

COVID-19 Vaccination Clinic Implementation Toolkit

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We gratefully acknowledge the support of leaders across OHSU, Columbia County health department, and the staff of OHSU Family Medicine Scappoose.

Chapter 1. What is in this toolkit and how is it organized?

This is a toolkit for decision-makers and implementers of vaccine clinics. Our goal was to create a “vaccination clinic in a box” that could be replicated in, and tailored to, many types of settings.

Since December 2020, when the first COVID-19 vaccines were available, there have been four main ways to deliver vaccines. (1) Mass vaccination sites, either drive-through or walk-in, were established in large parking lots, convention centers, and sports arenas, with the goal of vaccinating thousands of people every day. (2) Community-based vaccine events serve a smaller number of people and are held in a health center/clinic building or another site within a distinct neighborhood (eg, church, school); people may or may not need an appointment in advance. (3) Community pharmacies, mostly large chains, are administering COVID-19 vaccines by appointment. (4) Healthcare providers are administering COVID-19 vaccines as part of routine clinical care during patient visits (similar to other vaccines such as flu, TDAP, MMR).

We developed this toolkit to share our team’s experience creating a stand-alone vaccine clinic in a primary care rural health center (OHSU Family Health Center in Scappoose, Oregon). In our case, these were evening and weekend vaccine-specific clinics, serving both patients of the clinic and community members. The clinic operated between January – June 2021. During this time, eligibility and community uptake of vaccines changed dramatically. Nevertheless, our workflows, staffing models, documentation, and outreach were very consistent from the start to the end. This toolkit includes prompts for questions you may need to ask, examples of many types of documents that you may need (and information about where to find more documentation), and lessons-learned from our experience. If your community-based site is in a location other than a clinic, many aspects of this guide will still be helpful to you, but we acknowledge that there are unique considerations for creating vaccine clinics in spaces not usually designated for providing clinical care.

Our vaccine clinic started in January 2021, during a time when vaccine doses were scarce and clinics were expected to adhere to strict guidelines about the stages for eligibility for vaccination. This is reflected in the information about how to manage scheduling, opening vials, and managing waitlists. In Fall 2021, this is no longer an issue, and we have added a section on vaccine wastage guidelines.

Our toolkit on workflows for administering COVID-19 vaccines as part of routine outpatient primary care is available at <https://bridgetoinnovation.org/our-initiatives/covid-response/>

This guide is intended to be a “living document,” and we hope to update it as needed. If you implement a community-based vaccine clinic, whether it is in your clinic building or in a community building, we would love to learn from and integrate your experiences into this guide. Please send us an email to share your experiences.

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Chapter 2. Knowledge and evidence related to COVID vaccines

In this section, we share links to detailed information about the vaccines for COVID-19 that have been approved for use. The vaccine information and use authorizations are rapidly changing, so we provide links to get the most up-to-date information. Through these links, you can get information about these vaccines and evidence to-date of their efficacy, plus additional information and communication resources.

2.1. Information for Clinicians

- [Interim clinical considerations for COVID-19 vaccines](#) (updated frequently)
- [Booster shots](#) and [additional doses](#) of the COVID-19 vaccines
- [Pediatric vaccine information](#)
- [How COVID-19 vaccines work](#)
- [Understanding mRNA COVID-19 vaccines](#)
- [Understanding viral vector COVID-19 vaccines](#)
- [Vaccine cold-chain information](#)
- [COVID-19 vaccines and allergic reactions](#)
- [What to expect after getting vaccinated](#)
- [How the CDC is making COVID-19 vaccine recommendations](#)
- [Vaccine safety monitoring after a vaccine is authorized or approved for use](#)
- [COVID-19 Vaccination Training](#)

Communication resources

- [Key Things to Know about COVID-19 Vaccines](#)
- [Frequently Asked Questions about COVID-19 Vaccines](#)
- [Answering Patients' Questions About COVID-19 Vaccine and Vaccination](#)
- [How to Tailor COVID-19 Information for Your Specific Audience](#)
- [How to Address COVID-19 Misinformation](#)
- [Motivational Interviewing Techniques for 1-5 Minute conversations](#)
- Vaccine hesitancy resources from [Boost Oregon](#) and [CDC](#)

Pediatric Populations

- [How to talk with parents about COVID-19 vaccination for pediatric patients](#)
- [COVID-19 vaccination of minors](#)
- [Coadministration of COVID-19 vaccines with other vaccines](#)
- [AAP statement](#) on COVID-19 vaccine recommendations

Pfizer BioNTech

- [Information about the Pfizer-BioNTech COVID-19 Vaccine](#)
- [Full list of ingredients – Pfizer](#)
- [CDC training – Pfizer](#)
- [How to thaw, prepare, and administer – Pfizer](#)
- [Pfizer Vaccine preparation infographic](#) – Age 12 and Older
- [Pfizer vaccine preparation infographic](#) – Age 5-11
- [Evidence from the Pfizer-BioNTech clinical trials for adults](#)

- [Evidence from the Pfizer-BioNTech clinical trials for children](#) (starts on slide 17)
- [Demographic information of adult trial participants](#)
- [Pfizer Standing Orders – Adults](#)
- [Pfizer Standing Orders – Children](#)

Moderna

- [Information about the Moderna COVID-19 Vaccine](#)
- [Full list of ingredients – Moderna](#)
- [CDC training – Moderna](#)
- [How to thaw, prepare, and administer – Moderna](#)
- [Clinical trials – Moderna](#)
- [Demographic information for trial participants](#)
- [Moderna Standing Orders](#)

J&J Janssen

- [Information about the J&J Janssen COVID-19 Vaccine](#)
- [How to prepare and administer – J&J Janssen](#)
- [Full list of ingredients – J&J Janssen](#)
- [CDC training – J&J Janssen](#)
- [J&J Janssen Standing Orders](#)

2.2. Vaccine resources for patients and community members

- Fact Sheet for Recipients and Caregivers
 - [Pfizer-BioNTech](#)
 - [Moderna](#)
 - [J&J Janssen](#)
- What to Expect after Getting a COVID-19 Vaccine (1 page)
 - [English](#)
 - [Spanish](#)
- [Myths and facts about COVID-19 vaccines and how to find credible information](#)
- [What to expect when getting your COVID-19 vaccine](#)
- [Video: What to expect at your COVID-19 vaccine appointment](#) (Source: CDC, 48 seconds long)
- [Video: How mRNA vaccines work \(for kids\)](#) (Source: AAP, 2:53 minutes long)
- [Get Vaccine Answers](#) communication website

Chapter 3. Federal, state and county information and resources

3.1. How to register as a vaccination site

One of the most important changes to vaccines in the Fall of 2021 is that there may not be mass vaccination sites for COVID-19 and clinics will need to get more involved in vaccinating people. Check with your state leaders to learn how to get identified as a vaccination site and get access to vaccines.

- For information about signing up to be a COVID-19 vaccine provider, see your state's [COVID-19 Provider Registration website](#)

In Oregon, you can put your clinic on the Get Vaccinated Oregon Site here:

<https://admin.getvaccinated.oregon.gov/#/provider>

Oregon is utilizing a hub and spoke distribution model for vaccine distribution. The Oregon Health Authority (OHA) has identified thirteen Vaccine Redistribution Hubs for COVID-19 vaccine across the state, to widen vaccine access and prevent waste. All provide the Pfizer vaccine, with most of the Hubs providing other COVID-19 vaccines as well. More information about ordering vaccines in Oregon is in Section 7.1.

3.2. Supplemental funding for vaccine storage and handling equipment

The OHA/Oregon Immunization Program is announcing the availability of funding for vaccine storage and handling equipment. This funding is available to all existing Vaccines for Children (VFC), Vaccine Access Project (VAP), and CARES providers of influenza vaccines. The funding is also available for facilities that are offering COVID-19 vaccine, and this includes for clinicians that are not yet enrolled. To become eligible as an enrolled facility, complete the ALERT IIS part of the enrollment (you do not have to have completed the entire enrollment process). Allowable purchases will be reimbursed up to \$1,000 per vaccination facility.

Allowable purchases include:

- Vaccine storage units (i.e., refrigerators and freezers approved for vaccine storage). Note: NO dorm-style combined refrigerator/freezer units allowed under any circumstances.
- Temperature monitoring equipment
- Vaccine transport coolers that are purpose built for maintaining appropriate refrigerator or freezer temperatures for vaccines
- Supplies required as part of a clinic's immunization activities (e.g., first aid kit, EpiPen, etc.)

<https://app.smartsheet.com/b/publish?EQBCT=1e38f1448f5f424fb0d478adeb7a144b>

3.3. COVID-19 vaccination administration supplemental funding (Oregon specific)

This funding is to pay for uncovered costs related to COVID-19 vaccination incurred by Patient Centered Primary Care Home (PCPCH), Certified Community Behavioral Health Centers (CCBHC) and OHA-recognized Public Access Clinics. See more information [here](#).

This program contains two tracks:

- **Comprehensive Services:** Pays up to \$75 per COVID-19 vaccination administered by PCPCH clinics and CCBHCs providing comprehensive services such as costs involved in conducting outreach, education, scheduling, follow up, tracking, reporting, management and ordering of vaccines. Vaccination services provided on or after January 1, 2021 will be funded through the Comprehensive Services program even if registration occurs at a later date.
- **Direct Cost Reimbursement:** Provides direct cost reimbursement for clinics not participating in the Comprehensive Services Track, and covers expenses related to vaccination activities, supplies and equipment. PCPCH, CCBHC and Public Access Clinics may choose to participate in the Direct Cost Reimbursement Track if they do not choose the Comprehensive Services Track. Expenses incurred on or after January 1, 2021 are eligible for reimbursement through the Direct Cost Reimbursement Track.

The only clinics that may not qualify will be those who have received significant financial support or grants from other programs (specifically LPHAs). Oregon Health Authority launched the program in June 2021 and has 40 clinics participating, and have distributed \$1M in supplemental funding.

Information about OHAs clinic funding program, including an application and FAQs can be found on the Information for Providers page of the OHA website:

The screenshot shows the OHA website page for COVID-19 vaccine information for providers. The page has a blue header with navigation links: Home, Services, Oregon Health Plan, Health System Reform, Licenses and Certificates, and Public Health. The main heading is 'COVID-19 Vaccine Information for Providers'. On the left is a sidebar with links for immunization providers, vaccines for children, maternal immunization, provider resources, provider training, local health departments, model immunization protocols, pharmacists, pharmacy protocols, ALERT IIS, IQIP, contact us, immunization information for dentists, COVID-19 Oregon vaccine LPHA/Tribes and CBO partners communications toolkit, and COVID-19 training for vaccine providers. The main content area has a green box with an introduction and a list of resources. Below this is a red button to 'Enroll as a COVID-19 Vaccine Provider'. There are three main sections: 'COVID-19 Vaccine in Oregon' (with a list of links including 'COVID-19 Vaccine Supplemental Funding Application' which is circled in red), 'Training Programs and Reference Materials for Healthcare Professionals', and 'Oregon Provider COVID-19 Office Hours'.

COVID-19 Vaccine Information for Providers

This page provides resources to support providers in COVID-19 vaccination efforts to achieve community immunity.

- Providers who are enrolled as COVID-19 providers can contact LPHA and regional health systems to coordinate vaccine administration efforts.
- Provider allocation requests
- Provider vaccine and enrollment questions
- ALERT IIS Questions
- Assistance managing inventory in ALERT IIS
- Provider webinars and tipsheets
- Vaccine-specific information and storage requirement

Enroll as a COVID-19 Vaccine Provider

COVID-19 Vaccine in Oregon

- General information
- Vaccine Access for People with Disabilities
- OHA 3657 – COVID-19 Vaccine Communication Card
- COVID-19 Vaccine Provider Communications Toolkit
- COVID-19 Health Telling Points
- Grant funding available for vaccine storage and handling equipment
- COVID-19 Vaccination Supplemental Funding FAQs
 - COVID-19 Vaccination Supplemental Funding Application**
- COVID-19 Vaccine Address Change

Training Programs and Reference Materials for Healthcare Professionals

- OHA COVID-19 Vaccine Provider Required and Recommended Trainings
- CDC COVID-19 Vaccine Reference Materials for Healthcare Providers

Oregon Provider COVID-19 Office Hours

3.4. For more information regarding federal, state, and county vaccine resources and recommendations:

- [CDC's COVID-19 Vaccine site](#)
- [Oregon Health Authority's COVID-19 Vaccine site](#)
- [Get Vaccinated Oregon tool](#) (to check eligibility, get notifications, and find a provider)
- [Vaccine information by county](#)

Chapter 4. Staffing and roles

This chapter describes our experiences building the team to staff the vaccine clinic. This includes engaging staff and volunteers, how we led and communicated with the team, how we organized shifts, oriented teams to their roles, and kept staff safe.

We also describe the roles and functions that are necessary for a vaccine clinic. We've described these functions so that in your vaccine site you can distribute functions among the staff and volunteers that you have. In many cases, these roles and functions can be combined such that one person could play multiple roles.

4.1. Engaging staff and volunteers

People working at a vaccination site will likely come from three sources: clinical staff, non-clinical staff such as administrators and managers, and external volunteers.

Clinic staff were paid for shifts that they worked at the vaccine clinics, including overtime pay if applicable. Our initial vaccine clinics were held on weekends when the clinic would normally have been open but with limited staff assigned to work. The assigned staff for those clinic sessions were converted to become the core team for the vaccine clinic. This team was augmented with additional clinic staff and volunteers. Because we were creating appointments and documenting vaccinations within our electronic health record (EHR), it was critical to have experienced staff members. This also limited the number of volunteers that we could have who were unfamiliar with the EHR. Many of our clinical staff belong to a union, such as ONA and AFSCME. Our institution (OHSU) held discussions with the unions to determine guidelines around pay and extra hours. We sent an email to clinic staff on Thursday morning listing the shifts that were available that weekend. The short turnaround was due to the county's weekly vaccine allotment process, which currently happens mid-week.

Non-clinical staff in our department, such as administrators, managers and researchers, were enthusiastic about volunteering. For those without EHR knowledge and access, there were only a few roles (eg, assisted with greeting, screening, and directing traffic as needed). Volunteers who committed to working several shifts were given the opportunity to receive EHR training and access. Clinic staff, such as front-desk and registration, were generous with their time and helped orient our volunteers to easy EHR-based tasks, such as how to look up appointments and check people in. With enhanced training and "learning on the job," we were quickly able to expand our group who are now able to do tasks that require basic EHR access.

Of note, the Vaccinators and Lead Monitor need to be medical personnel who are licensed in the state. Some states are also allowing retired medical personnel whose licenses have expired to do vaccination. The people drawing up vaccines need to be trained to prepare vaccines (eg, nurses, pharmacists). The remainder of the roles don't need to be medical staff.

Our vaccine clinics have been conducted with a blend of clinic personnel and volunteers from other departments and locations. This has been an overwhelming success, as it has created a camaraderie among people who would not otherwise work together. Although your clinic may not be affiliated with an academic health center, there may be family and community members who want to volunteer and support your clinic. We encourage you to consider this, as vaccinating your community will take months, staff may struggle to sustain the level of participation required, and inviting volunteers into the process can create joy and

connection in a time when that is needed. If you do not have enough staff and a cadres of people connected with your organization who can volunteer, many communities have two organizations that have highly trained and organized volunteers: American Red Cross and Community Emergency Response Teams (CERT). These organizations can quickly mobilize trained and reliable volunteers who can help with roles such as putting out signs, directing traffic, and greeting and screening people when they arrive at the vaccination site. If your site is not using an EHR for scheduling and documentation, these volunteers could staff other roles, too.

Communication with volunteers

We had originally planned to have a web-based form for volunteers to use to indicate interest and schedule themselves for shifts. However, it was just as effective to communicate via email. We sent out an initial email querying for interest and built a list of names and email addresses using Smartsheet (though Excel would work as well). We specifically asked people if they could commit to volunteering at least three shifts per month, to try to build a core team of recurring volunteers. Then we communicated at least once a week with everyone on the list, providing training updates and opportunities for shifts.

