

Pre-check at mobile sites

Check-in/Registration Station

At check-in, patients are registered in the clinical registration system and provide consent to be vaccinated. This station is also where patients are screened for any medical conditions that may require clinician consultation and/or longer monitoring period, and where common or frequently asked questions can be answered. After check-in, patients are directed to an appropriate vaccination station. If patients need to register on-site, plan for additional staffing and time at this station to allow for correct entry of information, completion of consent forms, and answering patient questions.

ROLES AND RESPONSIBILITIES

CHECK-IN DOCUMENTERS

Qualifications

- Non-clinical
- HIPAA-trained
- Strong customer service (friendly and polite with patients)
- Strong verbal communication skills
- Attention to detail
- Experience with data entry
- Bilingual, depending on site location
- Representative of community where vaccination is taking place
- Computer literate

Responsibilities

Greets patients and invites them to sit down. Provides an overview of the check-in process and the patient information required, and begins asking the necessary medical and general questions for registration. Information provided by the patient is entered into the relevant fields of the registration system.

- Ask patient for name to locate record
- Ask patient to show ID
- Enter personal information if not already in registration system (*i.e.*, birthdate, address). Reassure patient of the need for specific information, and how information will be used and protected. In many communities, it is important to specifically note that patient information will not be shared with immigration authorities or other law enforcement.
- Request patient cell phone number. *Note: It is very important to get a cell phone number because some registration systems send information about the location and time of the second dose appointment by text. Individuals who only have landlines can provide a relative's cell phone number.*
- Ask patient to provide verbal consent to receive vaccine and ask for permission to electronically sign consent on screen on behalf of patient
- Confirm COVID-19 vaccine history (and manufacturer, if this is the second dose of a two-dose sequence)
- Conduct medical screening questionnaire and enter responses in registration system (includes questions about severe allergic reactions to other vaccines, food, animal, medications; vaccinations in last 14 days; COVID-19 positive in last 14 days; COVID-19 symptoms in last 14 days; immunocompromised; blood thinners)
- If patient's medical history requires a longer monitoring period, indicate this on their ticket (see *Tip from the field* on raffle tickets, page 17).

- Ask clinician to consult with patient if any uncertainty about patient's medical history
- Ask patient for demographic information (ethnicity and race), provide reassurance about the importance of this information, how it is used to help ensure all community members, regardless of race or ethnicity, have access to vaccines
- Ask patient in which arm they prefer to receive vaccine (may be asked at the vaccination station instead, depending on the site)
- Enter vaccine information (expiration date [current day]), lot number, administrator name, vaccine manufacturer)
- Direct patient to vaccination station queue

TIP FROM THE FIELD

Standard raffle tickets can be very useful and simple tools at community vaccination sites. The tickets can be used to:

- Visually show that a patient has been registered and is ready for vaccination
- Indicate which arm patient prefers for vaccination (check-in documenter can write "L" or "R" on ticket)
- Indicate whether patient needs clinician consultation and 15- or 30-minute monitoring period (check-in documenter can add post-it note to ticket if patient requires clinical consultation or longer monitoring period)

INFORMATION SYSTEM ASSISTANT

Qualifications

- Non-clinical
- HIPAA-trained
- Expertise in information systems and technology used at site

Responsibilities

- Monitors staff use of registration system, troubleshooting system issues as needed
- Train new staff and volunteers on the information system

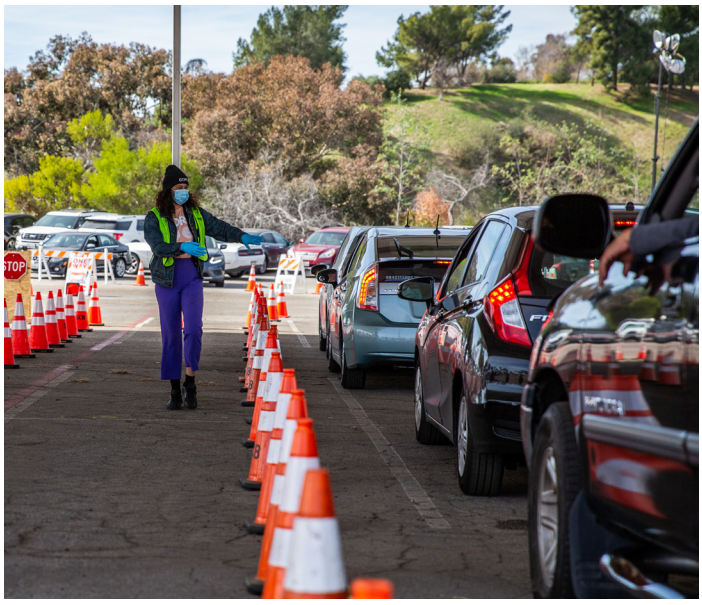
TRAFFIC CONTROL (for mass drive-through sites)

Qualifications

- Non-clinical
- Strong customer service (friendly and polite with patients)
- Strong verbal communication skills
- Bilingual, depending on site location
- Representative of community where vaccination is taking place
- Can be staff or volunteer

Responsibilities

- Manages flow of cars in coordination with Documenter and Vaccinator



FEEDER (for medium sites)

Qualifications

- Non-clinical
- Strong customer service (friendly and polite with patients)
- Strong verbal communication skills
- Bilingual, depending on site location
- Representative of community where vaccination is taking place
- Can be staff or volunteer

Responsibilities

- Directs patients from registration to open vaccination stations

SUPPLIES AND EQUIPMENT

- Signage (e.g., "Vaccination Check-in")
- Safety vests for staff, different colors for different levels of management
- Tablets or computers
- Mobile internet device (e.g., Verizon Jetpack)
- Tables
- Chairs (for staff and patients)
- Tents for patient line (if outdoor site)
- Tents for registration station (if outdoor site)
- Cones and flagging tape for lines
- Raffle tickets
- Post-it notes
- Pens
- PPE
- Hand sanitizer
- Sanitizing spray or wipes for pens/clipboards if using paper forms
- Masks for patients who do not have one

STATION LAYOUT

- Check-in tables should be spaced at least 6 feet apart to allow for sufficient social distancing
- Chairs should be placed on both sides of table - staff on one side, patients on the other side - and should be 6 feet apart from each other
- If using tent or cones, flagging tape can be tied around periphery to keep social distancing barrier between patients and staff
- At sites that accept patients with and without appointments, site managers can consider having two separate lines and check-in stations for each group because the pre-registered check-in process will be faster

Vaccine Preparation Station

The vaccine preparation station is used to store the vaccine, draw doses and prepare syringes, monitor vaccine temperature, and allocate pre-filled syringes and CDC COVID-19 Vaccination Record Cards to relevant staff. Staffing for vaccine prep may overlap with clinical staff who are eligible to vaccinate.

ROLES AND RESPONSIBILITIES

DRAWERS

Qualifications

- Clinical staff who are authorized by State Health law/regulation to draw doses (e.g., pharmacist, pharmacy technician). *Note: There may be revisions to those authorized to draw doses with recent emergency executive orders or legal changes.*
- In some jurisdictions, clinical students (e.g., nursing students, pharmacy students) may be permitted to draw doses under the supervision of a qualified clinician.

