Using Mobile Clinics to Vaccinate Children Against COVID-19 at Community-Based Locations

An Implementation Guide

AIM
Association of Immunization Managers

Overview

Over the course of the COVID-19 pandemic, the United States has seen diminished vaccine confidence and low COVID-19 vaccination coverage among children (Peck, 2022; Centers for Disease Control and Prevention, 2021). Differential access to services is a barrier to vaccine uptake. Parents' hesitancy about COVID-19 vaccines specifically and vaccines more broadly is another barrier to vaccine uptake (Alfieri et al., 2021; Ruiz & Bell, 2022; Albers et al., 2022; Corben & Leask, 2016). Addressing these trends and barriers and increasing the uptake of COVID-19 vaccines for children is essential to protecting public health and advancing health equity.

The Association of Immunization Managers (AIM) identified five promising practices for improving the uptake of COVID-19 vaccination and advancing vaccine equity for children ages 6 months to 11 years.

This guide is one in a series of five guides and tip sheets about promising practices to improve children's uptake of COVID-19 vaccines. Implementation guides and tip sheets can be found on AIM's website:

Conducting Targeted Outreach to Medicaid Beneficiaries for COVID-19 Vaccines by Linking Immunization Information System and Medicaid Data

Connecting Opportunities to Vaccinate Children Against COVID-19 with the Chance to Address Basic Needs of Children and Families

Using Mobile Clinics to Vaccinate Children Against COVID-19 at Community-Based Locations

Vaccinating Children Against COVID-19 at Home

Providing Operational Support to Help Pediatric Health Care Providers Vaccinate Children Against COVID-19

The information in these guides comes from participants in focus groups at the 2023 Great Lakes and Frontier/Southwest Vaccine Access Cooperative (VAC) meetings, interviews with immunization program managers and their partners, a literature review, input from AIM staff and AIM's Legacy Council, and Centers for Disease Control and Prevention (CDC) project officers' review of COVID-19 immunization progress reports and suggestions on potential promising practices. Thank you to all who contributed to this work.

Key findings and lessons learned in these guides are largely based on pediatric vaccination strategies implemented during the COVID-19 public health emergency. Some of the practices were implemented with support that was linked to one-time emergency federal funds. Practices were also supported with a mix of state and local government funds and private and philanthropic funds that were available during the public health emergency.

As such, the practices may not be identically replicated moving forward, as the vaccination landscape has changed due to commercialization of COVID-19 vaccines and other factors. However, we anticipate that lessons learned during the public health emergency can inform strategies for COVID-19 vaccination after the public health emergency, vaccinations for all age groups, routine vaccinations, and future pandemic response. Therefore, this guide also provides strategies and tips to implement the practice in the post-pandemic environment.

Implementation context during the public health emergency (PHE) versus post-PHE

During the COVID-19 PHE, the federal government paid for all COVID-19 vaccines. Moving forward after the PHE, both the federal government (through the Vaccines for Children [VFC] program) and health insurance plans will pay for vaccines. Jurisdictions implementing the practices after the PHE will need to consider how to support providers in billing multiple insurers and managing different stocks of vaccines when insurers only pay for certain COVID-19 vaccines.

How to Use This Guide

This guide is comprised of three chapters that answer the "what," "why," and "how" of implementing mobile clinics to vaccinate children at community-based locations. Across these chapters, you will find examples from the field, resources and tools, tips, and lessons learned to help implement this practice in your own jurisdiction.

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- ✓ ***feasibility*** *of the practice to start-up, scale, and sustain the practice over time,*
- ✓ ***costs*** *related to implementing the practice in the post-pandemic environment,*
- ✓ ***environmental factors*** *related to the policy, environment, and funding landscape.*

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About AIM

AIM is a nonprofit membership association comprised of the directors of the 64 federally funded state, territorial, and local public health immunization programs. AIM is dedicated to working with its partners nationwide to reduce, eliminate, or eradicate vaccine-preventable diseases. AIM also works to ensure the success of its members by providing support in their programming interests. Since 1999, AIM has enabled collaboration among immunization managers to effectively control vaccine-preventable diseases and improve immunization coverage in the United States and affiliated territories. For more information on AIM, please visit www.immunizationmanagers.org/.

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Chapter 1: What?

This chapter describes mobile vaccination clinics and the entities that implement them.