Shifts

We set up shifts that are 4 to 5 hours long. We heard feedback from many people that this was the maximum they would be able to commit to regularly. We timed shifts so that there was a 30-minute overlap between shifts (e.g., first shift 8-12:30, second shift 12-4:30). This allowed the first shift personnel to provide orientation and on-the-fly training for the people taking over their roles. Here is an example of how we managed volunteers using an Excel spreadsheet for morning and afternoon shifts with a goal of 400-500 vaccines administered each shift. We have made this Excel file available to you, too (note link in section 4.4).

	A	B	C	D	E
1	Vaccine Clinic Team Assignments				
2	Vaccine Goal:	400 per Day	Date Range	2/6 - 2/7	
3	Rooms per Team:	5+1			
4					
5	Staff	Saturday AM	Saturday PM	Material Needs	
6	Greeter 1 - Screening				
7	Greeter 2 - Check-in				
8	Greeter 3 - Check-in				
9	Blue Vaccine Team - LIP			Blue Pod & Rooms 6 - 7 - 8 - 9 - 10 + 5	
10	Blue Vaccine				
11	Blue Vaccine				
12	Red Vaccine Team - LIP			Red Pod & Rooms 12 - 13 - 14 - 15 - 16 + 11	
13	Red Vaccine Team				
14	Red Vaccine Team				
15	Orange Team - LIP			Orange Pod & Rooms 17 - 18 - 19 - 25 - 26 + 24	
16	Orange Vaccine Team				
17	Orange Vaccine Team				
18	Monitor/Navigator 1			Carts - Cleaning Material & Juice/Snacks	
19	Monitor/Navigator 2			Carts - Cleaning Material & Juice/Snacks	
20	LIP - Triage				
21	Phones - 1 WFH				
22	Phones - 2-in clinic				
23	Vaccine Draw/Monitor				
24	Vaccine Draw/Monitor				
25	Admin Support - Troubleshooter				
26	Shift Lengths	830 - 1230	12 - 400	FULL SHIFT - 830-400	
27		Available staff			
28					
29					
30					
31					

Orientation and leadership

Orientation: We created short descriptions for major roles and shared these with staff by email ahead of their shift. We also laminated shift descriptions and had them on-site for people to briefly review at the start of their shift. Much of the orientation was done “on the fly” by the person who was working the shift just prior or by others who had worked previous shifts. For some of the roles (e.g., EHR registration), there was a short orientation video or other training required.

Leadership: We learned that it was very helpful to have a point person for the start of each shift, for each main function. Team members could check in with this person and be oriented to their role. We also provided an email orientation, including what to wear, where to park, and what to bring. This email is available to you and referenced again in Chapter 6.

It was very helpful to have leaders clearly identified whose responsibility it was to step in and make tough decisions. For example, depending on the number of anticipated extra doses, there may be some flexibility to schedule an on-the-fly appointment for a caregiver or spouse. Individual volunteers shouldn’t make those judgements; rather, there should be a person identified who team members can call on in sticky situations.

Keeping volunteers safe

We provided personal protective equipment (PPE) for everyone. Medical-grade disposable procedure masks were available as well as hand sanitizer and bleach wipes. Disposable face shields, gowns, and gloves were also available to all, if desired.

4.2. Functions and roles for the vaccination clinic

In this section we describe, as completely as possible, all the functions that we needed to carry out a vaccine clinic. Before we started, we knew that rules governing who could vaccinate and who could have access to and the ability to use our clinic’s EHR would define what functions a person could play. We did take steps to train a subset of our non-clinic volunteers in the registration and scheduling processes, and this has been successful. Our institution created an online training program that these volunteers completed, and this was complemented by onsite training by clinic staff, several hours of shadowing, and then doing the task with support from an experienced user. In Chapter 8, you can read about a real-world example from White Bird Clinic in Eugene, Oregon, which decided not to use an EHR for scheduling and documenting.

We divided this section about specific team member roles by the following functions:

- No computer/EHR knowledge/access required
- The ability to use the EHR to do Registration/Scheduling
- The ability to use the EHR to create and manage an Encounter
- The clinical certification to vaccinate (e.g., MA, LPN, RN, MD, DO, APP, student working under license of a certified individual)

We describe functions and the tasks that belong to that function. Depending on the size of the vaccine site and the number of doses given, one role (person) could do multiple functions. For example, at one site the MA acts as scribe, documenting the vaccine, monitoring for screening time, cleaning the room, and escorting

people to the exam room. At another site, MAs might be vaccinating, and there may be non-clinical volunteers escorting people, serving as scribes, and/or cleaning rooms. See next pages for role descriptions.

4.3 For more information about staffing and roles

- [Vaccine clinic time and budget worksheet](#) (Harvard Primary Care Center)
- [Vaccine clinic readiness checklist](#) (state of California)

4.4. Materials you might find useful about staffing and roles

- [Shift spreadsheet](#)
- Role descriptions
 - [Check-in Guide](#)
 - [Greeter Guide](#)
 - [Monitor Guide](#)
 - [Scribe Guide](#)
 - [Vaccinator Guide](#)
 - [Overview template](#)

Functions that do not require EHR access/knowledge					
Function	Role	Tasks	Materials Needed	Location	Training Needed
Manage non-clinical volunteers	Volunteer lead	Inform volunteers of safety rules; Inform volunteers of their role; Train/orient volunteers for their role, giving them the information and materials needed; Tracking/sending people out for breaks	List of volunteers and assignments; materials for volunteers; explanation of each role	Inside/outside	Orientation to workflow; volunteer roles, and what all roles do
Monitoring the Parking Lot	Parking Monitor	Ensure people entering the lot of are in the right place; help people in and out of spots, if needed; direct people to alternative parking, if lot is full stay aware of outside line of people and direct the line so that it is away from car traffic, and people are distanced and wearing masks	Map of alternative places to park; bright-colored vest; parking baton	Outside	None
Greet patient	Greeter	Before patient enters building greet the patient; screen to ensure have appointment; ask people with the patient who do not have an appointment to wait in the car (unless patient needs assistance); give handouts (VIS and vaccine questionnaire); explain that masks must be worn at all times; and maintain 6-foot distance from others; direct patient to line inside and explain what the process will be review COVID questionnaire responses, direct to help desk as needed.	Vaccine information sheet and vaccine questionnaire	Ideally outside May need to be inside depending on configuration of outdoor space and weather conditions	Brief training in what questions to ask. Questions on laminated cards.
Screen for COVID-19 Symptoms	Greeter	Screen for COVID-19 symptoms. We want to do this before patient enters building, if possible.	Screening instructions	Ideally outside, but may need to be inside	Brief training in what questions to ask. Questions on laminated cards.
Text/phone list for end of day waiting list	Greeter	For people who don't have an appointment ask if they would like a text/call at end of day if there are extra vaccines, and take their contact information (keep a list); Contact patients at end and line up the numbers needed to use all the vaccines	Prepared list to record name, contact information and other pertinent information	Ideally outside, but may need to be inside	No training needed.
Answering patient questions	Triage/Help Desk	Answer patient questions that require a bit more detail; Assisting patients with yes responses on COVID questionnaire. Initial judgement on length of observation.	FAQs to help with answer question	Inside; front area	Clinical personnel address to answer COVID question and engage LIP, as needed
Assist patients without an appointment	Triage/Help Desk	Explain who is getting vaccinated now and why; Take patients contact information for end of clinic waitlist; keep this list (this sheet will need to have time on it to be fair)	CDC and state vaccine guidelines and who qualifies; waiting list	Inside; front area	Training in who does and does not fall into current vaccine cohort

Monitoring the line (ensuring flow, and 6-foot distancing, masks are worn)	Flow Director	remind patients to wear masks; remind patients to keep a 6-foot distance from others; help direct line so that people are not in the way of flow; direct patient to open examination rooms	Masks to provide to patients	Inside; moving around	No training needed
Clean clinic (doors, surfaces etc.)	Triage/Help Desk	Wipes down surfaces that people touched every few hours and at end of clinic session;	Wipes for cleaning	Inside	No training needed
Clean examination rooms	Scribe	Wipes down seat in exam room after each patient	Wipes for cleaning	Inside	Appropriate room turn over training
Set up/take down signs	Scribe	Sets up and takes down and stores signage in and outside of clinic	List of all of the signs to put up, where to put them, and a checklist to make sure they're all taken down	Inside	No training needed
Writing out the vaccine cards (if documenting on paper – this person can also record vaccine details and schedule 2 nd appointments)	Scribe	Write vaccine cards for patients; Explains timing for second shot vaccine specific stickers applied. Gives instructions for 15-minute wait. If documenting on paper, can also log shot details and schedule appointments for second shots.	Vaccine cards Vaccine specific stickers	In exam room	Clinical personnel (Medical Assistant) were briefly training in these issues
Monitor patients following vaccination	Symptom monitor	Observe or check-in on patients for 15 or 30 minutes, as indicated following vaccination; Offer juice, water or crackers, if needed; Provide first aid assistance to patients, if needed Alert doctor if there is a problem	Cart with juice, water, crackers Clear instructions on who to contact if there's a problem		Basic first aid
Screening for 15 vs 30-minute monitoring	Monitoring Screener	Asks about factors that might differential people with different monitoring needs	Questions to differential monitoring length		Review of vaccine questionnaire and monitoring requirements

Registration/Scheduling/Check-in/EHR access**					
Functions	Role	Tasks	Materials Needed	Location	Training Needed
Pre-appointment registration	Registration	Search for person in the EHR; create an new EHR record and MRN if needed; schedule appointment for Dose #1 Need to have the following information on each person: Full name, DOB, address, phone, preferred language, sex. Possibly also insurance info now.	Computer with EHR access Secure internet connection Laptop charger	Can be done from home	EHR scheduling access EHR training for PAS
Add patient to EHR to track vaccination, if not already in EHR	Registration	For those who may have been missed in pre-appointment registration. Search for person in the EHR; create an MRN if needed; schedule appointment for Dose #1	Computer with EHR access Secure internet connection Laptop charger	Outside	EHR scheduling access EHR training for PAS
Identify patients on the schedule and confirm identify; check-in patient to appointment	Check-in	Search by name, DOB Identify the correct appointment Check-in the person Confirm that *AR appears on the appointment	Computer with EHR access Secure internet connection Laptop charger	Outside	EHR scheduling access EHR training for PAS
Create an appointment the appropriate number of days from first vaccine	Scheduling dose #2	Search by name, DOB Make appointment for the correct dose (28-day booster) at the correct vaccination site location give patient appointment card or send appointment message via email or MyChart	Computer with EHR access Secure internet connection Laptop charger	Inside	EHR scheduling access EHR training for PAS
Trouble shoot EHR Problems	Data Team	Help address problems with EHR	None	Inside	None

**If you are completing check-in and documentation on paper and planning to enter the data into your state's immunization registry at a later time, you will just need a paper system for scheduling, registering, and documenting. Another option is to use a computer system that is not a certified electronic health record. Ensure you have adequate resources to report information to your county and state. Also, be sure you are following all confidentiality and privacy guidelines.

Clinical person with credential to vaccinate – e.g., MA, RN, LPN, MD, DO, APP, student working under license of certified individual					
Functions	Role	Tasks	Materials Needed	Location	Training Needed
Understand and oversee all aspects of daily flow	Float Lead	Trouble shoot all aspects daily flow; Final authority on decision regarding adapting flow during clinic session; Work with volunteer lead to manage the ebbs/flows	Copies of materials used by all other team members	Inside	EHR scheduling and documentation, vaccine prep and administration.
Screening for 15 vs 30-minute monitoring	Vaccinator	Confirm with individual factors that might differential people with different monitoring needs (why did the screener flag this person to wait 30 mins vs 15 mins?)	Questions to differential monitoring length	Inside	Review of vaccine questionnaire and monitoring requirements.
Prepare syringes	Shot filler	This person fills the syringes enough for the next for the next 30-40 of vaccines needed	Syringes vaccine	Inside	Proper handling and preparation of vaccine for administration
Vaccinate people	Vaccinator	Administers vaccines	Filled syringes; Alcohol swabs Cotton balls Band aids	Inside	Proper technique for IM administration of vaccine. Judgement on appropriate needle length.
Document vaccine given	Vaccinator or scribe	This person documents the vaccination delivery in EHR and for state immunization registry system, if both needed	Computer with EHR access or paper forms	inside	Training on brief documentation
Medical oversight of monitoring	Symptom monitor	Observe or check-in on patients for 15 or 30 minutes, as indicated following vaccination; Provide first aid assistance to patients, if needed Be alerted by the monitor if there is a problem	Walkie-talkie/pager, LIP information sheets: ACLS, BLS, and How to use EpiPen auto injector	Inside	Basic first aid

Chapter 5. Organizing the vaccination clinic

This chapter describes what you need to get started on planning and organizing your vaccine clinic. We provide a one-page printable checklist for key supplies, resources, and documents. We also describe our experience obtaining vaccine doses from our county, including key contacts, delivery, storage, and reporting.

One of the most complex aspects of vaccine clinics is to consider all the factors involved in planning for the number of vaccine doses that can be administered in an hour. We describe some of the methods we've used to estimate this, based on physical space, the number of people who are scheduled, and staffing capacity. We also describe decision-making around monitoring the remaining vaccine doses. These are some of the most critical decisions that you will face as you are operating your vaccine clinic.

5.1. Checklist

SPACE NEEDS	
	Pharmacy prep area
	Restrooms
	Place to eat
	Tables
	Chairs
	Outdoor heaters or space heaters during cold weather, or fans during warm weather
	Umbrellas or tents
	Extension cords
SUPPLIES FOR VACCINE RECIPIENTS	
	Hand sanitizer
	Vaccine cards (pre-fill out lot number, manufacturer, site, date), ample supply of pens to share (if needed)
	Informational handouts (see section 2.4)
	Snacks
	Wheelchairs
SUPPLIES FOR STAFF/VOLUNTEERS	
	Clipboard
	Laminated screening card (15-30 min wait)
	2-5 EpiPens and EpiPen instructions (some clinics have chosen to have Benadryl, Zyrtec, etc available, too)
	Clear protocol for what your team will do in an emergency, BLS and ACLS resuscitation instructions
	Pens
	Walkie-talkies/Pagers/Communication Devices
	Flags indicating “exam room ready” and “in use” (or another system you will use to communicate this info)
	Bright-colored vests for person in charge and traffic directors
	Traffic wands
	Masks
	Face shields
	Gloves/Gowns
	Sani-wipes
	Hand sanitizer
	Laptops and chargers (for registration, vaccinator, LIP, and monitor) and/or stationary computers
	Snacks
	Lap blankets during cold weather
VACCINE SUPPLIES (in addition to the COVID-19 vaccine doses)	
	Needles/syringes
	Band-aids
	Alcohol prep wipes
	Cotton swabs
	Sharps containers
	Labels
	Caddy for vaccinator to transport vaccines, alcohol swabs and band-aids, plus larger needles
	Freezer
	Clock to note time when vaccine removed from freezer and vial punctured
	Draw table and chairs

5.2. Obtaining vaccines

When contemplating the implementation of a vaccine clinic, you need to know if you will have consistent access to vaccines. In Oregon, vaccine receipt from the federal government is managed by the state. The state then distributes most of the vaccine doses to each individual county, which is authorized to manage distribution to organizations and people within their region.

Vaccine allocation to our Scappoose clinic team was determined directly by the county health department. Our clinic was approached by the county health department to assist with vaccine administration due to limited availability of space and teams at other sites. After we created a prototype model for a vaccine clinic, we started with a pilot clinic weekend, to work out issues in real time, while not getting overwhelmed by volume. For the pilot clinic, we administered 100 vaccines/day, with vaccinators averaging about 10 vaccines given/vaccinator/hour. We were able to dramatically upscale from that rate on subsequent clinic days.