TIP FROM THE FIELD

Frontload drawing at beginning of day and then taper off to avoid drawing too much. For example, at a mobile site, draw 30-40 doses at the beginning of the day. Vaccine preparation can begin prior to site opening (e.g., 30-45 minutes prior to first appointment).

Responsibilities

- Draw vaccine doses in accordance with training and guidance from the following sources:
  - U.S. Food and Drug Administration (FDA) site on COVID-19 Vaccines: https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-vaccines
  - U.S. Centers for Disease Control and Prevention (CDC) site on U.S. COVID-19 Vaccine Product Information: https://www.cdc.gov/vaccines/covid-19/info-by-product/index.html

VACCINE MANAGERS

Qualifications

- Clinical staff who are authorized to ensure proper vaccine storage, handling, preparation, and inventory reporting

QUALITY ASSURANCE

Institute hourly operational stops to reconcile quantities (# vax out, # cards, # tickets, # vax on computer all should match). Stop registration for a few minutes to do this reconciliation. Reconcile every 1-1.5 hours.

Responsibilities

- Monitor and ensure proper storage, handling, and preparation of vaccines in accordance with training and guidance from the following sources:
  - U.S. Food and Drug Administration (FDA) site on COVID-19 Vaccines: https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-vaccines
  - U.S. Centers for Disease Control and Prevention (CDC) site on U.S. COVID-19 Vaccine Product Information: https://www.cdc.gov/vaccines/covid-19/info-by-product/index.html

SUPPLIES AND EQUIPMENT

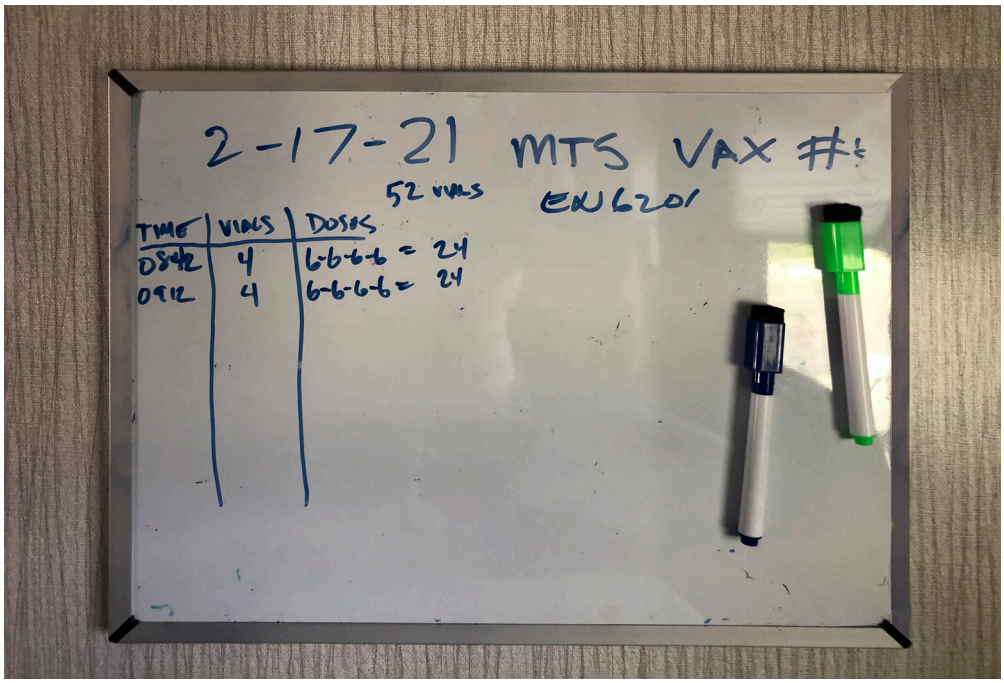
- Vaccine vials with ancillary supplies
- Additional syringes
- Reliable refrigeration for storing unopened vials
- Coolers and blue ice for transporting pre-filled syringes to vaccination stations
- Timers for monitoring thawed (and diluted, if required) vials
- Thermometer for monitoring room temperature or coolers
- White boards and markers for tracking status of thawed vaccines and number of drawn doses per vial
- Pen or pencil for recording date and time of dilution (if Pfizer)
- PPE
- Trailer or van for vaccine storage and drawing (if outdoor site)
- Laboratory or medical table covers

TIP FROM THE FIELD

On average, staff can draw 10 doses of Moderna in less than 8 minutes and mix and draw 5-6 doses of Pfizer vaccine in 6-8 minutes. These averages can be used to plan staffing and site throughputs.

TIP FROM THE FIELD

Match drawn doses with number of people. When low volume, wait for line to get up to 6 (Pfizer) or 10 (Moderna) people to make sure not overdrawing (not necessary when higher volume).



Vaccination drawing tracker at mobile site

STATION LAYOUT

Ideally inside for better security and regulation of vaccine temperature. Outside tents can be utilized with consideration of placement to minimize effects of weather (sun, wind, rain).

Vaccination Station

Patients receive their injection at the vaccination station. Some sites only provide injections at the vaccination station, while other sites combine registration, vaccination, and monitoring into one station.

ROLES AND RESPONSIBILITIES

VACCINATORS

Qualifications

- Clinical staff who are authorized by State Health law/regulation to administer intramuscular injections in their jurisdiction. *Note: There may be revisions to those authorized to vaccinate with recent emergency executive orders or legal changes.*
- Representative of community where vaccination is taking place

Responsibilities

- Greet patient and invite them to sit down
- Check patient ticket for preferred arm and designated monitoring period and confirm with patient
- Ask patient if they have any questions
- Administer vaccine in accordance with with training and guidance from the following sources:
  - U.S. Food and Drug Administration (FDA) site on COVID-19 Vaccines: https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-vaccines
  - U.S. Centers for Disease Control and Prevention (CDC) site on U.S. COVID-19 Vaccine Product Information: https://www.cdc.gov/vaccines/covid-19/info-by-product/index.html
- Direct patient to monitoring station
- Notify Clinical Manager when additional doses are needed

CLINICAL MANAGER

Qualifications

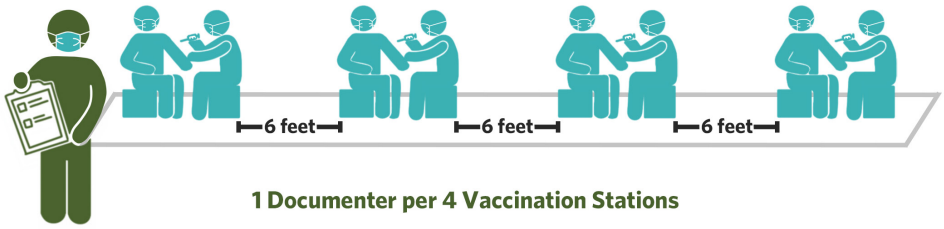
- Clinical staff who are authorized to administer intramuscular injections in their jurisdiction

Responsibilities

- Oversee vaccine administration
- Assume custody for vaccine and associated monitoring procedures
- Administer vaccine as needed
- Respond to adverse reactions to vaccine:
  - Consult with patient
  - Administer EpiPen, if needed
  - Request Advanced Cardiac Life Support, if needed

QUALITY ASSURANCE

At large sites, a simple digital ordering system (e.g., Google Forms and Sheets) can allow vaccinators to order vaccines from the vaccine preparation station as needed and then track fulfillment and receipt of these requests. In addition to creating a readily auditable chain of custody, this helps the team estimate usage in real time.