Summary of Chapter 1: What?

Overview of the practice	Mobile vaccination clinics are vans or other vehicles that bring vaccines to convenient community locations.
Implementing organizations	Various organizations or entities, such as hospitals, local and state health departments, and community-based organizations, can implement mobile vaccination clinics.

Overview of the practice

Mobile vaccination clinics (or mobile clinics) are vans or other vehicles that bring vaccines to convenient community locations. Although jurisdictions can use other approaches to deliver vaccines to children, such as large-scale vaccination sites or pop-up vaccine clinics, this guide focuses on using mobile clinics to vaccinate children at community-based locations. They can be recurring or one-time events and can have designated driving routes. Because the literature on implementing mobile clinics in school-based settings is already extensive, this guide focuses on implementing mobile clinics in non-school-based community settings, such as parks, flea markets, rail stations, churches, and supermarkets.

Implementing organizations

Various organizations or entities can implement mobile clinics, such as hospitals, local and state health departments, pharmacies, community-based organizations, and faith-based organizations. As discussed in greater detail in Chapter 3, organizations often form partnerships to leverage each other's resources and capabilities to implement mobile clinics. For example, the Connecticut Department of Public Health implemented a mobile clinic program that offered vaccinations to everyone who was eligible (6 months or older) and partnered with community-based organizations and local government entities that were interested in hosting mobile vaccination clinics in their community (see the Example from the Field box about Connecticut below for more information).

Example from the Field

Connecticut Department of Public Health Operated a Statewide Program to Bring COVID-19 Vaccines to Convenient Community Locations

Description: The Connecticut Department of Public Health (DPH) rolled out a statewide mobile vaccination clinic program that provided the COVID-19 vaccine for free to all eligible people, including children 6 months or older.

Contacts: See the AIM Immunization Program Directory

Goal: Through the program, DPH sought to reduce barriers to COVID-19 vaccination, with a focus on Connecticut's communities hardest-hit by COVID-19.

Approach: To improve uptake and accessibility, the program used highly visible yellow vans and did not require community members to provide proof of insurance or identification. DPH also partnered with community-based organizations and local governments to send outreach workers to raise awareness about upcoming mobile clinics in the community prior to the event. Organizations could apply using an online form to host a DPH van in their community based on the vans' availability. DPH provided host sites up to 100 to 125 vaccines per day, a team of three or four staff per van (including two vaccinators, one or two staff for registration and non-clinical activities, and one lead vaccinator to oversee clinic management), a marketing toolkit, advertising on the DPH vans website, and consent forms for minors. Host sites were responsible for confirming locations, hours, and points of contact; providing a physically safe location; distributing advertising and marketing materials; and committing to host a second dose mobile clinic at the same location and times. The program ended in June 2023.

Lessons learned:

- Prioritize visibility. Make the van visually appealing, locate the van in a place that is visible to a lot of people (because of high traffic), and work with community leaders to publicize event.
- Reduce administrative barriers, like the need to make appointments.
- Depend on local partners to relieve some of the administrative burden of operating mobile clinics – let the local partners confirm locations, hours, etc.

Resources: DPH created separate vaccine intake forms for different age groups.

Chapter 2: Why?

This chapter reviews the benefits of using mobile clinics in your community.

Summary of Chapter 2: Why?

Why might my jurisdiction implement a mobile clinic program?	Provide vaccination access across populations —particularly for underserved communities.
	Reduce travel and time burdens.
	Scale up and/or target areas.
	Connect to essential health care services.
	Improve health and reduce costs for families and communities.

Why might my jurisdiction implement a mobile clinic program?

Provide vaccination access across populations—particularly for underserved communities. Although deployment of mobile clinics was prioritized at the height of the COVID-19 pandemic, mobile clinics remain important access points for historically underserved communities, such as rural and low-income communities and medically underserved areas (see the Example from the Field box about Massachusetts below). Early studies suggest that mobile clinics can improve access to COVID-19 vaccinations for diverse populations (Gupta et al., 2022a; Gupta et al., 2022b). Mobile clinics can also help reduce vaccine hesitancy and build trust between families and medical providers by meeting people where they are in their communities and partnering with trusted community institutions to improve access to vaccination services and vaccine information.