Every week our clinic leadership communicates with the county health department about our potential capacity for vaccine administration, at which point the county makes a request to the state. We are notified by early/mid week of the final allocation for our county (often, we are not given the full amount requested). Within the next 48 hours, we recruit staff needed to administer that week's vaccine allocation, and then give the final schedule of available appointment slots to the county health department, which then directs groups to sign up via a third party, HIPAA-compliant software system.

Vaccines currently are shipped to OHSU's central pharmacy and transported to our community-based clinic, but we anticipate they will eventually be shipped directly to our clinic. The vaccine doses arrive as a kit, including syringes/needles, CDC vaccine cards, and vials of vaccine. Band-aids/gauze/alcohol/gloves are provided by the clinic.

We were approached about the possibility of adding Pfizer vaccines because there are fewer places who can store them. Our state had a certain number of sub-zero freezers available per county (our county was allocated 1), and the county asked us to take this freezer in order to store Pfizer vaccines. (We also had to commit to delivering at least 1000 vaccines per week.) Currently, we receive and store Moderna vaccines on-site in our normal vaccine freezer/fridge.

5.3. Estimating how to “right-size” your vaccine clinic to match your vaccine doses

On a national scale, delivering as many doses as quickly as possible is the goal. However, every local vaccination site must be able to expand and contract depending on the number of doses available or how many people are scheduled. This is because vaccine doses available from week to week are highly variable and inconsistent. There are several factors that determine the number of people that can be vaccinated per hour at a site. This chapter describes considerations and lessons-learned on how to balance vaccine doses with the ability to administer the vaccines.

5.4. Estimating throughput

One important consideration for your vaccine clinic will be determining the time it takes to vaccinate someone, how you define a vaccination team, how many vaccinations a team can do, and how many teams will be needed to deliver the scheduled vaccinations on Vaccination Day. There are several factors that go into making this decision.

- Where will people be monitored, and can 15- and 30-minute monitoring be done as a group?
If people can be moved and monitored safely in a large conference room or waiting, this is important because it frees up the vaccinators and vaccination space to continue with the next person. Are you going to have vaccinators moving from room to room, or will you have the vaccination team remain stationary and have people move? We had limited large spaces available, so we had vaccinators moving from room to room.
- Who will be on a vaccination team? This may take some trial and error.
We paired one vaccinator with two people (scribes) who were tasked with rooming people, opening, preparing and completing the vaccination encounter in our EHR and scheduling 2nd dose appointments. This team could vaccinate 100-150 people in a 4-hour clinic session if they had enough exam rooms available for them to efficiently move from room to room.
- When estimating the number of vaccines you can administer, the following may be helpful:
 - Start small. Set a small goal for your first vaccine clinic, and then built on your success. Our first clinic aimed to vaccinate 200 people. That success gave us the confidence to increase our target for the next weekend. We have been able to steadily increase the number of vaccines we deliver at each clinic session.
 - Have a “modular” structure that can be increased or decreased in size due to changes that will inevitably occur each week as vaccination supplies ebb and flow.
 - Decide if you want to continue to provide routine and urgent clinical care during the same time frame. This will limit availability of staff, rooms, and parking but may be the best option for your community and your clinic’s sustainability.

5.5. How vaccine storage impacts decision making

There are two ways to approach vaccine storage. These have a dramatic impact on decision-making in all aspects of the vaccine clinic.

Option 1: If you are able to store unused vaccine doses for another day, you can calculate the approximate number of doses that can be administered in your physical space and with your staff, but you will have some “wiggle room” to flex your supply of vaccine up or down as you go. Each vaccine has different storage requirements, which are summarized in Section 5.6.

Option 2: If you have XX number of doses that you must administer within XX hours, and any leftover doses will be wasted, then you must aggressively utilize a waiting list and keep people flowing through the site until you’ve given your last dose (*i.e.*, at a site with no refrigeration).

Option 1:

One major consideration for monitoring vaccine doses is whether or not you have the capability to store vaccines for multiple days/weeks. If you have the ability to store vaccines for multiple days/weeks, then you can pace your clinic sessions. As described above, set a target for vaccinations in collaboration with county leaders or other community-based partners who may be handling requests for doses, prioritization of people, and/or online scheduling. By Thursday of each week, county leaders would tell our team how many people signed up to get a vaccine. This gave us an initial estimate of the number of doses we needed to have available per day, and we have the ability to store unopened vials, so we opened vials and filled syringes individually throughout the day to match demand being careful not to have too much supply at any given time. (Note: You can get at least 10 doses from vials of Moderna, so if you open the vial for one person, you'll need 9 people ready to receive the remaining doses that day.)

Option 2:

If you need to use all vaccine doses in a specific timeframe, you will need to set your vaccine clinic hours of operation and schedule adequate staff to work the site in order to be sure to administer all doses within this timeframe. You need to aggressively manage a waiting list. This is an ongoing list of people who did not have an appointment, but approach your team about getting vaccinated. Or, you may have a list that your county or other partners have generated ahead of time from eligible people who were interested but did not get a scheduled appointment. We recommend beginning to call the people on your wait list early in the session, especially if you have a high number of no shows. We describe our experience with this in Section 6.11. You may decide to overschedule your clinic, to account for no shows (although this could lead to disappointment for people scheduled late in the day if everyone shows up). As part of this option, you could theoretically create a stand-by line for people who show up without an appointment, so you have people on site and ready to go.

In summary: If you fall short one day/session and can store unused vials, you can try to add additional people to your schedule the next day/session to utilize the leftover vials of vaccine. If you cannot store unused vials, you need a plan for quickly adding same day appointments to your schedule (more on this topic below in 6.11).

In our clinic we used Option 1 described above. We prepared vaccine doses as we went, rather than preparing them all in advance. We did this because it allowed us to closely align the number of vaccines prepared with number of people who actually showed up for the clinic session.

We had a no show rate of 1-10% most days at the height of the vaccine clinic (February – April 2021). By the time the stand-alone vaccine clinic closed at the end of June 2021, the no show rate was closer to 25%.

Proceeding in this way, it is very important to estimate the total number of vaccinations you anticipate administering in 1 hour, and then purposefully draw up fewer vaccinations for that hour. That way if there is a bottleneck at check-in, or multiple no-shows, you do not have expiring syringes that you are scrambling to administer before they expire.

The nurse/pharmacist drawing up the vaccines likely will not know the actual rate at which you are vaccinating, so this can get tricky. We had an experience one hour where there were several expiring vaccines and no waiting patients. We scrambled and got them into other pods, but this is a situation to try and avoid.

Regardless of which way you plan to run your vaccine clinic, keep in mind that each vial contains multiple doses which must be completely administered within short time frames. Vaccines CANNOT BE RE-FROZEN once they have been thawed.

5.6. Materials you might find useful about organizing the vaccination clinic

- [EpiPen instructions](#)
- [ACLS instructions](#)
- [BLS instructions](#)
- [Vaccine cold-chain information](#)

Chapter 6. Developing a vaccine clinic workflow and utilization of space

An important part of preparing for a vaccination event at your clinic is to plan the workflow. This can take a little bit of time and iteration. Planning a workflow is one of those tasks that is best accomplished by a small multidisciplinary group, as having team members with different types of knowledge and different perspectives can help.

Once you develop what you think might be a good workflow, do a test run. Walk through all steps of the flow and identify where things might go wrong. Recruit a few patients to help, too! Also, be prepared to debrief after each vaccine clinic and discuss what worked and what did not regarding the timing and flow of the people for the vaccine clinic. You will continue to iterate and refine the workflow as you go. As mentioned above, start with a small number, this “mini-version” of your clinic will allow you to identify bottlenecks and refine your workflow. We also used observers to help us identify workflow improvements.

There are going to be bottlenecks in the workflow on vaccine day. While greeting and screening people for COVID-19 symptoms and possible adverse reactions to the vaccine can be done quickly, checking people in for their appointment, particularly if you are using a complicated EHR and/or collecting billing information, can be a bit more time consuming. Check-in is one place where there can be a bottleneck. A second common bottleneck is after people are checked-in as they wait to be roomed for their vaccination (or wait to be called over to a vaccination station).

6.1. First steps and considerations

As you begin to plan your vaccine clinic, take stock of all of your clinic’s physical assets:

Some examples of outside assets include:

- Parking lot – will there be sufficient parking? If not, where is good overflow parking? What about people with mobility issues?
- Is there a paved walkway around the building? Is any of this paved walkway covered? This could be a good place to set-up a check-in desk and the shape of the building can be used to form help form lines for people waiting to check-in and then for vaccinations.
- Consider where the team will be most visible as people approach.
- Sandwich board signs/ signs on the walls to help with way finding and one direction flow. (Try to reduce or eliminate people having to cross back over the flow.)
- Consider where check in is located – make sure that the noise level will not make it hard for staff to hear people.

Some examples of inside assets include:

- How many examination rooms do you have?
- Do you have a room, perhaps a small conference room, where vaccines can be filled?
- Do you have a room where multiple people can be monitored after they have been vaccinated?
- Do you have places where signs could be placed to help with wayfinding? It is very easy to get lost in a clinic where everything looks the same.

- Do you have tools that foster communication, such as flags on doors, white boards outside rooms, walkie-talkies?

If setting up in a community building not fitted for clinical care (e.g., school, church, community center), what spaces do you have and how do you want to design your space and allocate certain spaces for certain tasks? *If you create this type of clinic – please share information with us so we can add a chapter about it in our next version!*

Next is a list of items to consider as you begin to plan for the flow of this clinic vaccine event.

Parking

- Where will people park?
- Where will volunteers and clinical staff park?

Activities that are best conducted outside, if possible

- COVID-19 symptom screening
- Screening for possible adverse reactions to past vaccines, history of anaphylaxis, and identifying those who need 30-minute monitoring (vs. the standard 15-minute monitoring)
- Check-in
- Waiting for a vaccinator

For outside activities, here are some questions that might prompt your team's workflow development:

- How will people visually know where to go after they've parked?
- Will there be tables set up for check-in? If so, where will you place these?
- How will people be directed to the end of the first line after they park?
- How do you want that first line to move? Consider the advantages of having that line (or a line) follow the contour of the building, particularly if you don't have other markers.
- After the person is greeted, how do you want the line to move from having been greeted to check-in? You will see in our clinic, people were asked to line up for check-in and greeters moved up and down the line to screen people.
- How do you want the line to move from check-in to being brought in for a vaccine?
- How will you keep lines separate?
- How will you keep people appropriately spaced (physically-distanced by 6 feet)?
- Do you want or have markings 6-feet apart? Chalk could work for this. We just estimated it.
- How will you support people who are unable to stand in line to wait? How will you support people unable to walk short distances (wheelchairs, walkers, etc)?

For activities inside your clinic, here are some questions that might prompt your team's workflow development:

- What rooms will you use to vaccinate people?
- How will the team know when a room is open, but not yet clean? When it's clean and available? When a room is occupied?
- Where will you monitor people?

- Will this be inside an exam room with the door open, inside a larger space within the clinic (e.g., waiting room), or is it possible to do this outside under a structure (e.g., a tent) or in personal cars?
- If monitoring inside the building, how can you keep people moving so exam rooms for vaccinations open quickly?
- How will you keep people physically distanced?
- How will you identify and monitor people who need 15- and 30-minute monitoring?
- How will people know when they can leave?

6.2. Sample workflow and floor plan

In this section, we walk you through the floor plan of our clinic and show you how we organized our clinic, as this might help your planning. We also walk you through the workflow at our clinic, and provide you with sample scripts that you can use to get your team started.

Physical Layout and People Flow

The figure below is the floor plan of our clinic. Our clinic is part of a medical/shopping center where there is ample parking. The building has a small overhang around the building, and a larger overhang at the front of the building. There are multiple doors where people can enter and exit the building.



We set up two folding tables at the front of the building to be used for check-in. This is marked on the map as “Registration.” Three people were typically seated at this table to register people. See Section 6.7 for more details about how the check-in table was set up. After people parked, they could see the check in desk, as they approached the front of the building. A greeter was watching people as they approached the building, and directed them to the end of the line. There was a check-in line. And, once this line formed, people generally knew to follow it and go to the end, with little assistance.

The main limitation of this spot was the curb, as it was not wheelchair accessible. There was not a great alternative for us, but it is an important consideration.

The people in line for Registration are marked with an X on the map. People lined up six feet apart for this line. Given the building's overhang, people could stay somewhat dry while they waited.

We did not have spots marked on the sidewalk, and people needed to be reminded by the greeter(s) to maintain 6-feet from others. If possible, mark the distance.

People who cannot stand and ambulate:

At each session, we had a number of people who could not physically stand for 20-30 minutes waiting for a vaccine and/or who were in a wheelchair. In these instances, we either had someone in the line just after this person "mark their spot" and let us know when it was their turn so the Greeter could locate the person and his/her caregiver. We also sometimes had a family member hold the person's spot. Or, if possible, we found a place inside the clinic where people could sit and wait for their turn.

After Registration, people were initially directed to one of two doors, although the flow worked better when we used three doors; the lines were shorter and moved faster with three doors. This, however, required having an extra vaccination team working. Doors 1, 2 and 4 are marked on the map with the appropriate number. Lines formed at each of these doors as people waited (outside) to be roomed for a vaccine. Blue dots mark how we directed this line. Given the footprint of the clinic, we needed to be careful and guide people to keep these two lines separate. This was a particular concern at Doors 2 and 4, but when we added a third door and an extra vaccination team, there were fewer people waiting in line at this step in the process.

Inside the clinic, we used the Platinum Pod Conference Room for the team filling the syringes. This room was staffed by at least one RN and was also where people who needed 30-minute monitoring were located while they waited, as the people filling the syringes could also monitor these people.

Having an RN fill vaccine syringes and monitor people in this space was useful. Think about places in your workflow and space where you can strategically place your team members who can do multiple tasks.

We used the lobby to monitor some of the people who had a 15-minute waiting period. We could safely distance about 12 people in this waiting room, which was generally all that was needed. If the waiting room was too full, people were asked to wait in their examination room, and monitors walked the halls to make sure people were doing okay. People were asked to set a personal timer for the time they needed to wait. Most had a smart phone that they could use for this task. We also used white boards outside each exam room to note the time a vaccine was given.