1 Documenter per 4 Vaccination Stations

DOCUMENTERS (for medium walk-up and mass drive-through sites)

Qualifications

- Non-clinical
- HIPAA-trained
- Strong customer service (friendly and polite with patients)
- Strong verbal communication skills
- Attention to detail
- Experience with data entry
- Bilingual, depending on site location
- Representative of community where vaccination is taking place

Responsibilities

Medium walk-up sites:

- Can include Documenters (e.g., 1 Documenter per 4 Vaccinators) who stand near vaccination tables and use tablets to confirm patient name, arm for vaccination, and start monitoring timer in the information system.

Mass drive-through sites:

- Vaccinators can be paired with Documenters who can walk from car to car registering patients before Vaccinators.

RUNNERS (for mass drive-through sites)

Qualifications

- Non-clinical
- Can be staff or volunteer

Responsibilities

- Bring coolers of pre-filled syringes and CDC cards to vaccination carts from vaccine preparation station.

SUPPLIES AND EQUIPMENT

- Pre-filled syringes
- Cooler
- Alcohol prep pads
- Bandages
- PPE
- Sanitizer
- Sharps disposal box
- Tablet (optional - see on next page in *Station Layout*)
- Emergency Anaphylaxis Kit (Epinephrine, Benadryl, IV Kit with 500cc of saline)
- Laboratory or medical table covers
- Medical waste bin
- Tables
- Supply carts (suggested for mass sites)
- Chairs for patients and staff

TIP FROM THE FIELD

Use of vaccine supply carts allows for simplified logistics at mass drive-through sites (see photos on following page).

Mobile and Medium Static Sites

- One table and two chairs per vaccinator
- Tables should be at least 6 feet apart

Drive-through Mass Sites

- Vaccinators can use carts stocked with all supplies that can be rolled from car to car
- As noted above, some sites combine registration, vaccination, and monitoring into one station. In this layout, patients go through these steps as a "pod" of several vehicles.

Vaccine supply carts and cooler with pre-filled syringes at mass drive-through site

TOP LEFT: Photo of documenter registering patients in cars as vaccinators follows to provide injection;
TOP RIGHT and BOTTOM: Vaccination stations at mobile sites

Monitoring Station/Waiting Area

Following vaccination, patients are observed and monitored for adverse reactions for at least 15 minutes. EMTs or clinicians are notified if the patient exhibits an adverse reaction. Patients are provided with CDC vaccination cards and instructed with regards to the information included on the card. Patients are checked out of the monitoring station when their observation period has concluded and all their questions have been answered.

If possible and resources are available, the waiting period is also a good opportunity to address health-related social needs for patients. Patients can be screened for food and/or housing insecurity, primary care and/or insurance needs, and directly connected to resources or have information about social resources provided. In some cases, food baskets and other resources may be made immediately available to take home.

ROLES AND RESPONSIBILITIES

MONITORS

Qualifications

- Non-clinical
- Strong customer service (friendly and polite with patients)
- Strong verbal communication skills
- Bilingual, depending on site location
- Representative of community where vaccination is taking place

Responsibilities

- Write vaccine information (or use printed labels) on CDC COVID-19 Vaccination Record Card ahead of time (may be done at registration instead)
- Ask patient for vaccination ticket
- Explain information on CDC vaccination card (especially vaccination type and date of second dose, where applicable) and instruct patient to write own name on card
- Double check phone number provided at registration is cell because second dose appointment information comes via text
- Instruct patient to wait in waiting area for 15 minutes or 30 minutes if their medical history requires a longer wait
- Encourage patient to sign up for v-safe, CDC's after vaccination health checker (https://www.cdc.gov/coronavirus/2019-ncov/vaccines/safety/vsafe.html)
- Observe patients to determine if anyone is experiencing an adverse reaction (per training on signs to look out for)
- Monitor list of names in system on tablet/computer with remaining waiting time
- When waiting time is up, go to patient, and ask how they are feeling
    - If patient is not feeling well, call over EMT/clinician
    - If patient is feeling fine, check out patient on tablet/computer (if selected information system has this feature) and tell patient they are free to go
- If system allows, confirm patient receives second dose scheduling text/email, and assist with second dose scheduling as needed

TIP FROM THE FIELD

Some information systems automatically text patients when their monitoring period is complete. This feature can be particularly helpful at medium to large walk-up sites.

SUPPLIES AND EQUIPMENT

- Signage (e.g., "Post Vaccination Waiting Area" and "Exit")
- Safety vests
- Tablets or computers
- Wi-fi puck
- Tables for staff
- Chairs (for staff and patients)
- Tents (if outdoor site)
- Cones and string for lines
- CDC COVID-19 Vaccination Record Cards
- Pens
- Box for tickets
- PPE
- Hand sanitizer
- Donated meals, food kits, or other resources (if available)

Volunteers preparing donated lunches from World Central Kitchen distributed at monitoring station of mobile site in LA.

STATION LAYOUT

- Monitoring station needs to be socially distanced seating area with sufficient shade, if outside
- Staff can be seated at a table but should also be circulating to monitor patients

Monitoring area at mobile site

Mass drive-through "pods" where documentation, vaccination and monitoring all takes place in one station

Staff Break Area

SUPPLIES AND EQUIPMENT

- Signage (e.g., "Staff Break Area")
- Tables
- Chairs
- Tent (if outdoor site)
- Hand sanitizer
- Restroom access or porta-potties

STATION LAYOUT

- Socially distanced
- Separate from patient flow
- Sufficient shade, if outside

Site Management

ROLES AND RESPONSIBILITIES

SITE MANAGER

Qualifications

- Non-clinical
- Experience managing a team
- Site operations experience preferred
- HIPAA trained
- Strong customer service (friendly and polite with patients)
- Representative of community where vaccination is taking place
- Bilingual, depending on site location
- Computer literacy

Responsibilities

- Provide oversight of full site operations
- Monitor all stations and provide support to staff as needed to ensure quality and efficiency
- Remain visible so staff can always request assistance
- Provide Greeter with timely direction on adjustments in patient flow necessary to match drawing speed, and supply talking points for communicating any updates with patients
- Address any questions a Greeter, Documenter, or Monitor is unable to answer for patients
- Understand the registration system well to support Documenters with registration issues
- Monitor supply of doses and communicate with Drawers and Vaccinators regularly to ensure sufficient supply of doses at each vaccination station
- Manage situations requiring de-escalation
- Respond to medical emergencies by calling over clinical staff and using radio to call emergency medical services, if needed

Cross-cutting Operational Components

Regardless of type and scale, all vaccination sites share the following operational components:

- Community engagement and outreach
- Site requirements and layout
- Staffing (hiring, staffing calculations, scheduling and assignments, and training)
- Resource coordination and support (as available)
- Information systems and data management
- Safety and security
- Partner coordination

Recommendations for these cross-cutting operational components are provided below, along with examples and considerations.