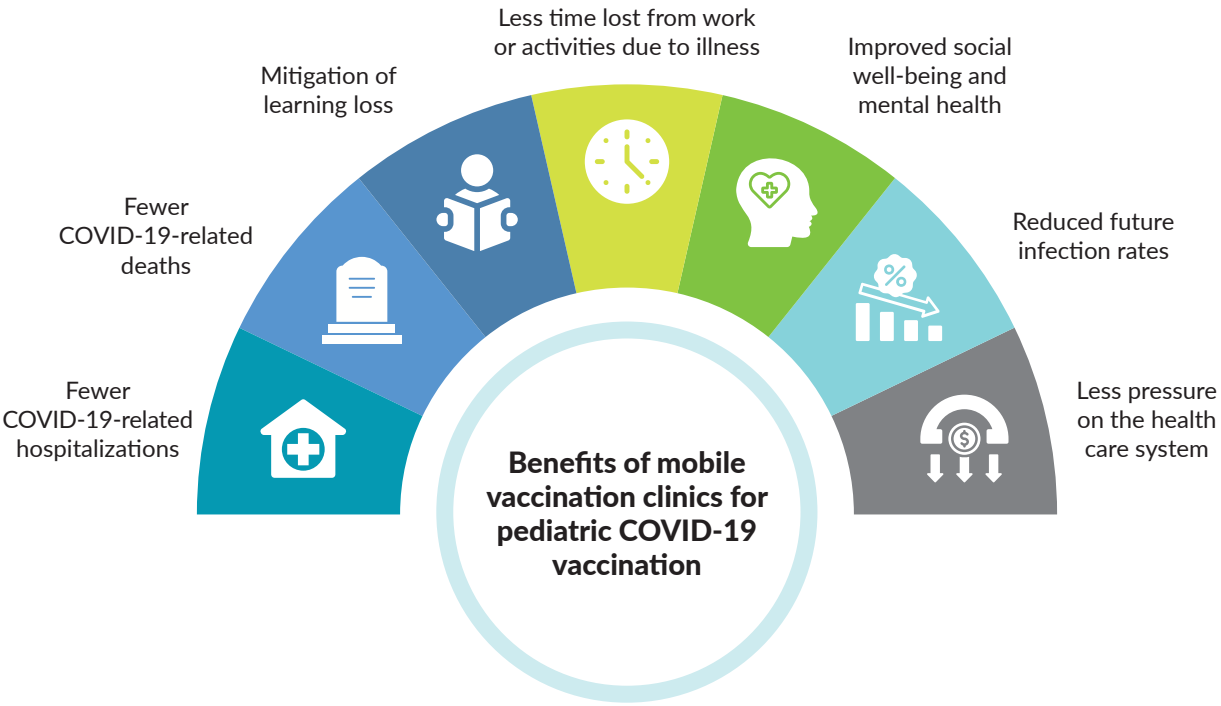
Reduce travel and time burdens. By bringing mobile clinics to convenient locations—such as parks, rail stations, churches, and supermarkets—jurisdictions help families avoid the burden of going out of their way to get vaccinated. Community members value mobile clinics because of their convenience.

Scale up and/or target areas. These clinics can be operated at decreased capacity to serve communities regularly, or they can ramp up during pandemics and outbreaks. They can also reach communities at seasonal community events, like back-to-school events.

Connect to essential health care services. Staff at mobile clinics can connect children and their families to a medical home, which can provide other preventive care services and improve overall health.

Improve health and reduce costs for families and communities. By improving access to COVID-19 vaccination through a mobile clinic program, a jurisdiction could benefit from substantial cost savings. See the graphic below for an overview of the health benefits of mobile clinics for families and communities.

Implementing mobile clinics can lead to better health and cost savings



Promising Practices to Improve Pediatric COVID-19 Immunization Rates Toolkit

Find more resources, including tip sheets and slide decks, to implement mobile clinics and other strategies to improve vaccination rates

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Example from the Field

Massachusetts Department of Public Health Met Local Vaccination Needs through Mobile Services

Description: The Massachusetts Department of Public Health (DPH) deployed mobile vaccines to expand vaccine access in communities whose needs were not met by existing vaccination locations.

Contacts: See the AIM Immunization Program Directory

Goal: DPH prioritized people in 20 municipalities most disproportionately affected by COVID-19.