PROVIDER:	RMS:	AM:	PM:	EVE:
BLUE	16, 7, 8, 9, 10, 5	Joe	Shawna	Jason
Red	12, 13, 14, 15, 11	Pen-Sonja Pen-Mall Chans	Ashley	Pen-Robert Pen-Beth
Orange	17, 18, 19, 20, 21, 22	Pen-Garrett Pen-Liz Ann Pen-Chris Michael	Tiff	Melissa
Gold	1, 2, 3, 4, 6, 10, 11	Pen-Peggy Martin Pen-Deb Cohen	LeAnn	Britt
Greeter 1- Screening		Pen-Sara MacCormen	Pen-Katrina Pen-Walshman	
Greeter 2- Screening		Pen-Karla	Pen-Alison Pen-Fred	
Greeter 3- Check-in		Pen-Pearl	Pen-Karla	
Greeter 4- Check-in		Pen-Aman Pen-Prasad	Pen-Tina	
Greeter 5- Check-in		Pen-Bianca	Pen-Rebekah	
Monitor/ Navigator 1		Pen-Stephanie Pen-G	Pen-David	
Monitor/ Navigator 2		Pen-Ashley Pen-Almond		
LIP		Pen-Cynthia		
Phones 1- WFL		Pen-Tina	Pen-Kim D	
Phones 2- in clinic		Pen-Jmac	Pen-Jmac	
Vaccine (draw) Monitor		Pen-Randy		
Vaccine (draw) Monitor		Pen-Stem	Pen-Stem	

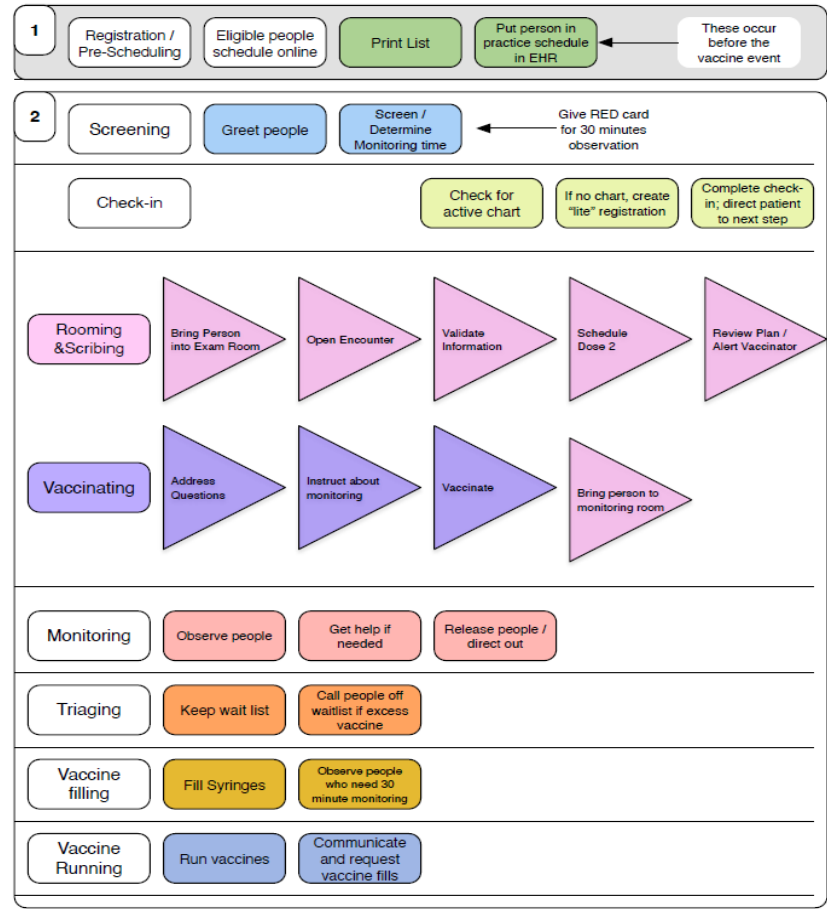
The picture above shows people assigned to each role and each location. We used approximately 25 examination rooms. The clinic has four pods. Each pod had a vaccination team (1 vaccinator/2 scribes), the teams are described in Section 6.9. Each team worked between 4-6 examination rooms, with one team overflowing into the lobby, if needed. This overflow rarely occurred.

The Roomer/Scribe would invite and escort the next person in the “already check-in” line outside into the building (from either Doors 1, 2 or 4), bring the person into an open (and cleaned) examination room, log into the EHR to create an encounter, and schedule their second appointment (if applicable). The Roomer/Scribe would then use a room flag system and/or walkie-talkie to communicate with the clinician that the person was ready for vaccination. The vaccinator did one additional screen of allergies prior to vaccinating and answered any additional questions.

We used flags similar to how our usual clinic flows: red flag signaled scribe was in room with vaccine recipient, green flag signaled recipient was ready for vaccinator, blue flag signaled recipient had been given vaccine and was waiting for 15 minute monitoring in exam room with the door open.

Workflow

The figure below shows our workflow. It is downloadable as a PDF [here](#). In Chapter 5 we describe all of the functions needed to carry out a vaccine clinic. And, we describe how, in our clinic, we combined some of those functions into roles, such as the Greeter/Screenener role and the Roomer/Scribe role. The workflow below



Note: Steps in the flow diagram for scheduling a second vaccine dose will not be needed for the J & J vaccine. This was noted in pink as part of Rooming & Scribing.

shows the sequence in which these functions or activities were carried out and by whom.

This is a swim lane diagram. It is read from top to bottom and from left to right. Working from the top, the first grey row, which is labeled number 1 is the first swim lane. We created a grey swim lane to show that these activities all occur before the day of the vaccine clinic.

The top lane denotes all functions related to the registration activity, which is complete when all people scheduled for the vaccine clinic have had an appointment scheduled in the clinic’s EHR.

The ovals show each step in the process: The green ovals show steps carried out by the registrator. The first uncolored oval shows a step that is carried out by the person who is wishing to be vaccinated (i.e., schedule online).

As this swim lane shows, this Registrator receives a list of eligible people who scheduled an online vaccination appointment. The Registrator prints this list to have at the day of the vaccine clinic. And, they enter each person into the clinic's schedule in the EHR.

Each swim lane shows a different activity and the steps in the process and the order in which they occur, if read from left to right. In our clinic, those doing Rooming and Scribing worked in teams with those doing Vaccinating. The triangles show the steps in the process, and the colors of the triangle show which role carries out the step (e.g., green is done ahead by clinic staff; blue is the Greeter/Screeners; pink is the Roomer/Scribe; purple the vaccinator, and so forth).

6.3. Scheduling vaccine recipients for first dose

Before the day of the vaccine clinic, people were pre-scheduled via a HIPAA-compliant platform. For us, this was facilitated by Columbia County Public Health, which used the [Acuity](#) platform. Other HIPAA compliant scheduling platforms are [Jot Form](#), [BlockIt](#) and [SOLV](#). See Chapter 8 for examples of how these platforms were used.

Since we were using our EHR to document vaccines, the registrator attempted to pre-register each person via an expedited registration workflow. In order to register people in our EHR, the following information needed to be collected by the county's scheduling system: full name, date of birth, address, phone number, sex, preferred language. If this is possible, it will speed the check-in process on the day of the vaccine clinic. **It is important to know the elements of information needed for registration, reporting, billing and for completing your state's immunization registry documentation.**

6.4. Assisting with car flow/traffic in the parking lot

We found that people would arrive early to the vaccine clinic. We asked them to wait in their cars until the clinic opened. In addition, cars would be arriving and departing the lot all day. We did not experience trouble with traffic, and drivers were largely able to negotiate the parking lot, park their car and join the line. If you have a tricky parking situation, it is advisable to have someone directing traffic and monitoring parking (ensure they have vests and traffic wands).

Given limited spaces in the lot, volunteers and staff were asked to park elsewhere. An email was sent to the vaccination team the day before the clinic with directions for where to park. For the example email that was sent to volunteers, click [here](#).

6.5. Screening people for an appointment and appropriate priority group

Our clinic is following the priorities that Oregon has set for vaccinating the population. This prioritization can be found by clicking [here](#). Updates to the state's vaccine priorities can be found on [COVID-19 Updates \(egov.com\)](#).

We assumed that people the county had scheduled into an appointment slot met eligibility criteria; we did not do a re-assessment at the check-in door to determine whether each person who arrived fit within the state's eligibility criteria.

Managing the communication when a person must be turned away

There will be people who you will have to turn away. We recommend listening to these people, and treating them kindly. Everyone wants to get vaccinated, and it's difficult to have to wait.

- Explain to the person that the state and county are identifying and inviting people to the vaccine clinic based on priorities. The clinic is not making these decisions.
- Give them a handout that describes your state's vaccination eligibility groups, if appropriate (example from Oregon is in Chapter 3).
- Provide them with a handout of who they can contact in their county. In Oregon, this information can be found [here](#).
- Offer to take the person's phone number and put them on a wait list. We explained to people that sometimes, at the end of a clinic session, there are a few extra vaccines to be used. We contacted people in the order that they were placed on this list to come into the clinic to be vaccinated. The person may only get 15-20 minutes notice, if this were to happen. Typically, people were happy to have this opportunity.

Managing family and friends

Friends and family that accompany the person with a scheduled appointment, but are not part of the priority group being vaccinated (and do not have an appointment) were not vaccinated at our clinic. We asked these people to wait in the car (or elsewhere), but not in line, if the person with the appointment was able to wait in line alone. If the person getting vaccinated needed assistance, we asked family and friends to identify one person to accompany the person.

We had some instances where multiple people from the same family were getting vaccinated, and all had appointments. These people waited in line as a group. Each individual was checked-in. This family was then roomed as a group (in the same examination room). The Roomer/Scribe created an encounter and second appointment for dose 2 for each individual, and the vaccinator vaccinated all people at the same time. In some instance, we allowed families to monitor in the examination room.

Managing people who request a different vaccine

It is being widely publicized that some people are requesting one of the vaccines over another. Our institution has begun publicizing which vaccine will be offered at a vaccination event, which allows people to make their own choice about whether to get vaccinated at that event, or a different event. We will continue to update this toolkit with more resources on this topic, including decision support tools as they become available. In the meantime, [Boost Oregon](#) offers resources for discussing vaccine hesitancy. The CDC offers [strategies for healthcare providers](#) to answer common questions about COVID-19 vaccines.

6.6. Screening people for COVID-19 symptoms

The questions we asked to screen people for COVID-19 symptoms can be found [here](#). We laminated these questions. People were screened for COVID-19 symptoms outside. The Greeter/Screeners did this. After completing these questions. If a person screens positive on COVID symptom screen, they needed to reschedule. The Screener contacted the Vaccination Lead on duty for assistance. We did not have anyone at the event screen positive for COVID-19 symptoms.

6.7. Screening people for adverse reactions to the vaccine/monitoring needs

After screening for COVID-19 symptoms, the Greeter/Screen then asked people about potential adverse reactions to the vaccine. The following visual document was created to identify people who should and should not proceed with a vaccine, and people who should wait for 15 or 30 minutes after vaccination. Although we had a laminated version of this available to the Greeters/Screeners, it was easier for these volunteers (who were often non-clinical volunteers) to have a few short questions to guide their screening process.

CONDITIONS	MAY PROCEED WITH VACCINATION	PRECAUTION TO VACCINATION	DO NOT VACCINATE
	Conditions: <ul style="list-style-type: none"> Immunocompromised condition Pregnancy Lactation Actions: <ul style="list-style-type: none"> Vaccination not contraindicated Patient may consider discussion with primary healthcare provider 15-minute observation period 	Conditions: <ul style="list-style-type: none"> Moderate/severe acute illness Actions: <ul style="list-style-type: none"> Risk assessment Potential deferral of vaccination 15-minute observation period if vaccinated 	Conditions: <ul style="list-style-type: none"> None Actions: <ul style="list-style-type: none"> N/A
ALLERGIES	Allergies: <ul style="list-style-type: none"> Non-serious allergy history (e.g., no anaphylaxis) to any of the following: <ul style="list-style-type: none"> Food, pet, insect, venom, environmental, latex, etc. Oral medications Vaccines or other injectables Family history of allergies Actions: <ul style="list-style-type: none"> 15-minute observation period 	Allergies: <ul style="list-style-type: none"> History of anaphylaxis due to any cause History of any immediate allergic reaction to vaccines or injectable therapies (except those related to component of mRNA COVID-19 vaccines or polysorbate, as these are contraindicated) Actions: <ul style="list-style-type: none"> Risk assessment Potential deferral of vaccination and/or referral to allergist-immunologist 30-minute observation period if vaccinated 	Allergies: History of the following are contraindications to receiving either of the mRNA COVID-19 vaccines: <ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose of an mRNA COVID-19 vaccine or any of its components Immediate allergic reaction of any severity to a previous dose of an mRNA COVID-19 vaccine or any of its components (including polyethylene glycol) Immediate allergic reaction of any severity to polysorbate Actions: <ul style="list-style-type: none"> Do not vaccinate Consider referral to allergist-immunologist

Date Reviewed: 1/13/2021

The CDC prevaccination checklist is shown below and available to download [here](#). OHSU provided our clinical system with the following guidance: People should delay an immunization until a consult with an allergist has occurred if the person has had:

- Hypersensitivity reaction to the first dose of the COVID-19 vaccine;
- Known severe allergy to a COVID-19 vaccine ingredient;
- Their own concerns that they might have a severe reaction when they get the vaccine.

Based on this guidance, we identified four key questions for the Greeter/Screeners to ask.

- CDC item #4 Have you ever had an allergic reactions to another vaccine other than COVID-19 vaccine?
- CDC item #5 Have you ever had a severe reaction to severe reaction to anything else, or history of anaphylaxis needing an EpiPen?
- #9 Do you have a weakened immune system?
- #11 Are you pregnant or breastfeeding?

We asked this last question, not because these are contraindications, but because this allowed us to direct people to the medical lead if they had additional questions or wished to talk with a clinician. Greeters and Screeners held laminated cards that said “30 minutes.” They handed this card to anyone who reported a prior allergic reaction to a vaccine. They also handed a 30 minute card to people who had concerns they wanted to discuss with a clinician and/or who reported a severe allergy that could be clinically relevant (e.g., antibiotics, peanuts) and required additional assessment/consideration.

6.8. Registration and check-in

Your clinic will need to consider how it will register, check-in, and submit the vaccination information to the state. We used a vaccination module built into our EHR, which is Epic. This enabled us to use a streamlined registration and scheduling process for people who were not patients of the clinic. At the check-in table, each staff member had a laptop, a printout of the people scheduled for the day (for reference in case the person’s appointment could not be found in the EHR), sanitizing wipes for pens, umbrella handles, and wheelchair handles, and to wipe laptops in between users. We also provided blankets and a small heater under the table.

People made their appointments via the county. The county sent information to the clinic. For many people, minimal information was added to the EHR for the person and an appointment was created. On the day of the vaccine clinic, when people arrived, those at the Registration Desk found the person’s name on the schedule and then followed steps to check-in the person. When people were already in the system and their information was complete (which was accomplished through pre-scheduling done by the team in advance), check-in was rapid. When this information was not in the EHR, the person at Registration added the necessary information. This did slow down the Registration process. (As noted above, if this is happening frequently at registration, consider having another desk available to do this additional work so that you can keep your line moving.)

If you choose to use an EHR-based tool to track vaccine administration, it is important to outline the essential information needed (i.e., the least amount of information your clinic needs to collect from hundreds of people who are not already registered as your established patients in the EHR). Streamlining this process as much as possible and doing work ahead of the vaccination day will make the registration process most efficient.

Prevaccination Checklist for COVID-19 Vaccines



For vaccine recipients:

Patient Name _____

The following questions will help us determine if there is any reason you should not get the COVID-19 vaccine today.

Age _____

If you answer "yes" to any question, it does not necessarily mean you should not be vaccinated. It just means additional questions may be asked.

If a question is not clear, please ask your healthcare provider to explain it.

Yes No Don't know

1. Are you feeling sick today?			
2. Have you ever received a dose of COVID-19 vaccine?			
• If yes, which vaccine product did you receive? <input type="checkbox"/> Pfizer <input type="checkbox"/> Moderna <input type="checkbox"/> Another product _____			
3. Have you ever had an allergic reaction to: (This would include a severe allergic reaction [e.g., anaphylaxis] that required treatment with epinephrine or EpiPen® or that caused you to go to the hospital. It would also include an allergic reaction that occurred within 4 hours that caused hives, swelling, or respiratory distress, including wheezing.)			
• A component of the COVID-19 vaccine, including polyethylene glycol (PEG), which is found in some medications, such as laxatives and preparations for colonoscopy procedures			
• Polysorbate			
• A previous dose of COVID-19 vaccine			
4. Have you ever had an allergic reaction to another vaccine (other than COVID-19 vaccine) or an injectable medication? (This would include a severe allergic reaction [e.g., anaphylaxis] that required treatment with epinephrine or EpiPen® or that caused you to go to the hospital. It would also include an allergic reaction that occurred within 4 hours that caused hives, swelling, or respiratory distress, including wheezing.)			
5. Have you ever had a severe allergic reaction (e.g., anaphylaxis) to something other than a component of COVID-19 vaccine, polysorbate, or any vaccine or injectable medication? This would include food, pet, environmental, or oral medication allergies.			
6. Have you received any vaccine in the last 14 days?			
7. Have you ever had a positive test for COVID-19 or has a doctor ever told you that you had COVID-19?			
8. Have you received passive antibody therapy (monoclonal antibodies or convalescent serum) as treatment for COVID-19?			
9. Do you have a weakened immune system caused by something such as HIV infection or cancer or do you take immunosuppressive drugs or therapies?			
10. Do you have a bleeding disorder or are you taking a blood thinner?			
11. Are you pregnant or breastfeeding?			