COMMUNITY ENGAGEMENT AND OUTREACH ACTIVITIES

Sustained engagement with communities prior to and during vaccine site operations helps generate demand for vaccinations via the provision and discussion of accurate, up-to-date information on vaccine efficacy, safety, and availability. Trusted messengers—specially trained clinical and non-clinical members from the community where vaccine sites are located—and diverse dissemination approaches (e.g., virtual town halls, radio spots, pamphlets positioned at FQHCs) help to ensure that community members are reached well in advance, and with the information necessary to schedule, attend vaccination appointments, and receive their allocated vaccination. Working with established, local organizations already involved in supporting medical, social, and economic needs of community members helps build trust in vaccination.

Engagement practices prior to vaccination site operations:

- Map community stakeholders and identify community- and faith-based organizations, and local businesses best positioned to inform the various aspects of vaccine outreach and vaccination site operations.
- Coordinate across community organizations to:
    - Identify populations most vulnerable to the effects of COVID-19 within the community
    - Identify centralized, easily accessible locations within the community to establish operations, drawing on multiple partners for resource coordination and support
    - Co-create outreach resources and dissemination strategies
    - Assign and delegate engagement with community members (trusted messenger trainings, communication campaigns, virtual town hall facilitation, etc.)
    - Share job descriptions and identify candidates for staffing vaccination sites (for all positions, at all levels)

Community outreach content development and dissemination:

- Media and other content (promotional flyers, social media posts, signage) are developed in partnership with community- and faith-based organizations, with iterations informed by community feedback
- Written, virtual and in-person outreach is multilingual, and based on the language preference of community members
- The trustworthiness of community partners and their communication channels helps amplify messaging and drives participation from select populations
- Ensure there are spaces for community members to ask questions in an open way, with the intent to strengthen knowledge about vaccination (rather than coerce or cajole into getting vaccinated)

Vaccination site engagement strategies and activities:

- All vaccination site operations require strategic, sustained community member engagement to ensure uptake of vaccine and efficient coverage of communities most vulnerable to COVID-19
- Working in advance of vaccination dates, community mobilizers should coordinate with local community organizations (CBOs, church groups, etc.) to drive registration by their constituents. Our data illustrates that this method is highly effective at reaching desired racial, ethnic or specific worker group sub-populations.
- To manage outreach and appointments for sites, implementers can establish a call center in collaboration with community partners, who may engage their volunteer network. When possible, the teams will pre-register individuals who have limited access to online scheduling options. This type of telephonic outreach is particularly effective in increasing vaccination of older populations in low-income communities.

Maria Plata, Lead Health Promoter for Southwest Florida with Healthcare Network (left) gives a set of masks to a resident while doing door-to-door COVID-19 education canvassing in in Immokalee, FL in December 2020. (Photo by Scott McIntyre / PIH)

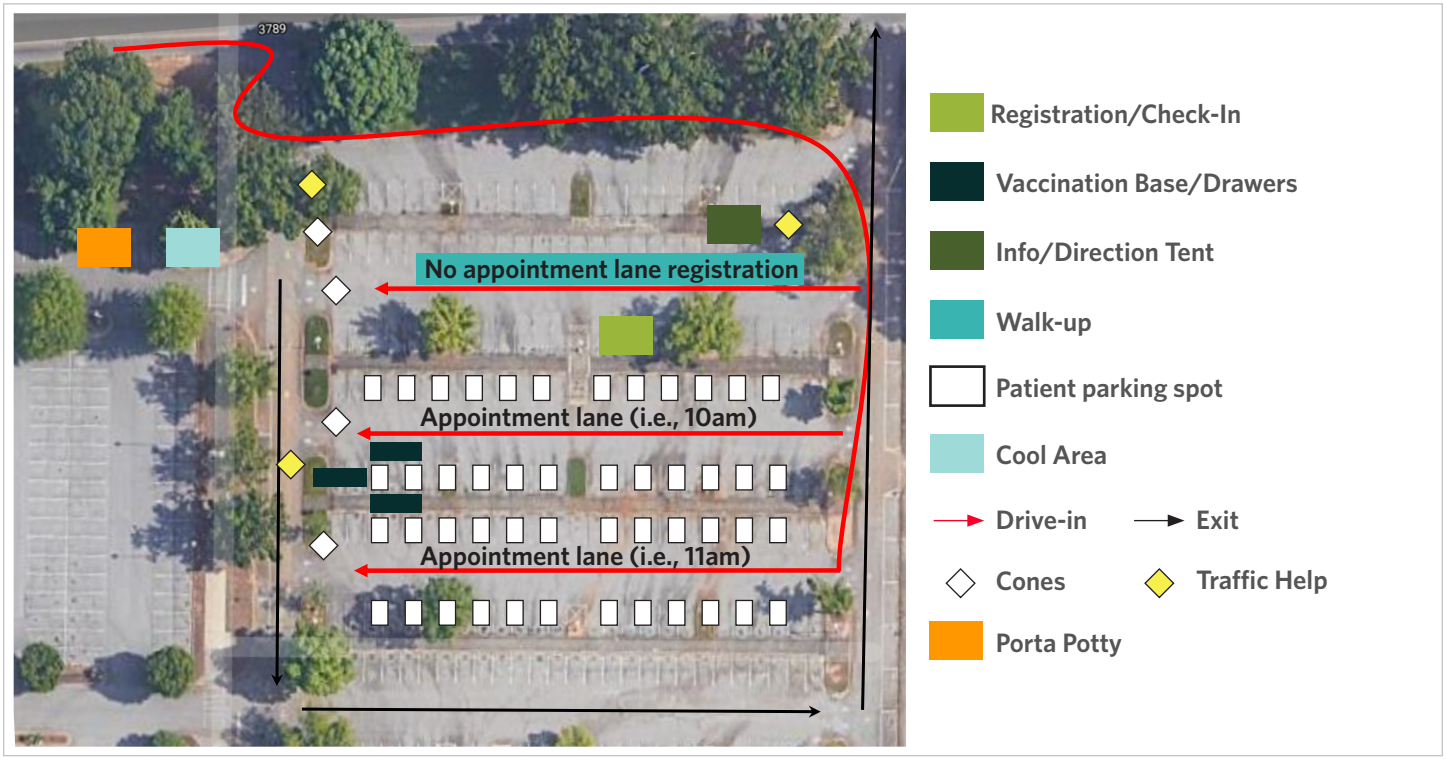
  - While mobile sites can present challenges for two-dose vaccines, a multi-day activation with increased outreach in advance of return and increased effort around appointment reminders (working through a registration platform and engaging community partners) can help to address these challenges.
  - Alternatively, consider single-dose vaccines that are better suited to mobile sites.
- To meet vaccination capacity at sites and ensure attendance is consistent, culturally and linguistically proficient registration teams can engage communities in advance to register patients in advance of the arrival of the medical team. This approach is particularly responsive to the needs of communities with less access and familiarity with virtual registration systems/processes, and is also an opportunity to assess other medical, social and economic needs of community members in order to coordinate wraparound care beyond the limited touchpoints offered via vaccination. Additionally, the increased efficiency from proactive pre-registration enables smaller mobile units to visit and provide coverage to multiple community sites in a single day.
- During vaccination operations, culturally and linguistically proficient site teams help patients feel at ease with what can be an intimidating process for those with less access to the health care system. Team members must address questions or concerns about vaccine safety, explain the vaccine efficacy and benefits, call attention to common side effects of injection, share available pathways to report adverse events, and reinforce the importance of second doses (if applicable).
- Language Access
  - When possible, medical and operations staff and volunteers should be members of the community where vaccine sites are located, representing the cultural and linguistic diversity of the community being vaccinated.
  - Partnership and coordination with community-based organizations can facilitate language access, including providing bilingual administrative support and interpretation services for vaccination clinics, and assistance with facilitating registrations.
  - Provide phone-based translation services are available when necessary (e.g., Language Line).