Approach: This program sought to recognize diverse lived experiences and respond to the needs and preferences of individuals and communities. DPH collaborated with municipal leaders and local partners to meet the needs of certain groups for enhanced vaccination support, such as Indigenous peoples and people of color; individuals whose first language is not English; and people with disabilities, experiencing homelessness, with mental health or substance use disorders, facing transportation barriers, or who did not feel comfortable receiving a vaccine in a traditional health care setting. Vaccination services were often delivered from an ambulance or medical van at sites such as community centers, auditoriums, and central municipal areas. Municipal leaders coordinated with faith-based organizations, located vaccination services at venues responsive to the needs of people with disabilities, and focused on areas with limited access to public transportation or high numbers of prioritized populations.

Lessons learned:

- Take a whole-family approach and vaccinate the entire family.
- Hold clinics outside of traditional school and work hours.
- Ensure accessibility for children and adults with disabilities and sensory sensitivities.
- Provide activities to occupy children during waiting and observation periods.
- Organize a townhall to answer questions and engage trusted and multilingual community members to assist with messaging and the clinic.

Resources:

- Massachusetts DPH has developed a toolkit to guide implementation of mobile clinics: COVID-19 Mobile Vaccination Program (Hosting a Mobile Vaccination Toolkit).
- Massachusetts DPH created customizable promotional materials available in several languages and American Sign Language: COVID-19 Vaccine Promotion Toolkit.

Chapter 3: How?

This chapter lists important resources that jurisdictions might use to operate mobile clinics, common challenges and potential solutions, and key considerations.

Summary of Chapter 3: How?

Step 1: Prepare resources	Mobile clinics require staff and supplies for vaccinating children, mobile unit upkeep, and administrative tasks before and during clinical operations.
Step 2: Establish partnerships	Partnerships can help mobile clinic operators build trust in communities and make clinics more accessible for patients.
Step 3: Identify operational challenges and action steps	Operational challenges, such as patient acceptability and staffing concerns, might be ameliorated by utilizing partnerships and improving accessibility.
Step 4: Determine key considerations for implementation	
Feasibility	Partnerships can help start up and sustain this practice that can potentially improve vaccine equity.
Costs	Consider administrative and actual costs upfront.
Environmental factors	Policies on provider scope of practice, minor consent, and anti-vaccine groups may affect the implementation of mobile clinics.
Other resources to implement this practice	See the list of existing resources to support implementation of this practice.

Step 1: Prepare resources

Jurisdictions need significant resources to provide vaccinations outside of brick-and-mortar clinics. Before committing to a mobile clinic, jurisdictions may consider which partners and staff can best meet the needs of the community, create a plan for procuring the mobile unit and vaccine supplies, and consider how to spread awareness of the mobile clinic. During the planning phase, mobile clinic providers will also need to work with their software vendor to ensure their electronic health record or other software is set up to document consent and doses administered and to securely share data with other providers and the immunization information system (IIS). To bring a mobile clinic to the community, jurisdictions must also consider the supplies they need to run normal clinical operations, including proper vaccine storage and handling and data entry for patient records and the immunization registry. These steps are summarized below:

Before	During	After
• Secure staff and partners • Secure resources and supplies • Conduct outreach • Identify and test methodology for collecting and sharing data on doses administered	• Set up clinic • Conduct clinic operations	• Securely store and take inventory of supplies • Ensure documentation, such as documentation of temperature, vaccine information, doses administered, and filing with insurance is complete • Connect with patients for follow-up doses and care

The supplies needed to run mobile clinics fall into three broad categories:

1. Vaccine storage, handling, and administration supplies
2. Mobile unit supplies
3. Clinical administration and office supplies

Examples of these types of supplies are below.

Vaccine storage, handling, and administration supplies	Mobile unit supplies	Clinical administration and office supplies
• Vaccine • Digital data logger thermometers • Professional grade freezer, refrigeration unit, or authorized vaccine storage units	• Mobile unit or van • Insurance • Utilities • Private patient areas	• Patient paperwork • Office supplies • Wi-Fi hotspot • Computers • Software to collect and share data • Tables and chairs

Mobile clinics also need clinical, administrative, support, and volunteer staff. These staff and possible roles are described below.