Form reviewed by _____

Date _____

01/05/2021 CS321629-E

Adapted with appreciation from the Immunization Action Coalition (IAC) screening checklists

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6.9. Monitoring people post-vaccine

Post-vaccine monitoring is the biggest limiting factor in how a vaccine clinic will function. You must provide space for every person to safely sit for 15 minutes after being vaccinated, distanced from others. A small number will need 30 minute monitoring. Effective planning of monitoring space is essential. Some ideas are:

- Bring 15-minute people to the lobby. They can self-time the 15 minutes using their phone or watch.
- Move 30-minute people to a conference room.
- Have people return to their cars if the parking lot is large enough to accommodate this. People can write the time on their windshield or be handed a piece of paper for their dashboard.
- If you have ample exam rooms, have them sit in an exam room with the door open.

Regardless of where you choose to monitor people, you will need a few team members to keep an eye on people. You will need to have some supplies on hand for (**extremely rare**) vaccine reactions. In general, the critical piece is benadryl and epinephrine. We alerted our local fire & rescue team about the clinic and to let them know their services may be needed for anaphylactic reaction; in our case, the fire & rescue building is a few hundred feet away from the clinic building so they were not on-site. For other vaccine clinics it would be advisable to have EMTs on site in the parking lot to help to respond to emergencies. Anaphylactic reactions are EXTREMELY rare. In our experience the vast majority of reactions were vasovagal reactions from people with either needle phobias or anxiety around vaccine administration itself. For this reason, it was important to have someone available that can offer this latter group juice/water/crackers and have ability to take basic vitals, etc. We extended monitoring of anyone with vasovagal reactions to 30 minutes (minimum) of monitoring with the requirement that they must feel back to baseline before leaving the facility.

6.10. Billing

The COVID-19 vaccine was purchased by the U.S. government and is therefore available to every person at no cost. People receive the vaccine regardless of ability to pay and regardless of their insurance status. Providers are able to bill insurance for the administration of the COVID-19 vaccine. CMS has several toolkits on this centralized resource page to assist with billing: <https://www.cms.gov/COVIDvax> In addition, we cover coding information in Chapter 8.11.

Oregon and other states may have funding through FEMA to supplement insurance reimbursement. Please see Chapter 3 for more information about support for vaccination.

Even if you are not currently billing or planning to bill, it is prudent to collect insurance information from people along with a clear message that they will not pay anything out of pocket for the vaccine.

6.11. Managing a wait list for end of day leftover doses

As described above, we kept a wait list of people who were interested in getting called if we have extra vaccines to use at the end of the clinic. You can find the list we created for this purpose [here](#). Typically, the person at the Registration Desk kept this list.

6.12. Vaccine “waste” or unused doses

In early 2021, vaccine supply was scarce and a lot of attention was given to maximizing every drop of vaccine in a vial. Since May 2021, there has been a major shift in recommendations about waste:

Vaccine vials may be opened without every dose being used. As access to COVID-19 vaccine increases, it is important for providers to not miss any opportunity to vaccinate every eligible person who presents at your primary care clinic for a COVID-19 vaccine. As there are opportunities to vaccinate more people, it may increase the likelihood of leaving unused doses in a vial. Your clinic may want to consider that despite following best practices to use every dose possible, that should not be at the expense of missing an opportunity to vaccinate every eligible person when they are ready to get vaccinated.

<https://www.cdc.gov/vaccines/covid-19/downloads/wastage-operational-summary.pdf>

6.13. For more information about developing a vaccine clinic workflow and utilization of space

- [CDC’s Prevaccination Checklist for COVID-19 Vaccines](#)
- Our modified prevaccination checklist for [first](#) and [second](#) doses (in our clinic, these are laminated and can be cleaned and reused)
- [EpiPen instructions](#)
- [ACLS instructions](#)
- [BLS instructions](#)
- [Vaccine cold-chain information](#)
- [COVID-19 vaccine FAQs from OHSU](#)
- [Symptoms of Coronavirus](#)
- [Vaccine clinic time and budget worksheet](#) (Harvard Primary Care Center)
- [Vaccine clinic readiness checklist](#) (state of California)
- [Billing resources](#)
- [How to handle unused doses](#)

6.14. Materials you might find useful about developing a vaccine clinic workflow and utilization of space

- [CDC’s Prevaccination Checklist for COVID-19 Vaccines](#)
- [Role workflow](#)
- [Vaccination flow – staff perspective](#)
- [Vaccination flow – recipient perspective](#)
- [Staff/volunteer sample reminder and parking email](#)
- [Oregon eligibility contact card](#)
- [Sample parking lot map](#)
- [Sample “What to expect” video](#)
- [Waiting list](#)
- [Vaccine hesitancy resources from Boost Oregon](#) and [CDC](#)
- HIPAA compliant online scheduling and documentation: [SOLV](#), [JotForm](#), [Block-It](#), and [Acuity](#)

Chapter 7: Boosters, pediatric vaccines, exemption requests and vaccine equity

7.1. Boosters, additional doses, and “mixing and matching”

7.1.a. Booster doses

The [CDC recommends](#) that some COVID-19 vaccine recipients get booster shots. People 65 years and older, 50–64 years with underlying medical conditions, or 18 years and older who live in long-term care settings should receive a booster shot. All people 18 years and older should receive a booster shot at least 2 months after receiving their Johnson & Johnson/Janssen COVID-19 vaccine.

People may select any brand of COVID-19 vaccine for their booster dose, regardless of brand used for initial doses.

Booster dose vaccine manufacturer	Age of recipient (years)	Vial cap color denoting formulation	Booster dose	Booster dose injection volume	Number of doses
Pfizer-BioNTech	≥18	Purple	30 µg	0.3 ml	1
Moderna	≥18	Not applicable	50 µg*	0.25 ml	1
Janssen	≥18	Not applicable	5×10 ¹⁰ viral particles	0.5 ml	1

Source: <https://www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html>

For people who received Pfizer-BioNTech or Moderna COVID-19 Vaccine

Older adults age 65 years and older: People ages 65 years and older **should** get a booster shot. The risk of severe illness from COVID-19 [increases with age](#) and can also increase for adults of any age with underlying medical conditions.

Long-term care setting residents ages 18 years and older: Residents ages 18 years and older of long-term care settings **should** get a booster shot. Because residents in [long-term care settings](#) live closely together in group settings and are often older adults with underlying medical conditions, they are at increased risk of infection and severe illness from COVID-19.

People with underlying medical conditions ages 50–64 years: People ages 50–64 years with underlying medical conditions **should** get a booster shot. The risk of severe illness from COVID-19 increases with age and can also increase for adults of any age with [underlying medical conditions](#).

People with underlying medical conditions ages 18–49 years. People ages 18–49 years with underlying medical conditions **may** get a booster shot based on their individual risks and benefits. The risk of severe illness from COVID-19 can increase for adults of any age with [underlying medical conditions](#). This recommendation may change in the future as more data become available.

People who work or live in high-risk settings ages 18–64 years. People ages 18–64 years at increased risk for COVID-19 exposure and transmission because of [occupational or institutional setting](#) **may** get a booster shot based on their individual risks and benefits. Adults who work or reside in certain settings (e.g., health care,

schools, correctional facilities, homeless shelters) may be at increased risk of being exposed to COVID-19, which could be spreading where they work or reside. That risk can vary across settings and based on how much COVID-19 is spreading in a community. This recommendation may change in the future as more data become available.

Examples of workers who may get COVID-19 booster shots:

- First responders (e.g., healthcare workers, firefighters, police, congregate care staff)
- Education staff (e.g., teachers, support staff, daycare workers)
- Food and agriculture workers
- Manufacturing workers
- Corrections workers
- U.S. Postal Service workers
- Public transit workers
- Grocery store workers

For people who received J&J/Janssen COVID-19 Vaccine

All people ages 18 years and older who received a J&J/Janssen COVID-19 vaccine at least 2 months ago **should** get a booster shot. The J&J/Janssen COVID-19 vaccine has lower vaccine effectiveness over time compared to mRNA COVID-19 vaccines (Pfizer-BioNTech and Moderna).

7.1.b. Additional primary doses (a.k.a. third dose)

People with moderately to severely compromised immune systems are especially vulnerable to COVID-19, and may not build the same level of immunity to 2-dose vaccine series compared to people who are not immunocompromised.

[CDC recommends](#) that moderately and severely immunocompromised persons aged ≥ 12 years (Pfizer-BioNTech recipients) or ≥ 18 years (Moderna recipients) receive an additional primary dose of the same mRNA COVID-19 vaccine at least 28 days after a second dose, as follows:

- Pfizer-BioNTech: 30 μg in a volume of 0.3 ml (same as the primary series dose and booster dose) for persons aged ≥ 12 years.
- Moderna: 100 μg in a volume of 0.5 ml (same as the primary series dose) for persons aged ≥ 18 years.

This additional dose is intended to improve immunocompromised people's response to their initial vaccine series. Immunocompromised people include those who have:

- Been receiving active cancer treatment for tumors or cancers of the blood
- Received an organ transplant and are taking medicine to suppress the immune system
- Received a stem cell transplant within the last 2 years or are taking medicine to suppress the immune system
- Moderate or severe primary immunodeficiency (such as DiGeorge syndrome, Wiskott-Aldrich syndrome)
- Advanced or untreated HIV infection

- Active treatment with high-dose corticosteroids or other drugs that may suppress your immune response

7.1.c. “Mixing and matching” vaccine brands

[According to the CDC](#), the same brand of COVID-19 vaccine should be used for the first, second and third (for those who are immunocompromised) doses. Booster doses may be any brand of the COVID-19 vaccine.

7.2. Pediatric and adolescent vaccines

7.2.a. Is the COVID-19 vaccine recommended for children and adolescents?

The American Academy of Pediatrics (AAP) recommends COVID-19 vaccination for all children and adolescents 5 years of age and older who do not have contraindications using a COVID-19 vaccine authorized through an Emergency Use Authorization (EUA) or Biologics License Application (BLA), recommended by CDC, and appropriate for their age and health status. [Read the AAP statement.](#)

7.2.b. Do children and adolescents need special consent or assent to receive the COVID-19 vaccine?

This information comes from [the American Academy of Pediatrics](#).

State and/or local laws determine who is able to consent or assent for COVID-19 vaccines; the same as other vaccines. In most places and instances, a parent’s consent is required for a child or adolescent to receive a vaccine. While this may not always require a signature, you may consider obtaining one for COVID-19 vaccines. Health care providers administering the vaccine should inform vaccine recipients of the following: (1) FDA has authorized emergency use of the vaccine (2) known and potential risks and benefits related to emergency use (3) that they have the option to accept or refuse the product and (4) be informed of any available alternatives to the product and their known risks and benefits. Each recipient should receive a fact sheet that includes essential information about the vaccine. The fact sheets for health care professionals administering the vaccine as well as recipients were approved as part of the authorization and are available from the FDA website:

- [Fact Sheets for Health Care Providers](#)
- [EUA Fact Sheet for Recipients and Caregivers \(12 years of age and older\)](#)
- [EUA Fact Sheet for Recipients and Caregivers in Spanish \(12 years of age and older\)](#)
- [EUA Fact Sheet for Recipients and Caregivers \(5-11 years of age\)](#)
- [EUA Fact Sheet for Recipients and Caregivers in Spanish \(5-11 years of age\)](#)

7.2.c. Special considerations for vaccinating patients under age 12

Information from Pfizer for the 5-11 years of age formulation:

[Standing Orders for Administering Vaccine](#)
[Preparation and Administration](#)
[Storage and Handling Summary](#)

- *Administer catch-up vaccinations to patients who are behind.* Most parts of the country have experienced decreased rates of routine childhood and adolescent immunizations during the pandemic. The time is now to call patients and families and encourage them to return and get caught up. As some patients and families may be hesitant to return to the office, the AAP has reinvigorated its #CallYourPediatrician campaign, which includes [resources](#) that practices can use to amplify this message. Information on reminder/recall strategies is available [here](#).
- *Promote COVID-19 vaccine confidence.* Misinformation about COVID-19 vaccine abounds. Vaccine hesitancy threatens the promise of herd immunity against COVID-19. Practices can utilize [resources](#) in the AAP Immunizations Campaign Toolkit to promote vaccine confidence. In addition, practices can utilize the CDC's [COVID-19 vaccine confidence resources](#). Consider ways that patients and families in your practice like to receive information and use these mechanisms to debunk common myths and answer frequently asked questions.
- *Know the COVID-19 vaccination sites in your community:* If your practice chooses not to administer COVID-19 vaccine, you should identify and compile information about nearby COVID-19 vaccination sites to share with your patients and families. A good resource is <https://www.vaccines.gov/search/> which allows you to search by product and zip code. Parents can also text their ZIP code to 438829 (GETVAX); or call 1-800-232-0233. Encourage everyone to be vaccinated and ask families to notify you if your patient receives COVID-19 vaccine elsewhere. This will help ensure a comprehensive immunization record.

7.2.d. Communication resources specific to pediatric populations:

- [How to talk with parents about COVID-19 vaccination for pediatric patients](#)
- [COVID-19 vaccination of minors](#)
- [Coadministration of COVID-19 vaccines with other vaccines](#)
- [AAP COVID-19 vaccine campaign toolkit](#)

7.3. Vaccine Equity

7.3.a. OHA vaccine advisory committee – a vision for equity across the state

The Oregon Health Authority (OHA) convened a COVID-19 Vaccine Advisory Committee (VAC) to develop the state's sequencing for the COVID-19 vaccine. The 27-member VAC held four meetings during the month of January 2021 and three information sessions to discuss topics related to vaccine delivery. According to the recommendation report, "VAC members were selected from a group of nearly 700 people for their professional background, lived experiences or expertise serving individuals that have been systemically impacted by COVID-19. The VAC was convened with the specific intent of centering equity in all vaccine sequencing decisions."

The VAC acknowledges structural racism and pressure from systems that are not ready to center this truth about the ways structural racism impacts the health of Black, Indigenous and People of Color (BIPOC) communities. VAC sequencing was in consideration and in review of the data and needs of BIPOC communities and refugee communities.

Vaccine distribution must include working with trusted community partners including community-based organizations, faith leaders and trusted entities where people feel

comfortable. OHA must track and use data along the way to capture information about medical mistrust and barriers. Local public health authorities are charged with engaging and working with vulnerable populations. This includes partnering with community-based organizations, federally qualified health centers and other local organizations to develop a community-informed, equity-informed vaccine distribution plan.

7.3.b. How one community is implementing this equity vision

[This section was contributed by Columbia-Pacific CCO]

In order to achieve a shared vision of vaccinating the most people within our communities, various sectors are coming together collaboratively in three rural counties in Northwest Oregon: Columbia, Tillamook, and Clatsop. The box on the right describes the Coordinated Care Organization model in Oregon. Over the last several years, CCOs have developed close partnerships with public health, community-based organizations, hospitals, and health system at-large, in service to improving the system of care. These partnerships have served as an important foundation for developing the systems to distribute COVID-19 vaccine. The CCO that serves Columbia, Tillamook and Clatsop counties is called Columbia Pacific CCO. As the CCO for this region, we recognized that this work of vaccinating communities needed to be led by local public health and community-based organization. We were active partners to add value where needed. This has included convening partners, providing funding and other support, providing data, and developing an equity toolkit, as described below.

Convening partners to identify barriers and develop solutions to reach underserved populations

Columbia Pacific-CCO played a convening role, bringing together partners (community-based organizations, public health, primary care and hospitals) across its three-county region to discuss and address systemic barriers related to accessing COVID-19 vaccine. The process of convening partners has been instrumental in helping cultivate shared, innovative, and integrated approaches to vaccinate the community. The Columbia Pacific-CCO role was to invite partners, provide the web meeting platform, take notes, identify next steps, and co-lead the meeting if requested.