SITE REQUIREMENTS AND LAYOUT

- Accessible to target population
  - Site should be identified in close collaboration with community organizations
  - Available during business and off-hours (early and late) for those who may not be able to take time from work or other responsibilities
  - Located near public transit or with additional transportation arranged
  - Consider coordinating with organizations that support the social needs of community members to provide additional services adjacent to vaccination sites (food banks, PPE distribution, community health workers, other social programs)
- Sufficient space for all of the stations described above: Pre-check/Line, Check-in/Registration, Vaccine Preparation, Vaccination, Monitoring and Check-out
- Sufficient space for operations support areas: admin area, storage area, staff break area
- Sufficient space for social distancing across all of the stations and areas
- Appropriate ventilation, if indoors
- Services: electric, restroom
- Parking and Traffic Flow (Ingress/Egress)
- Accessibility: Ensuring all spaces are ADA compliant

TIP FROM THE FIELD

Departments of Health or other government partners will have data on neighborhoods with the highest COVID-19 positivity rates and the highest social vulnerability indices. This data can be used to identify locations with the greatest need for mobile vaccination sites.



Drive-through site layout example

STAFFING

HIRING

Hiring from within the community needs to be intentional, particularly for mobile units, to build both community trust and capacity. Local vaccination sites also provide employment opportunities to communities who have been impacted by both the burden of COVID-19 and the resulting rising unemployment. Depending on the community's needs, staff may also need to be multilingual. Hiring directly from the communities enables implementers to always have staff on site who have lived experience that enables them to relate to and interact effectively with patients from all backgrounds. Hiring of clinical staff will require additional background checks to confirm licensure, etc.

STAFFING CALCULATIONS

Staffing calculations should be based on a combination of the following factors:

- Number of available vaccine doses for the day
- Site space, including:
  - Available space for socially distanced post-vaccination monitoring
  - Available parking space
  - Determination to do drive-through or walk-up
- Number of vaccinations per vaccinator, per hour
  - This rate depends on the skill of the vaccinator. Experienced staff can do 20 or more vaccinations per hour. Less experienced staff may do closer to 10 vaccinations per hour.
- On-site registration time
  - This time depends on the technology being used. A comprehensive digital registration form that collects patient information and screens for medical conditions takes approximately 3 minutes. A paper-based system can take much longer.
- No-show rates

SCHEDULING AND ASSIGNMENTS

Scheduling site staff during fluctuating vaccine supply can be challenging. Scheduling software can facilitate the scheduling process significantly, especially for mass sites. Scheduling 1-2 weeks at a time helps to ensure sufficient staff. Sites with extended hours (e.g., 8 a.m. - 8 p.m.) require two shifts. Staff assignments can be provided either in advance or during the meeting at the start of a shift.

MT 01	Addres:										
Trailer:											
Passenger Van:											
Driver's Asst:											
9 STAFF											
LEADS											
SAFETY											
7:45:00 AM	Arrive at Franks										
8:00 AM	Drive to site										
8:30 AM	SET UP										
		IN PROGRESS								MONITORING // DISCHARGED	
8:45 AM	Shift Times	CHECK-IN 1			Shift Times	LINE	LINE	8:45 AM	CARD / OBSERVATION		TEAM LEAD
		Daniela B.	Susan C.	Pedro Z.		Mari S.	Wyatt G.		Wendy	Diego H.	VAX / DATE LOT CHECK
9:00 AM	9:00-10:30				9:00-10:30			9:00 AM			Daniela B.
9:15 AM								9:15 AM			Susan C.
9:30 AM								9:30 AM			
9:45 AM								9:45 AM			
10:00 AM								10:00 AM			
10:15 AM				BREAK			BREAK	10:15 AM		BREAK	
10:30 AM	10:30 - 12:00	BREAK		10:15 - 10:30		BREAK	10:15 - 10:30	10:30 AM		10:15 - 10:30	BREAK
10:45 AM		10:30 - 10:45	BREAK			10:30 - 10:45		10:45 AM	BREAK		
11:00 AM			10:45 - 11:00					11:00 AM	10:45 - 11:00		
11:15 AM								11:15 AM			
11:30 AM								11:30 AM			
11:45 AM								11:45 AM			
12:00 PM	12:00-1:30	BREAK			12:00-1:30			12:00 PM			VAX LOT CHECK
12:15 PM						BREAK		12:15 PM		BREAK	
12:30 PM		12:00 - 12:30	BREAK					12:30 PM			BREAK
12:45 PM						12:15 - 12:45	BREAK	12:45 PM	BREAK	12:15 - 12:45	
1:00 PM			12:30 - 1:00	BREAK				1:00 PM			
1:15 PM							12:45 - 1:15	1:15 PM	12:45 - 1:15		
1:30 PM				1:30 - 1:45				1:30 PM			
1:45 PM	1:30-3:00				1:30-3:00			1:45 PM			VAX LOT CHECK
2:00 PM		BREAK				BREAK		2:00 PM			
2:15 PM		2:00 - 2:15	BREAK			2:00 - 2:15		2:15 PM		BREAK	
2:30 PM			2:15 - 2:30	BREAK			BREAK	2:30 PM	BREAK	2:15 - 2:30	
2:45 PM				2:30 - 2:45			2:30 - 2:45	2:45 PM	2:30 - 2:45		
3:00 PM								3:00 PM			
	CLOSE AND BREAKDOWN										VAX COUNT
4:00 PM	Back @ Frank's										

Mobile vaccination site schedule example

TRAINING

Implementers need a comprehensive training program that prepares staff with the skills, knowledge and confidence to carry out their jobs effectively while maintaining the utmost safety in a high-risk environment. Training programs that combine online and in-person modules are highly effective and efficient.