Our first convening was a discussion about barriers to vaccination. In the weeks following that first meeting, Columbia Pacific-CCO engaged in direct conversations with partners to gather additional perspectives, especially as the first vaccination clinics were being held. In March 2021, we helped convene a second meeting, with a goal of sharing ideas, planning, and discussing what supports were needed to address system barriers that limit access to the COVID-19 vaccine for those most impacted by COVID, and by those most affected by systemic inequities within society. We also helped to convene partners within individual counties to develop shared plans to stand up mass vaccination sites, as vaccine supply starts to increase.

What is a CCO?

A Coordinated Care Organization (CCO) is a Medicaid managed care organization that provides coverage for Medicaid members in a specific region of the state. A CCO is a network of physical health care, addictions and mental health care and dental care providers. CCOs are local and have one budget that grows at a fixed rate for mental, physical and dental care. CCOs are accountable for the health outcomes of the population they serve. They are governed by a partnership among health care providers, community members, and stakeholders in the health systems that have financial responsibility and risk.

<https://www.oregon.gov/oha/hsd/ohp/pages/coordinated-care-organizations.aspx>

The barriers we identified through this work included:

- Transportation access to vaccination events
 - o Due to geography
 - o Due to difficulties leaving the home
 - o Due to age
 - o Due to intellectual, developmental or physician disability
- Interpretation services for English Language Learners
- Assistance related to system navigation
 - o Due to lack of internet
 - o Lack of expertise / ability to use online attestation and scheduling systems
- Supports for people with Serious Persistent Mental Illness
- Supports related to vaccine hesitancy; need events that feel safe and are community led
- Supports and access for those who are Houseless

Equity toolkit

Columbia Pacific-CCO created an equity toolkit that identifies six strategies (along with practical recommendations and resources) to support equitable vaccine distribution. The toolkit also described specific ways that organizations, like CCOs, can support vaccination efforts through its Community Engagement Team. The graphic on the next page show the elements of the equity toolkit.

Equity Toolkit/Supports




1. Data to ensure equity informed decision-making
2. CPCCO Equity Lens Tool
2. Community Based Organizations & Partnerships
3. Transportation Support Plan & Resources
4. Interpretation and Translation Services & Supports
5. Mobile Vaccination Program to Reduce Barriers
6. CPCCO Community Engagement Team Supports

Columbia Pacific CCO Equity Lens



S – Stop, name the decision, policy or project at hand, make time to reflect.
T – Think, ask questions, seek different perspectives, embrace complexity.
O – Observe thoughts, feelings, assumptions, dominant culture tendencies.
 (i.e. urgency, either/or thinking, perfectionism, worship of the written word, etc.)
P – Proceed, communicate with consistency and transparency.

Before making any decisions, advancing work, or resolving issues, did we STOP and consider the following?

-  1. What inequities and disparities exist among which groups? Which inequities does the work aim to eliminate?
-  2. How does the work engage other sectors for solutions? What institutional and structural barriers exist?
-  3. Who is most impacted by the work? How were those communities meaningfully engaged from the beginning?

Deepening Analysis and Accountability

Use the questions below to guide further examination for moving decisions, work, or resolutions toward justice, equity, diversity and inclusion (JEDI).

4. How does the work:

- a. Contribute to racial justice?
- b. Identify and redress past injustices and inequities?
- c. Differ from the current status or status quo?
- d. Support individuals in reaching their full potential.
- e. Support equitable distribution of resources and power?

5. Which sources of inequity does the work address?
 (race/racism, ethnicity, language, economic status, social class, religion, age, disability, gender, gender identity, sexual orientation or other socially determined circumstance).

6. How will the impact on equity be weighed and monitored? How will accountability be kept as it is meaningful to impacted communities?

Funding and other practical support

As a regional payer, Columbia Pacific-CCO was able to offer funding and other practical infrastructure support to promote vaccination equity across the three counties. Grants funded clinical and community partners who were taking action on vaccinating the community; grant funds help pay for supplies, staff, signs, and other components of hosting a vaccination clinic. Columbia-Pacific CCO also supported the implementation of a centralized vaccine scheduling system in Tillamook County, called Block-It. At the request of the county, our team researched scheduling platforms, purchased the system, and is providing technical assistance for the county-wide rollout. This resource is available to any of the three counties, as requested.

Equity-informed population data approach

CareOregon, a non-profit health Medicaid insurance company that serves the health care needs of low-income Oregonians, partnered with Columbia Pacific-CCO, to develop a way to use data analytics to inform its equity-first approach to vaccination. Together, CareOregon and Columbia-Pacific-CCO used their data, in concert with public health guidance, to identify and do outreach to communities and community members that might struggle to access the vaccine. CareOregon and CPCCO created a dashboard that included the following data elements: client race, ethnicity, language, age, chronic conditions (e.g., high risk CDC categories), assigned PCP, county, zip code, and ACG frailty flag. These are data important to understanding equity that most primary care practices and community-based organizations in our region cannot access.

Data are being monitored via the dashboard we created so that efforts can be refined, in real time, to get vaccines to populations, using a continuous quality improvement approach, in partnership with local public health. To date, we have been able to identify a number of opportunities to better serve community members, such as identifying locations that could benefit from hosting vaccine events due to proximity of a high population of people with chronic conditions, transportation barriers, etc. This approach also allowed them to create outreach lists by county or clinic served. Importantly, the dashboard allows county leaders and clinics to track data and use a continual review process to assess new ways of outreaching to those needing to be vaccinated within prioritized groups.

Acknowledgments

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Keshia Bigler, MPH, Population Health Portfolio Manager, CPCCO

Maranda Varsik, Project Manager, CPCCO

Jonathan Weedman, VP Population Health, CareOregon

- [OHA Vaccine Advisory Committee recommendation memo](#)
- [CareOregon playbook for outreach to high-risk populations](#)
- Columbia-Pacific CCO resources for vaccine distribution:
 - [Equity Toolkit](#)
 - [Equity lens tool](#)
 - [Mobile vaccine distribution FAQ](#)
 - [Transportation FAQ](#)
 - [Interpretation FAQ](#)

7.4. Recommendations for welcoming BIPOC and other groups that are disproportionately impacted by COVID-19:

The COVID-19 pandemic has highlighted health inequity rooted in the unjust living realities in many of our communities both urban and rural- especially for Black, Latinx, Indigenous, and Native Hawaiian/ Pacific Islander Americans. Members of these communities are at a disproportionately high risk of mortality and have low vaccination rates.

When developing an equitable vaccination strategy, consider the following:

1. **Be aware of implicit bias within your clinic.** Taking steps to recognize and correct unconscious assumptions toward groups can promote health equity¹.
2. **Take the time to listen.** Vaccine hesitancy has myriad reasons, and many patients are looking for answers to their questions from a trusted source (you!). Building trust and taking time to answer questions with today's evidence takes time and humility. But it is worth it.
3. **Connect with community partners and resources.** Provide information about outreach events, hours and same day accessibility to local churches, food banks, after-school centers and labor partners. Organize a listen and plan session with community leaders to tailor content messaging that resonates with community members and encourages vaccination. Community based organizations can help tailor communication content for varying health literacy and education levels, with an emphasis on ease of accessibility.
4. **Recognize the barriers to equitable, quality health care in your community, and know where the resources are.** Safety net clinics such as Federally Qualified Health Centers and the Local Public Health Authorities and in Oregon, the local CCOs will often have connections to social service resources that can assist with transportation to the clinic for vaccination, as well as resources for other needs preventing vaccination such as food and housing insecurity.
5. **Provide language and culturally specific communication services.** Include American Sign Language and braille in both outreach, registration, education and follow up information. Community based organizations can help to tailor content that is culturally specific and relevant to the community you serve.
6. **Support populations with limited digital literacy** by providing non-digital registration, educational materials, and resource options. Simplify the registration process and make it convenient and try to offer digital and non-digital options.
7. **Offer vaccination during non-traditional hours** or days of the week to provide access to individuals who cannot leave work, lack childcare or eldercare.

¹ *Fam Pract Manag.* 2019 Jul-Aug;26(4):29-33. Edgoose, J.; Quioque, M.; Sidhar K. How to Identify, Understand, and Unlearn Implicit Bias in Patient Care.

Chapter 8. Vaccination procedures

This chapter provides training resources for your vaccinators, as well as vaccination instructions for each of the vaccines. For example, how to thaw the vaccine vials, how to reconstitute the Pfizer vaccine, how to fill syringes, administer the vaccine, monitor people after receiving the vaccination, and how to complete the vaccination record card. It also covers coding and billing for services.

8.1. Ordering vaccines

Oregon is utilizing a [hub and spoke distribution model](#) for vaccine distribution. The Oregon Health Authority (OHA) has identified thirteen Vaccine Redistribution Hubs for COVID-19 vaccine across the state, to widen vaccine access and prevent waste. All provide the Pfizer vaccine, with most of the Hubs providing other COVID-19 vaccines as well.

Each Hub serves as a central site to receive vaccines, store them for brief periods of time, repackage them into smaller batches, and redistribute them to clinics and other administering sites. Hubs will allow vaccinators such as clinics, pharmacies, and public health sites to have smaller quantities of the Pfizer vaccine available in their conventional vaccine freezers and refrigerators, where they may be safely stored for up to 6 weeks. In addition, many Hubs are distributing Moderna and J&J vaccine, allowing providers to access small or large quantities of these vaccines that are already on hand in the state.

Hubs provide COVID-19 vaccine to each region's enrolled pandemic vaccine providers, the "Spokes." OHA is covering the operating costs of any Hubs that request reimbursement, so there is no cost to the Spokes for this service, and OHA has produced a Fact Sheet for each Hub that provides detail about its ordering and delivery process. You may request the Fact Sheet for your region's Hub by emailing COVID19.VaccineRequest@dhsosha.state.or.us.

Note for sites deciding how much of the Pfizer vaccine to order: As of May 19, 2021, the FDA has authorized Pfizer vaccine to be stored for up to 2 weeks in a conventional vaccine freezer (-25 to -15C) plus up to one month in a vaccine refrigerator (2 to 8C). This means that facilities without an ultra-cold freezer can safely store the Pfizer vaccine on site for up to 45 days.

Note about Johnson & Johnson vaccine supply: While J&J is not available from the manufacturer as of July 2021, sites can obtain it by responding to the OHA's statewide vaccine request survey. Sites that are served by a Hub that handles J&J will receive the vaccine via delivery from the Hub. For other jurisdictions, the OHA will ship J&J directly to the enrolled vaccinator.

For information on your [Vaccine Redistribution Hubs](#):

To connect with your region's Redistribution Hub and/or questions related to Redistribution Hubs, email: COVID19.VaccineRequest@dhsosha.state.or.us.

8.2. Training vaccinators

CDC training (CM available):

- **WB4460: COVID-19 Vaccine Training: General Overview of Immunization Best Practices for Healthcare Providers**

<https://www2.cdc.gov/vaccines/ed/covid19/SHVA/index.asp>

PROGRAM DESCRIPTION: CDC has created a new, web-on-demand, self-paced module for healthcare providers who will be administering Pfizer-BioNTech COVID-19 Vaccine. This module will provide information to healthcare professionals about COVID-19 vaccine manufactured by Pfizer Pharmaceuticals, based on the recommendations of the Advisory Committee on Immunization Practices and guidance from the manufacturer.

OBJECTIVES: At the conclusion of the session, the participant will be able to:

Describe the Vaccine Safety, Development, and Emergency Use Authorization (EUA) mechanism to provide approval for COVID-19 vaccines.

Describe the general storage and handling requirements for COVID-19 vaccines.

Describe the general vaccine administration procedures for COVID-19 vaccines.

Describe documentation and reporting procedures for adverse events associated with COVID-19 Vaccines.

Locate current immunization resources to increase knowledge of team's role in program implementation for improved team performance.

Implement disease detection and prevention health care services (e.g., smoking cessation, weight reduction, diabetes screening, blood pressure screening, immunization services) to prevent health problems and maintain health.

- **WB4464: Moderna COVID-19 Vaccine: What Healthcare Professionals Need to Know**

<https://www2.cdc.gov/vaccines/ed/covid19/moderna/index.asp>

PROGRAM DESCRIPTION: CDC has created a new, web-on-demand, self-paced module for healthcare providers who will be administering Moderna COVID-19 Vaccine. This module will provide information to healthcare professionals about COVID-19 vaccine manufactured by Moderna, Inc., based on the recommendations of the Advisory Committee on Immunization Practices and guidance from the manufacturer.

OBJECTIVES: At the conclusion of the session, the participant will be able to:

Describe characteristics of the Moderna COVID-19 vaccine used to prevent COVID-19 infection.

Describe storage and handling requirements for Moderna COVID-19 vaccine.

Describe vaccine preparation procedures for Moderna COVID-19 vaccine.

Describe vaccine administration procedures for Moderna COVID-19 vaccine.

Locate current immunization resources to increase knowledge of team's role in program implementation for improved team performance.

Implement disease detection and prevention health care services (e.g., smoking cessation, weight reduction, diabetes screening, blood pressure screening, immunization services) to prevent health problems and maintain health.

- **WB4461: Pfizer-BioNTech COVID-19 Vaccine: What Healthcare Professionals Need to Know**

<https://www2.cdc.gov/vaccines/ed/covid19/pfizer/index.asp>

PROGRAM DESCRIPTION: CDC has created a new, web-on-demand, self-paced module for healthcare providers who will be administering Pfizer-BioNTech COVID-19 Vaccine. This module will provide information to healthcare professionals about COVID-19 vaccine manufactured by Pfizer Pharmaceuticals, based on the recommendations of the Advisory Committee on Immunization Practices and guidance from the manufacturer.

OBJECTIVES: At the conclusion of the session, the participant will be able to:

Describe characteristics of the Pfizer-BioNTech COVID-19 vaccine used to prevent COVID-19 infection.

Describe storage and handling requirements for Pfizer-BioNTech COVID-19 vaccine.

Describe vaccine preparation procedures for Pfizer-BioNTech COVID-19 vaccine.

Describe vaccine administration procedures for Pfizer-BioNTech COVID-19 vaccine.

Locate current immunization resources to increase knowledge of team's role in program implementation for improved team performance.

Implement disease detection and prevention health care services (e.g., smoking cessation, weight reduction, diabetes screening, blood pressure screening, immunization services) to prevent health problems and maintain health.

- **WB4470: Janssen COVID-19 Vaccine (Johnson & Johnson): What Healthcare Professionals Need to Know**

<https://www2.cdc.gov/vaccines/ed/covid19/janssen/index.asp>

PROGRAM DESCRIPTION: CDC has created a new, web-on-demand, self-paced module for healthcare providers who will be administering Janssen COVID-19 Vaccine. This module will provide information to healthcare professionals about COVID-19 vaccine manufactured by Johnson & Johnson, based on the recommendations of the Advisory Committee on Immunization Practices and guidance from the manufacturer.

OBJECTIVES: At the conclusion of the session, the participant will be able to:

Describe characteristics of the Janssen COVID-19 vaccine used to prevent COVID-19 disease.

Describe storage and handling requirements for Janssen COVID-19 vaccine.

Describe vaccine preparation procedures for Janssen COVID-19 vaccine.

Describe vaccine administration procedures for Janssen COVID-19 vaccine.

Locate current immunization resources to increase knowledge of team's role in program implementation for improved team performance.

Implement disease detection and prevention health care services (e.g., smoking cessation, weight reduction, diabetes screening, blood pressure screening, immunization services) to prevent health problems and maintain health.

8.3. Procedures for filling syringes



How to Thaw and Prepare the Pfizer Vaccine

<https://www.cdc.gov/vaccines/covid-19/info-by-product/pfizer/index.html>

How to Thaw the Vaccine

- Vaccine may be thawed in the refrigerator or at room temperature.
- Refrigerator: Between 2°C and 8°C (36°F and 46°F)

- Unpunctured vials can be stored in the refrigerator for up to 1 month (31 days).
- Room temperature: Up to 25°C (77°F)
 - Unpunctured vials may be held at room temperature for up to 2 hours (including thaw time).
- Using either thawing method, vials must reach room temperature before dilution and must be diluted within 2 hours, or returned to the refrigerator.
- Do NOT refreeze thawed vaccine.
- Use CDC's beyond-use date labels for this vaccine to track storage time at refrigerated and frozen temperatures.

	Formulation for ≥12-year-olds (purple cap)	Formulation for 5–11-year-olds (orange cap)
Age group	12 years and older	5–11 years
Vial cap color		
Dose (mRNA concentration)	30 ug	10 ug
Injection volume	0.3 mL	0.2 mL
Fill Volume (before dilution)	0.45 mL	1.3 mL
Amount of Diluent* Needed per vial	1.8 mL	1.3 mL
Doses per Vial	6 (after dilution)	10 (after dilution)

Source: <https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2021-11-2-3/08-COVID-Oliver-508.pdf> (slide 55)

How to Prepare the Adult Vaccine

<https://www.cdc.gov/vaccines/covid-19/info-by-product/pfizer/downloads/diluent-poster.pdf>

1. Follow aseptic technique. Perform hand hygiene before vaccine preparation, between patients, when changing gloves (if worn), and any time hands become soiled.*
2. Remove vaccine from the freezer or refrigerator. Allow vaccine to come to room temperature. Vials can be held at room temperature for up to 2 hours before mixing. After 2 hours, return unmixed vials to the refrigerator.
3. Before mixing check the:
 - Expiration date on the vaccine and diluent
 - Any beyond use dates or times
 - NEVER use expired vaccine or diluent
 - NEVER use vaccine after the beyond-use dates or times
4. With the vaccine at room temperature, gently invert the vial 10 times. Do **NOT** shake the vial. If the vial is shaken, contact the manufacturer. The vaccine is white to off-white in color and may contain opaque particles. Do not use if liquid is discolored.
5. Using a new, sterile alcohol prep pad for each vial, wipe off the stoppers of the diluent and vaccine vials.

6. Using a 21-gauge (or narrower) needle, **withdraw 1.8 mL** of 0.9% sodium chloride (normal saline, preservative-free) into a mixing syringe. After use, discard diluent vial and any remaining diluent.
 - Do NOT use or save the remaining vaccine diluent to mix additional vaccine or for other uses.
 - Do NOT use bacteriostatic normal saline or other diluents to mix the vaccine.
7. Inject 1.8 mL 0.9% sodium chloride (normal saline, preservative-free) diluent into the vaccine vial.
8. Using the mixing syringe, remove 1.8 mL of air from the vaccine vial to equalize the pressure in the vaccine vial.
9. Gently invert the vial containing vaccine and diluent 10 times. The vaccine will be off-white in color. Do not use if discolored or contains particulate matter. Do **NOT** shake. If the vial is shaken, contact the manufacturer.
10. Note the date and time the vaccine was mixed on the vial.
11. Keep mixed vaccine between 2°C and 25°C (36°F and 77°F) and administer within 6 hours. Discard any unused vaccine after 6 hours. Do not return to freezer storage.
 - Minimize exposure to room light, and avoid exposure to direct sunlight and ultraviolet light.
12. Choose the correct vaccine formulation based on the age of the recipient and equipment, including the correct needle size.
 - The vial for persons 12 years of age and older has a purple cap and may have a purple border on the label. Do NOT administer vaccine with an orange cap or has an orange bordered label on the vial.
 - Use a new, sterile needle and syringe for each injection.
 - Low dead-volume syringes/needles can be used to extract 6 doses from a vial. If all low dead-volume syringes are not available use a combination of low dead-volume syringes and non-low dead-volume syringes.
13. Cleanse the stopper on the vial of mixed vaccine with a new, sterile alcohol prep pad. Withdraw 0.3 mL of mixed vaccine into the syringe. Ensure the prepared syringe is not cold to the touch.
 - Regardless of the type of syringe used, ensure the amount of vaccine in the syringe is 0.3mL.
 - If the amount of vaccine remaining in the vial cannot provide a full 0.3mL dose discard the vial and contents.
 - Do NOT combine vaccine from multiple vials to obtain a dose.
14. Remove any significant air bubbles with the needle still in the vial to avoid loss of vaccine. Use the same needle† to withdraw and administer the vaccine, unless contaminated or damaged. Check the vial label, again, to ensure it is the correct formulation based on the age of the recipient.

*Gloves are not required unless the person administering the vaccine is likely to come in contact with potentially infectious body fluids or has open lesions on the hands. If worn, perform hand hygiene and change gloves between patients.

†It is not necessary to change needles between drawing vaccine from a vial and injecting it into a recipient unless the needle has been damaged or contaminated.

How to Prepare the Pediatric Vaccine

1. Follow aseptic technique. Perform hand hygiene before vaccine preparation, between patients, when changing gloves (if worn), and any time hands become soiled.
2. Remove vaccine from the storage unit. Check the vial label to ensure it is the correct formulation based on the age of the recipient. The vial for children 5 through 11 years of age has an orange cap and orange border on the label. Allow vaccine to come to room temperature. Vials can be held at room temperature at room temperature for up to 2 hours before mixing.
3. Before mixing, check the:

- Age indications on the label
- Expiration date of the vaccine and diluent
- Any beyond-use dates/times

NEVER use expired vaccine or diluent. NEVER use vaccine after the beyond-use date or times.

4. With the vaccine at room temperature, gently invert vial 10 times. Do not shake the vial. If the vial is shaken, contact the manufacturer. The vaccine is white to off-white in color and may contain opaque particles. Do not use if liquid is discolored.
5. Using a new, sterile alcohol prep pad for each vial, wipe off the stoppers of the diluent and vaccine vials. Using a 21-gauge (or narrower) needle, withdraw 1.3 mL of 0.9% sodium chloride (normal saline, preservative-free) into a mixing syringe. Discard diluent vial and any remaining diluent every time. Do NOT use bacteriostatic normal saline or other diluents to mix the vaccine.
6. Inject 1.3 mL 0.9% sodium chloride (normal saline, preservative-free) diluent into the vaccine vial.
7. Using the mixing syringe, remove 1.3 mL of air from the vaccine vial to equalize the pressure in the vaccine vial.
8. Gently invert the vial containing vaccine and diluent 10 times. The vaccine will be off-white in color. Do not use if discolored or contains particulate matter. Do not shake. If the vial is shaken, contact the manufacturer.
9. Note the date and time the vaccine was mixed on the vial.
10. Keep mixed vaccine between 2°C and 25°C (36°F to 77°F) for up to 12 hours. Discard any unused vaccine after 12 hours. Do not return to ultra-cold freezer storage.

How to Thaw and Prepare the Moderna Vaccine

<https://www.cdc.gov/vaccines/covid-19/info-by-product/moderna/index.html>

How to Thaw the Vaccine

- Vaccine may be thawed in the refrigerator or at room temperature.
 - Refrigerator: Between 2°C and 8°C (36°F and 46°F). Unpunctured vials may be stored in the refrigerator for up to 30 days.
- Room temperature: Between 8°C and 25°C (46°F and 77°F).
 - Unpunctured vials may be held at room temperature for up to 12 hours.
- Do **NOT** refreeze thawed vaccine.
- Use vials in the refrigerator before removing vials from the freezer.
- Use CDC's beyond-use date labels for this vaccine to track storage time at refrigerated temperatures.

How to Prepare the Vaccine

1. Assess recipient status:
 - Screen for contraindications and precautions.
 - Review vaccination history.
 - Review medical considerations.
2. Follow aseptic technique. Perform hand hygiene before vaccine preparation, between patients, when changing gloves (if worn), and any time hands become soiled.*
3. Unpunctured vials: Check the expiration date.
 - Scan the QR code on the outer carton, or
 - Go to www.modernatx.com/covid19vaccine-euaexternal icon
 - Use CDC's expiration date tracker to document expiration date changes.

- Do not discard vaccine until ensuring the expiration date has passed.
As the expiration date approaches, check the expiration date again using the same process.
Never use expired vaccine.

Punctured vials: Check the beyond-use time. Never use vaccine after the beyond-use time.

4. With the vial upright, gently swirl the vaccine. Do NOT shake. If the vial is shaken, contact the manufacturer.
Note: Gently swirl the vaccine before withdrawing subsequent doses.
5. Examine the vaccine. It should be white to off-white in color and may contain white particles. Do not use if liquid contains other particulate matter or is discolored.
6. Using a new, sterile alcohol prep pad, cleanse the stopper of the multidose vaccine vial.
7. Choose the correct equipment, including the correct needle size. Use a new, sterile needle and syringe for each injection. Ensure the needle and syringe are secured tightly together.
8. Withdraw 0.5 mL of vaccine into the syringe.* Ensure the prepared syringe is not cold to the touch.
 - Discard vial when there is not enough vaccine to obtain a complete dose.
 - Do NOT combine residual vaccine from multiple vials to obtain a dose.
 - Regardless of the type of syringe used, ensure the amount of vaccine in the syringe equals 0.5 mL.
9. Note the date and time the vial was first punctured. Keep the vaccine between 2°C and 25°C (36°F and 77°F) for up to 12 hours. Discard any unused vaccine after 12 hours.
 - Do NOT puncture vaccine more than 20 times.

*Gloves are not required unless the person administering the vaccine is likely to come in contact with potentially infectious body fluids or has open lesions on the hands. If worn, perform hand hygiene and change gloves between patients.

*Changing needles between drawing vaccine from a vial and injecting it into a recipient is not necessary unless the needle has been damaged or contaminated.

How To Prepare the J&J Janssen Vaccine

<https://www.cdc.gov/vaccines/covid-19/info-by-product/janssen/downloads/Janssen-Prep-and-Admin-Summary.pdf>

1. Follow aseptic technique. Perform hand hygiene before vaccine preparation, between patients, when changing gloves (if worn), and any time hands become soiled.*
2. Unpunctured vials: Check the expiration date by:
 - Scan the QR code on the outer carton, or
 - Call the manufacturer (1-800-565-4008,) or
 - Go to <https://vaxcheck.jnj/>
 - Use CDC's expiration date tracker to document expiration date changes.
 - Do not discard vaccine until ensuring the expiration date has passed.

As the expiration date approaches, check the expiration date again using the same process.

Never use expired vaccine.

Punctured vials: Check the beyond-use time. Never use vaccine after the beyond-use time.

3. With the vial upright, gently swirl the vaccine for 10 seconds. Do NOT shake. If the vial is shaken, contact the manufacturer. Note: Gently swirl the vaccine before withdrawing subsequent doses.
4. Examine the vaccine. It should be colorless to slightly yellow, clear to very opalescent suspension. Do not use if liquid contains particulate matter or is discolored.

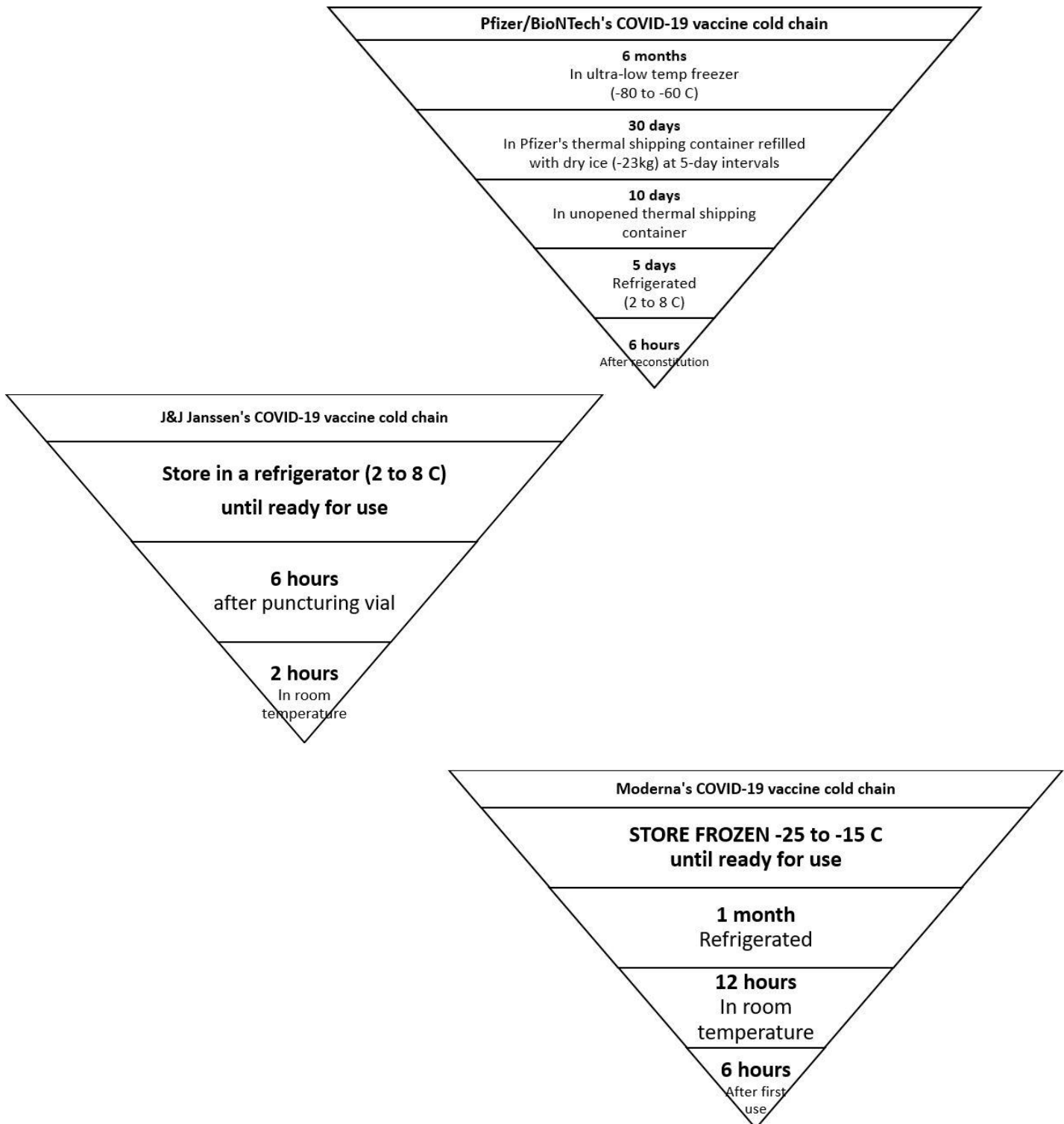
5. Using a new, sterile alcohol prep pad, cleanse the stopper of the multidose vaccine vial.
6. Choose the correct equipment, including the correct needle size. Use a new, sterile needle and syringe for each injection.
7. Ensure the needle and syringe are secured tightly together. Withdraw 0.5 mL of vaccine into the syringe.[†]
 - Regardless of the type of syringe used, ensure the amount of vaccine in the syringe equals 0.5 mL.
 - If the amount of vaccine remaining in the vial cannot provide a full 0.5 mL dose, discard the vial and contents.
 - Do not combine vaccine from multiple vials to obtain a dose.
8. Note the date and time the vial was first punctured. Keep the vaccine between 2°C and 8°C (36°F and 46°F) for up to 6 hours or at room temperature (up to 25°C or 77°F) for 2 hours. Discard any unused vaccine if not used within these timeframes.

*Gloves are not required unless the person administering the vaccine is likely to come in contact with potentially infectious body fluids or has open lesions on the hands. If worn, perform hand hygiene and change gloves between patients.

[†]Changing needles between drawing vaccine from a vial and injecting it into a recipient is not necessary unless the needle has been damaged or contaminated.

8.4. Vaccine freezing and thawing guidelines

The following infographics show the amount of time each vial can be held at each stage.