All team members should receive comprehensive training specific to their job tasks as well as organizational policies and protocol on the following topics:

- Education around COVID-19, how it transmits, and safe practices in alignment with CDC guidelines (wearing face coverings, social distancing, handwashing/sanitary practices, monitoring temperature)
- Extensive training around proper functionality and usage of PPE
- Proper hand-washing, sanitizing and decontamination procedures within each vaccine site zone and when arriving and before leaving a vaccine site
- Protocol around managing and administering COVID-19 vaccines and understanding of reporting and troubleshooting related issues, as well as how they work, their efficacy and side effects
- Roles and responsibilities for all vaccination site stations and cross training to be proficient in all areas
- Set-up, cleaning and breakdown of a vaccination site
- Emergency Action Plan to address inclement weather, onsite medical emergencies, imminent threat to safety
- HIPAA

In-service Training

On a daily basis, managers can have a briefing on any updated protocols or regulations, as well as any work-related topics, followed by a safety refresher. Staff should be encouraged to ask questions and be clear on their roles, responsibilities, and daily tasks. These efforts and lines of communication allow implementers to pivot quickly to disperse new information to the team.

TIP FROM THE FIELD

Cross-training staff to build team capacity and familiarity with the full process builds stronger and more nimble teams. Team members know how their work affects colleagues at other stations and allows for staff to fill in for each other as needed.

RESOURCE COORDINATION AND SUPPORT

In addition to providing vaccination at sites, there are opportunities to provide wraparound services to individuals in need of medical, social, and economic support. These services can include quick on-site screenings to link patients to benefits programs and community organizations as well as direct provision of resources such as food kits. Proactively reaching and supporting the most vulnerable will help facilitate vaccination access and uptake by communities most vulnerable to COVID-19.

BEFORE VACCINATION:

- Accompany community members through the registration, scheduling, and appointment process
- Engage community organizations, trusted leaders, and existing resource navigation programs in local operational planning for vaccine rollout to ensure the needs of the most vulnerable are prioritized (see Community Engagement and Outreach Activities)
- Support public communications and community engagement to ensure community members know when, where, and how to get vaccinated, while addressing questions, concerns, and hesitancy (see Community Engagement and Outreach Activities)

AT POINT OF VACCINATION:

- Integrate social needs screenings and referrals during vaccination appointment
- Screening process should include: social determinants of health, resource referral, provision of resource information and food
- Referrals for health care services at point of vaccination

AFTER VACCINATION:

- Incorporate second dose reminders into all programs and arrange transportation to second dose appointment, when applicable
- Ensure follow-up with individuals who express needs for clinical and social support services
- For health departments and private sector providers managing large vaccination sites, consider engaging dedicated staff or a community partner to manage follow-up services
- Support partnerships between jurisdictions and existing community organizations and maintain a record of available supports to continuously strengthen the network of services and resources for referral

TIP FROM THE FIELD

Donated meals from local restaurants or community organizations can be provided at the monitoring station at mobile sites so patients can eat while they wait during their monitoring period.

Note: Meals, vouchers for local grocery stores, or food kits from food banks provided at vaccination sites should be available for any individual who shows up, regardless of their intention to be vaccinated. It is important to ensure that those who may be hesitant about receiving vaccination are not coerced by the provision of critical resources.

Community-based vaccination campaigns should be leveraged to build community trust in the health system by reinforcing sustainable linkages to both primary health care services and broader community resources that will support longer-term community development beyond the pandemic. Vaccination represents an important opportunity to connect vulnerable communities and individuals to the health and public health systems, as well as other social support services.

See CRC Operational Recommendations for additional guidance on integrating resource coordination into vaccination campaigns.

INFORMATION SYSTEMS AND DATA MANAGEMENT

Information systems for vaccination operations can range from paper-based forms, to Google Sheets, to all-in-one software platforms. The types of information systems and flows of data also depend on the existing state and/or clinic systems, infrastructure, and requirements.

The following section presents our system-agnostic recommended specifications for each element of site operations data management.