8.5. Procedures for administering vaccinations



- Perform Hand hygiene for 15-20 sec. Gloves are not required for IM injections per CDC/ACIP/OSHA
- Position patient and self ergonomically. Have patient relax arm on their lap. Position yourself parallel to the patients arm to align your back
- Have patient roll up sleeve all the way to the shoulder to expose injection site
- Palpate the acromion process (bony tip of shoulder). Mark it with your pinky or ring finger depending on whether you are using a 2 or 3 fingerbreadth measurement
- Measure 2-3 fingerbreadths directly below the acromion process
- Form a V shape with your thumb and index finger as shown above
- Mark injection site by measuring from your web of thumb and middle of your index finger
- Avoid the top 2/3 of the deltoid which is where the bursa and joint space is to prevent shoulder injury

Administering Pfizer, Moderna, and J&J Janssen Vaccine

All three vaccines have the same instructions for administration.

<https://www.cdc.gov/vaccines/covid-19/info-by-product/pfizer/index.html>

<https://www.cdc.gov/vaccines/covid-19/info-by-product/moderna/index.html>

<https://www.cdc.gov/vaccines/covid-19/info-by-product/janssen/index.html>

1. Assess recipient status:
 - Screen for contraindications and precautions.
 - Review vaccination history.
 - Review medical considerations.
2. Bring the dose of vaccine from the designated preparation area immediately to the patient treatment area for administration.
3. Ensure staff has the correct PPE before administering vaccines and implement policies for the use of face coverings for vaccine recipients older than 2 years of age (if tolerated). Note: gloves are not required for administering vaccines but some staff prefer to use them.
4. Ensure that your pre-filled syringe has an appropriately sized needle for the designated recipient⁺, then administer the vaccine immediately by intramuscular (IM) injection in the deltoid muscle.
5. Observe recipients after vaccination for an immediate adverse reaction:
 - **30 minutes:** Persons with a history of an immediate allergic reaction of any severity to a vaccine or injectable therapy and persons with a history of anaphylaxis due to any cause
 - **15 minutes:** All other persons

*Changing needles between drawing vaccine from a vial and injecting it into a recipient is not necessary unless the needle has been damaged or contaminated. Larger individuals will require a longer needle, as seen below.

Needle Size Recommendations		
MALE	FEMALE	NEEDLE SIZE
Adults ≥ age 18 yrs.		
Less than 130 Lbs	Less than 130 Lbs	5/8- 1 inch
130- 150 Lbs	130-150 Lbs	1 inch
153-260 Lbs	153- 200 Lbs	1- 1.5 inches
260 + Lbs	200 + Lbs	1.5 inches

8.6. Procedures for monitoring people following the vaccination

<https://www.cdc.gov/vaccines/covid-19/clinical-considerations/managing-anaphylaxis.html>

Observation period following COVID-19 vaccination

CDC currently recommends that persons without [contraindications to vaccination](#) who receive an mRNA COVID-19 vaccine be observed after vaccination for the following time periods:

- 30 minutes: Persons with a history of an [immediate allergic reaction](#) of any severity to a vaccine or injectable therapy and persons with a history of anaphylaxis due to any cause.
- 15 minutes: All other persons

8.7. Procedures for filling out vaccine cards

Vaccine	Product Name/Manufacturer	Lot Number	Date	Healthcare Professional or Clinic Site
1 st Dose COVID-19			mm - dd - yy	
2 nd Dose COVID-19			mm - dd - yy	
Other			mm - dd - yy	
Other			mm - dd - yy	

People will receive a vaccination record card, shown below. Vaccination site staff should fill out the vaccine manufacturer, lot number, date of first dose, and date the second dose is due. Encourage people to enroll in VaxText, a free text messaging to receive COVID-19 vaccine second dose reminders: [VaxTextSM COVID-19 Vaccination Second-Dose Reminder](#). If you do not have ample supply of vaccination record cards, you may need to make additional photocopies.

8.8. Considerations when setting a date for dose 2 for Pfizer and Moderna

8.8.a. Setting a date for dose 2 and 3 – Pfizer

<https://www.cdc.gov/vaccines/covid-19/info-by-product/pfizer/index.html>

Second dose: Persons age 5 years and older should receive **2 doses at least 21 days apart. Range: 17-42 days**

- Second doses administered up to 4 days before the recommended date (17 or more days after first dose) are considered valid. However, doses administered earlier do not need to be repeated.
- Second doses should be administered as close to the recommended interval as possible.
 - Do not use the grace period to schedule appointments for the second dose.
- There is no maximum interval between the first and second dose.
- Both doses should be Pfizer-BioNTech COVID-19 Vaccine.
 - Every effort should be made to determine which vaccine product was received as the first dose.
 - In exceptional situations, if the vaccine product given as the first dose cannot be determined or is no longer available, any mRNA COVID-19 vaccine product may be administered at least 28 days after the first dose.

Third dose: Moderately to severely immunocompromised people: Consider an additional dose **at least 28 days after the initial 2-dose primary series**.

8.8.b. Setting a date for dose 2 - Moderna

<https://www.cdc.gov/vaccines/covid-19/info-by-product/moderna/index.html>

Persons age 18 years and older should receive **2 doses at least 28 days apart. Range: 24-42 days**

- Second doses administered up to 4 days before the recommended date (24 or more days after first dose) are considered valid. However, doses administered earlier do not need to be repeated.
- Second doses should be administered as close to the recommended interval as possible.
 - Do not use the grace period to schedule appointments for the second dose.
- There is no maximum interval between the first and second dose.

8.9. For more information about vaccination procedures

- [OHSU training](#)
- [CDC training – Pfizer](#)
- [CDC training – Moderna](#)
- [CDC training – J&J Janssen](#)
- [How to thaw, prepare, and administer – Pfizer](#)
- [How to thaw, prepare, and administer – Moderna](#)
- [How to thaw, prepare and administer – J&J Janssen](#)
- [Pfizer Vaccine preparation infographic](#)
- [Managing anaphylaxis](#)
- [Clinical considerations](#)

8.10. Materials you might find useful about vaccination procedures

- [Pfizer Standing Orders – Age 12 and older](#)
- [Pfizer Standing Orders – Age 5-11](#)
- [Moderna Standing Orders](#)
- [J&J Janssen Standing Orders](#)
- [Transport temperature log](#)

8.11. Coding for services related to COVID-19 vaccines and immunization administration and counseling

This information comes from the American Academy of Pediatrics

The CPT Editorial Panel has developed several new SARS-CoV-2 vaccine product and immunization administration codes. The new CPT codes

- clinically distinguish each coronavirus vaccine product and the specific dose for better tracking, reporting, and analysis
- allow for unique CPT vaccine administration codes for each vaccine product
 - This includes unique codes for a 1st dose of a single product and a 2nd dose

This level of specificity is a first for vaccine administration codes, and offers the ability to track each vaccine dose, even when the vaccine product is not reported (eg, when the vaccine may be given to the patient for free). The CPT codes for the administration include:

- clinic expense costs of storage and ordering
- counseling provided to patients or caregivers on the date the vaccine is administered
- administering the vaccine
- updating the electronic health record and the vaccine registry

Note you will not report the immunization administration codes (90460-90461, 90471-90474) when administering a Coronavirus vaccine.

Vaccine Product Information	Vaccine Manufacturer	CPT Codes				Patient Age
		Product	1 st Dose Admin	2 nd Dose Admin	3 rd Dose Admin	
Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (Coronavirus disease [COVID-19]) vaccine, mRNA-LNP, spike protein, PF, 30 mcg/ 0.3mL dosage, diluent reconstituted, for IM use	Pfizer-BioNTech	91300	0001A	0002A	0003A	≥12 years
SARS-CoV-2 (Coronavirus disease [COVID-19]) vaccine, mRNA-LNP, spike protein, PF, 100 mcg/0.5mL dosage, for IM use	Moderna	91301	0011A	0012A	0013A	≥18 years
SARS-CoV-2 (coronavirus disease [COVID-19]) vaccine, DNA, spike protein, adenovirus type 26 (Ad26) vector, preservative free, 5x10 ¹⁰ viral particles/0.5mL dosage, for IM use	Janssen	91303	0031A	N/A	N/A	≥18 years

Vaccine Counseling Coding

Vaccine Counseling with No Administration

There may be occasions when a patient or parent presents to their medical home for vaccine counseling, particularly for the COVID-19 vaccine. Increasing vaccine hesitancy surrounding this vaccine may be greater and some older adolescents may seek out information on their own. There are many mechanisms by which you can get information out to your patients, however, for those who opt for in-person (ie, in office or telehealth) individual counseling there are coding options. You should check with your payers for guidance on the most appropriate way to code as some have limitations on the use of Z codes with office-based E/M services (eg, 99212). Note, if you provide vaccine counseling on the day you also administer the vaccine to the patient you may not report counseling separately. Coding options include:

ICD-10-CM codes

Z71.89 Other specified counseling

Z28.21 Immunization not carried out because of patient refusal

Z28.82 Immunization not carried out because of caregiver refusal

CPT Options:

99201-99215 Office-based E/M service: based on time spent with the patient/caregiver.

99401-99404 Preventive Medicine Counseling: based on time spent counseling (Note this code is not listed as an approved telehealth service). May not be used for group counseling.

99411-99412 Preventive Medicine Group Counseling: Used for group visits when discussing vaccine safety

Coding Tips:

- You will not report a 90460, 90461, 90471—90474 with any COVID-19 vaccine administration code.
- Report only one vaccine administration code per COVID-19 injection
- If you see the patient for a significant and separately identifiable E/M service in addition to the COVID-19 vaccine, append modifier 25 to the E/M service. For example, you see a patient for a routine preventive medicine service (eg, 99394) and they decide to get the COVID-19 vaccine, report the 99394 and the appropriate product (as required) and the administration code only. Counseling is captured in the COVID-19 vaccine administration code.
- Your ICD-10-CM code for COVID-19 vaccine administration is Z23

Patients with Private Insurance Coverage

Bill insurance using the appropriate CPT code as outlined in the coding guidance above. Some private payers appear to reject or deny claims if the product code (9130x) is listed on the claim. For these payers, send only the administration code (00xxA).

Patients without Coverage

Uninsured people receive COVID-19 vaccine through the CDC's COVID-19 Vaccination Program. Payment for vaccine administration is available directly from HRSA via the [COVID-19 Uninsured Program Portal](#). You will be paid the current Medicare rate for COVID vaccine claims.

Participation in the CDC COVID-19 Vaccination Program requires the following steps:

1. Enrolling as a provider participant (through UnitedHealth Group and Optum ID), 2.
2. Checking patient eligibility
 - To do so, you must first upload a spreadsheet of patients for whom you would like to submit claims to the HRSA COVID-19 Uninsured website. Download a [template for the spreadsheet](#) Once you have uploaded this spreadsheet to the HRSA COVID website, it takes about 24 hours for the patients to be verified as self-pay and a temporary COVID-19 Uninsured ID will be provided.
3. Submitting patient information
 - You may use this “Uninsured ID” just like you would a child’s insurance ID
4. Submitting claims
 - Submit claims electronically to the COVID Fund using your typical claims submission process.
5. Receiving payment via direct deposit.

Providers who participate in the COVID-19 Vaccination Program must confirm that the patient is uninsured and **agree not to balance bill recipients**. Providers should refer to their local public health jurisdiction for information on enrolling in the program.

Chapter 9. Case studies and examples from across Oregon

This chapter presents vaccination clinic examples from across Oregon. We selected these examples to showcase what other people are doing differently. We will continue to add stories to this section. Do you have a practical example from your vaccine clinic? Send it to us: cpcr@ohsu.edu

9.1. Scheduling and documenting outside the EHR: White Bird Clinic, Eugene, Oregon

When White Bird Clinic in Eugene, Oregon was approached by the Lane County Health Department in December 2020 to begin a community vaccine clinic, they started out by scheduling and documenting using their NextGen EHR system. Shortly, they began to experience limitations and bottlenecks caused by this method: (1) they were getting too much information about people through their regular new patient registration workflow; (2) the community members that were added as new patients for vaccination clinics would have skewed the clinic's actual patient panel numbers and demographics; (3) there was a significant staff time commitment involved in completing the new patient registration workflow for dozens of people ahead of each vaccination clinic event. White Bird considered customizing NextGen (creating a vaccine clinic location to separate the vaccine panel from the primary care panel, for example) but the time involved was daunting.

White Bird began using the SOLV platform in early February 2021 after hearing that an FQHC in Washington was using it. The cost was: \$500 for set-up, then \$500/month for the first site, \$400/month for the second site, etc. SOLV is a secure, HIPAA compliant, web-based program. White Bird uses SOLV for pre-registration, consent, and appointment-scheduling. The clinic also uses it for capturing the vaccine documentation information that is later mass uploaded into Alert IIs, the state vaccine registry system. At their main vaccine site (a music hall), White Bird is using the clinic's older laptop computers that had been taken out of circulation because they were too slow to run the EHR. These computers were wiped and the Chrome browser was installed. At the vaccine clinic, the staff have two tabs open in Chrome: SOLV and ALERT. Because SOLV is a secure encrypted site, they only need a wifi connection; they don't need VPN. The clinic also has a couple of iPads on site for people who haven't fully completed their registration. They are using ALERT to confirm first doses for any community member who comes for a second dose.

The registration information collected via the SOLV form includes all the information that White Bird, as an FQHC, will need to include in UDS reporting. The form also collects insurance information, with a clear message that people will never need to pay for a vaccine, but the clinic might bill their insurance at some point. The clinic already needs to combine several data sources for UDS reporting, so adding the SOLV data won't significantly increase the reporting burden. (This may not be the experience of other FQHCs that have a unified data source such as a robust EHR.)

The clinic offers several communication pathways to meet the needs of community members:

- (1) A person can use the link on the White Bird vaccination clinic page (<https://whitebirdclinic.org/vaccine>) to complete the registration information, consent to the vaccine, and schedule their appointment. About two-thirds of White Bird's vaccine clinic clients use this method, and it has dramatically reduced the staff burden related to scheduling and registration. This freed up resources to more directly support people who use the other communication pathways.

- (2) Next to the registration link on the White Bird vaccination clinic webpage, there is a phone number that anyone can call. In White Bird's experience so far, this includes community elders, people experiencing homelessness, and other community members who may have barriers to online registration. When people call, they leave a voicemail. A staff member or volunteer calls them back and uses the SOLV form to complete the registration and scheduling on behalf of the community member.
- (3) Spanish-speakers, a priority population for White Bird, are provided the phone number to the White Bird dental clinic front desk via information in Spanish on the vaccination web page. The dental clinic is a secondary vaccination site, and many staff members are bilingual. The front office staff use SOLV to complete the registration and scheduling on behalf of the community member.

Using the SOLV program has enabled the clinic to scale up its vaccine efforts; it expects to be vaccinating 850-900 people each week. Due to the low tech requirements, they will also be able to use SOLV in their mobile vaccination vans targeting people experiencing homelessness, planned to begin after March 29. They have also been able to utilize their clinic volunteers, who have been sidelined for most of the pandemic, to help register people from home using the voicemail system.

For more information, please contact Chris Hecht <checht@whitebirdclinic.org>.

Screenshots from WhiteBird's vaccine scheduling system:

A message from the clinic:

Covid vaccination is free; we may bill your insurance. No one will be refused service based on an inability to pay.

Please arrive 10 minutes before your scheduled appointment time.

Your total time at the clinic may be as much as an hour and a half.

For questions, please call 541.246.2341. Please do not call the WOW Hall or White Bird medical clinic, they are not affiliated with this program.

CHOOSE A DATE AND TIME:

Wednesday, April 7th
[Show More →](#)

1:50 pm	2:00 pm	2:10 pm	2:20 pm
2:30 pm	2:40 pm	2:50 pm	3:00 pm

REASON FOR VISIT

Which dose are you scheduling?

HAVE YOU BEEN TO WHITE BIRD BEFORE?:

No Yes

PATIENT INFO:

Patient first name

Patient last name

Birth date: Month Day Year

Mobile number

Email address (optional)

☐ I have read, understand and agree to Solv Health's [Terms of Service](#), and [Privacy Policy](#).

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Bookings by Solv.
For emergencies [please call 911](#)



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