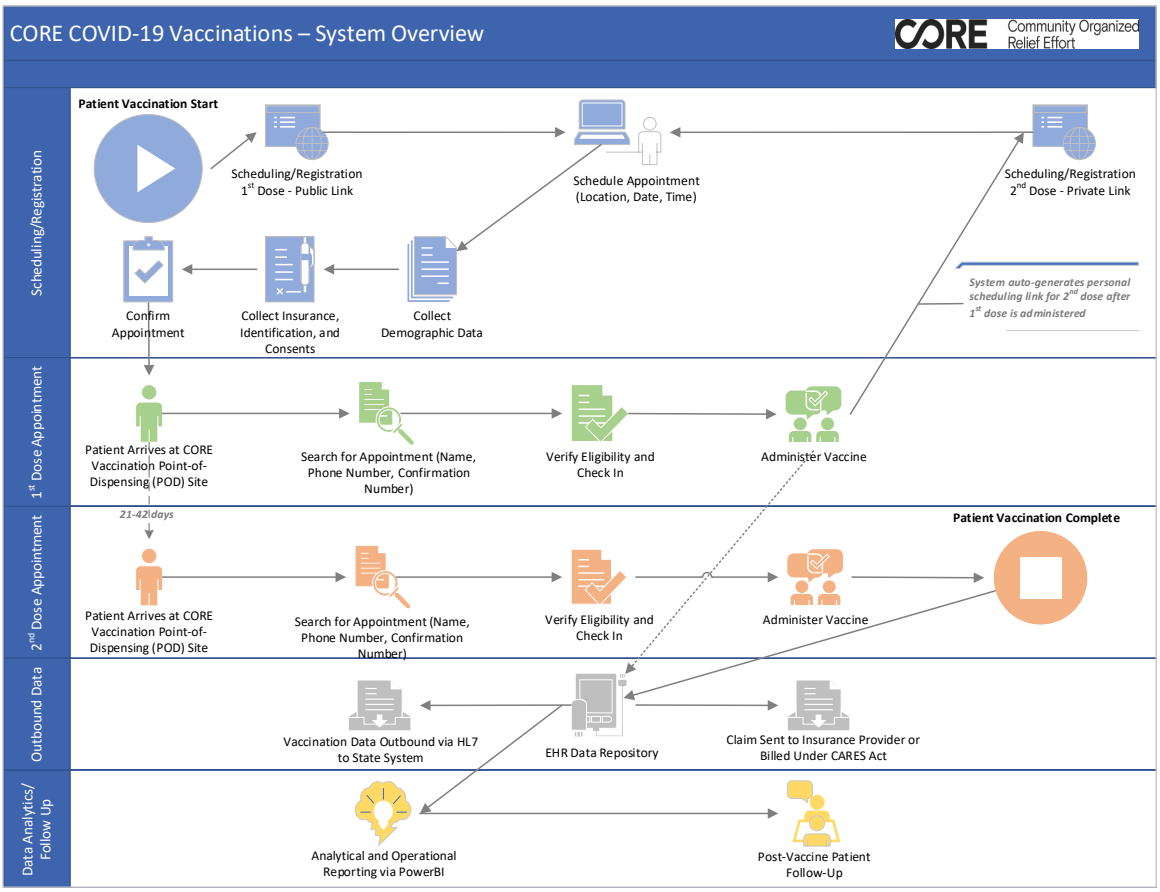
SCHEDULING

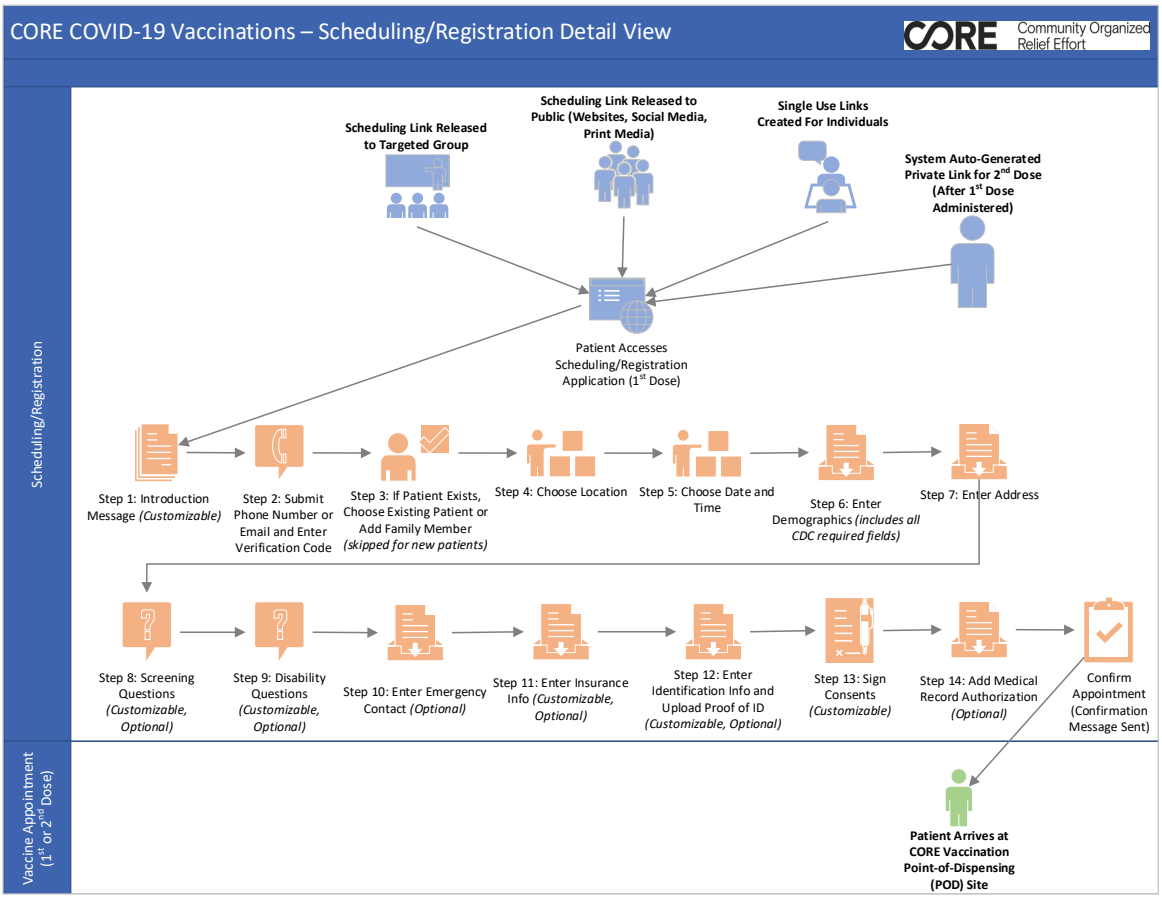
- Intuitive and clean user interface allowing patients to self-schedule and choose among locations, dates and times. Ideal if multiple language options are available for patient accessibility.
- Public link (URL) which can be published via government websites, social media, print media, news outlets, and virtually any other public-facing communication.
- Automatically generated patient-specific, single-use links for second dose appointment, which are released to the patient upon administration of first dose.
- The ability to generate targeted, semi-private links for identified groups, or fully private, patient-specific, single-use links for both first and second dose appointments.
- The ability to generate reminder messages prior to both first and second dose appointments.
- The ability for patients to respond directly to the appointment notification text or email thread.
- The ability to cancel or reschedule appointments and easily from within the system.
- Functionality to create "split scheduling pools" for a single location, wherein patients scheduling a first dose will only see first dose appointment availability for that location, and patients scheduling a second dose will only see second dose appointment availability for that location.
    - *Note: This prevents first dose patients from scheduling appointments that are reserved for second dose only, and prevents second dose patients from scheduling appointments that are outside the second dose date window.*
- The ability to quickly and efficiently adjust to a high no-show rate at a site (same day), by increasing location capacity and sending out a mass message to existing patients and/or to the general public indicating that additional appointment slots are available.
    - The mass message to existing patients can be targeted to a group based on logical filters such as patient demographics, zip code, etc.
- The ability to message with patients directly via the patient portal in order to cancel or reschedule existing appointments, or to create new appointments.
- Functionality to create new locations or retire existing locations quickly and easily.
- The ability to customize patient messaging regarding appointment confirmation and reminder notifications.
- The ability to "hold" appointment slots for a set amount of time (15 minutes) while the patient completes the scheduling and pre-registration process.

REGISTRATION

- Intuitive and clean user interface to enable self-registration by the patient prior to arriving at the site.
- Collects all CDC-required data elements for vaccination registration, and provides additional, optional data fields that can be made required, set as optional, or hidden entirely.
- Multi-screen walkthrough with step-by-step instructions for filling out the pre-registration document.
- Ability to collect all registration elements, such that when the patient shows up at the vaccination site, the staff member needs only to verify the information and eligibility status.

Information System Workflow Diagrams





- Simple and easy on-site check-in process that requires less than 5 clicks to complete, thereby maximizing efficiency and throughput of site operations.
- Multilingual support, and accessibility modifications available for both scheduling and patient registration.
- Ability to manually register patients via the patient portal and schedule vaccination appointments.
- Ability for qualified site staff to quickly and easily change erroneous demographics and other information.
- Ability to collect emergency contacts, customized electronically signed consents, patient guardians, and additional authorized access to medical record.
- Ability to add family members to a single registration record in order to accommodate underage children and other dependents.
    - *Note: Report to state vaccination system still reflects separate patients and separate vaccine administrations, even if a family member is added.*

ADMINISTRATION

- Intuitive and clean user interface to enable efficient and accurate data entry by clinicians during vaccine administration, thereby maximizing on-site throughput and ensuring complete data collection.
- Collects all CDC-required data elements for vaccine administration, and provides additional, optional data fields that can be made required, set as optional, or hidden entirely.
- Ability to quickly add clinicians and/or vaccine administrators.
- Ability to indicate patient refusal, or medical factors that would preclude vaccine administration.
- Ability to document adverse reactions to the vaccine during the observation period.

VACCINE INVENTORY

- Leverage existing inventory system or build simple, scalable inventory system to track acquisition, storage, distribution, and administration of vaccines.
- Ability to report daily usage, waste, on-hand vaccines per site, on-hand vaccines in storage, and other relevant inventory data.

DATA STORAGE AND ANALYTICS

- Vaccination data to be stored in a secure, encrypted data repository within a HIPAA-compliant architecture.
- Ability to send batched daily files or real-time HL7 messages containing vaccination administration data to state vaccination systems and other local and state health systems.
- Ability to interface with Vaccine Adverse Event Reporting System (VAERS) in order to report adverse vaccination events.
- Ability to create patient lists for follow-up, targeting specific populations, if needed, and creating follow-up work queues for designated staff members.
- Ability to develop follow-up questionnaires and track monitoring and evaluation metrics in order to develop longitudinal analysis of vaccine response.
- All vaccinations need to be reported in a timely manner to the state registry for immunizations (e.g., GRITS in Georgia, CAIR2 in California).
- Internal reporting of monitoring and evaluation data is critical for tracking performance and informing programmatic changes.

DASHBOARD

- Built-in operational dashboard showing aggregated vaccination data including scheduled appointments, doses administered by type, and patient demographic information at the site program levels.
- Customized operational dashboards that are updated throughout the day with detailed information to inform operational fine-tuning, such as no-show rates, site throughput metrics, vaccine usage data, and other relevant measures.
- Customized analytical dashboards that are updated once per day with summary statistics and program-level metrics to support program evaluation.

SAFETY AND SECURITY

COVID-19 SAFETY

Protecting site staff, volunteers, and patients from contracting and transmitting COVID-19 is essential to maintaining day-to-day site operations and sustaining community-based vaccination, broadly. All team members must adhere to the evidence-based mitigation measures of masking and other PPE use, physical distancing of at least 6 feet, and hygiene and sanitation procedures.

Staff and volunteers should maintain a clean workstation, keep all personal belongings in a designated area, and make sure to follow decontamination protocols after every shift. Everyone must wash or sanitize their hands in accordance with WHO hand sanitation recommendations before and after touching anything outside of their clean workstations. Clinicians should change their gloves and wash their hands between every patient. All other non-clinician roles should change their gloves and wash their hands any time there is a compromise to infection control measures.

It is every team member's responsibility to adhere to the recommended mitigation practices and support their colleagues by holding each other accountable for infection control measures—in particular, clinicians and leads should ensure that safety measures are being reinforced.

ON-SITE SECURITY PLAN

Tailored job site security plans should be developed for every vaccination site. These plans cover general information about the sites, site orientation, communications plans, hazard identification and risk assessments, daily safety briefings, and emergency action plans. Given the high-profile nature of COVID-19 vaccine distribution, these plans should incorporate the evolving guidance from the Cybersecurity and Infrastructure Security Agency (CISA) regarding COVID-19 vaccination distribution physical safety measures.

SECURITY MEASURES

To ensure the safety of patients, visitors, and staff, vaccination site operators should implement a wide range of security measures, such as hiring security personnel, requiring ID badges for staff, using 911iNet radio system, and providing adequate site illumination.

INCLEMENT WEATHER PLAN

Implementers operating vaccination sites outdoors must be prepared to deal with a range of inclement weather conditions. Detailed policies and protocols can reduce weather-related risks in the work environment. Site managers should be provided with specific recommendations related to general weather monitoring principles and plans for stopping or modifying operations during lightning, winds, severe weather, and extreme cold and heat.

PARTNER COORDINATION

As discussed in the *Community Engagement* section above, early and sustained engagement with the community is essential for successful vaccination site operations. Another key partner is the local government. Government agencies not only provide vaccine supply but are also strategic partners in site selection, community outreach, eligibility requirements, and data management.

To ensure community-based vaccination efforts meet the needs of those most vulnerable to COVID-19, it is critical that coordination structures and processes among those charged with the task of setting up and running the site are established early, and adhered to throughout each phase of the work. Operations, medical and community partners, each with their own set of expectations, professional norms, and essential contributions to the collaborative effort, must communicate clearly and consistently with one another in order to be efficient and effective.

Set and align expectations for when, where (zoom links, locations), and for what purpose different team members should meet to discuss site operations. Establish standing meetings and build in flexibility to adjust start and end times, length, frequency, and cadence based on staff and site needs. Additionally, patience and a willingness to adapt to the different schedules of various partners will ensure small, inevitable challenges do not expand into disagreement or delays that could jeopardize the goals of the partnership.

Engaging community members early and often in the process may help identify opportunities and efficiencies related to meeting agendas (discussions happening in parallel) and locations (available conference space near site). All stakeholders involved in the successful planning and operations of vaccination sites are responsible for creating opportunities to connect, collaborate and problem-solve.

Appendix

Supplies and Equipment

Supplies /Equipment	Site Location
Printed lists or tablets with lists of pre-registered patients for the day	Pre-check
Wheelchairs	Pre-check
Cones and flagging tape for lines	Pre-check and in between each station as needed
Vaccine information sheet/Emergency Use Authorization fact sheets	Pre-check or Check-in/Registration
Charging outlets	Check-in/Registration
Masks for patients who do not have one	Check-in/Registration
Raffle tickets and/or Post-it notes	Check-in/Registration
Mobile internet device	Check-in/Registration, Monitoring
Sanitizing spray or wipes for pens/clipboards if using paper forms	Check-in/Registration, Monitoring
Tablets or computers	Check-in/Registration, Monitoring
Vaccine vials with ancillary supplies	Vaccine Preparation
Additional syringes	Vaccine Preparation
Coolers and blue ice for transporting pre-filled syringes to vaccination stations	Vaccine Preparation
Reliable refrigeration for vaccine storage	Vaccine Preparation
Thermometer for monitoring room temperature or coolers	Vaccine Preparation
Timers for monitoring thawed (and diluted, if required) vials	Vaccine Preparation
Trailer or van for vaccine storage and drawing (if outdoor site)	Vaccine Preparation
White boards and markers for tracking status of thawed vaccines and number of drawn doses per vial	Vaccine Preparation
Laboratory or medical table covers	Vaccine Preparation, Vaccination
Alcohol prep pads	Vaccination
Bandages	Vaccination
Emergency Anaphylaxis Kit (Epinephrine, Benadryl, IV Kit with 500cc of saline)	Vaccination
Medical waste bin	Vaccination
Sharps disposal box	Vaccination
Supply carts	Vaccination

CDC COVID-19 Vaccination Record Card	Vaccine Preparation, Vaccination or Monitoring
Box for raffle tickets	Monitoring
Meals, food baskets or other resources for patients	Monitoring
Chairs for patients	Pre-check, Check-in/Registration, Vaccination, Monitoring
Signage	Pre-check, Check-in/Registration, Vaccination, Monitoring, Exit
Chairs for staff	Check-in/Registration (if not drive-through), Vaccine Preparation, Vaccination (if not drive-through), Monitoring, Staff Break Area
Tables	Check-in/Registration, Vaccine Preparation, Vaccination, Monitoring, Staff Break Area
Hand sanitizer/handwashing stations	All stations
Pens	All stations
PPE (masks, gloves, face shields)	All stations
Radios for communication	All stations
Safety vests for staff	All stations
Tents for patients and staff (if outdoors and needed due to weather conditions)	All stations
Porta-potties	As needed