Staff	Description of possible role(s)
Clinical staff	• Obtain consent • Administer vaccines • Answer medical questions • Provide guidance for decision making • Provide other medical services • Respond to acute adverse events
Administrative staff	• Plan and coordinate clinic operations • Register patients and enter data • Bill health insurers and Medicaid for administration fees, and insurance companies for private vaccine purchase
Support staff	• Provide security • Drive vans • Provide language interpretation
Volunteers	• Manage traffic flow • Act as ambassadors for the community

A checklist of supplies that can serve as a starting point for organizations interested in operating mobile vaccination clinics can be found in Appendix A.

Step 2: Establish partnerships

Partnering with local community leaders, community-based organizations, vendors, and other local medical providers can support clinic operations to:

- Improve community engagement and increase community trust (see the Example from the Field box about Los Angeles below)
- Increase capacity to serve patients
- Improve planning and operations
- Connect patients back to medical homes

Partnerships with local medical providers are particularly helpful for ensuring patients trust the mobile clinic providers and have connections to medical homes. For example, in Massachusetts, Codman Square Health Center and Mattapan Heath Center partnered with Massachusetts General Hospital to operate mobile clinics that decreased barriers to care by expanding services, improving vaccine confidence, and strengthening community relationships. Although the health center's primary care provider was not part of the mobile unit staff, patients were able to have a telehealth visit with the provider prior to their mobile visit. This telehealth visit made patients and families feel more comfortable receiving care outside of the health center, since they knew their trusted provider approved it.

Partnerships can enable clinics to obtain resources that implementing organizations may not be able to procure on their own. For example, Codman Square Health Center and Mattapan Health Center's partners were able to provide insured drivers and cut down on costs of hiring and insuring a driver for the mobile unit.

Key Partners to Consider When Implementing this Practice

The key to implementing this practice is to identify and engage entities that can help with the planning, promotion, and/or execution of the practice

- Community health centers
- Community-based organizations
- Faith-based organizations
- Hospitals
- Immunization coalitions (e.g., Indiana Immunization Coalition)
- Pharmacies
- Schools

Example from the Field

Los Angeles County Department of Public Health (DPH) Partners with Community-Based Organizations to Host Mobile Clinics for Children and Community Members

Description: Los Angeles County DPH mobile clinics partner with community-based organizations to provide vaccination clinics at community locations.

Contacts: See the AIM Immunization Program Directory

Goal: To provide COVID-19 vaccinations and other selected vaccines (such as flu and routine childhood vaccines) to children and other community members in Los Angeles County.

Approach: Los Angeles County DPH operates a mobile clinic program year-round that provides vaccines at community sites such as childcare centers, parks, libraries, and events, such as Juneteenth celebrations. Community-based organizations complete a form to request mobile clinics in their communities. Los Angeles County DPH partners to host these events. Los Angeles County DPH coordinates staff for the clinics, including the nurse lead, intake staff, vaccinator, driver, security, and a lead coordinator on the day of an event. The community-based organization partners conduct the outreach and promotion activities for the event. Separately, Los Angeles DPH's clinical operations team visits local organizations' sites, building partnerships and trust with local organizations and increasing participation in mobile clinic events.

Lessons learned:

4. Hire and train culturally competent staff working in mobile clinics or staff clinics with local community members.
5. Design pediatric-specific vans (for example, with smaller chairs and smaller medical instruments).
6. Connect mobile clinic patients back to their pediatricians to allow for appointment follow-up care.

Resources: Los Angeles DPH created frequently asked questions documents in English and Spanish to help interested community organizations learn more about its programs.

Step 3: Identify operational challenges and action steps

Jurisdictions might run into challenges when planning and operating mobile clinics. The suggested action steps that follow can help overcome these challenges and meet patients' needs.

Category	Possible challenge	Suggested action step(s)
Patient acceptability and privacy	Families might not feel comfortable receiving care outside a brick-and-mortar clinic or from medical staff they do not know (Leibowitz et al., 2021).	○ Have local organizations, such as a local health clinic, with which the community has an existing relationship provide the mobile clinic (Leibowitz et al., 2021).
	Patients in areas of high vaccine hesitancy or distrust might not want other community members to know they are receiving a COVID-19 vaccine and might want privacy when receiving the vaccine.	○ Make sure patients have a private area to get their vaccines or to be evaluated or treated if experiencing adverse reactions.
Patient considerations	Families might lack transportation to the clinic.	○ Host the mobile clinic in a location accessible to public transportation.
	Parents and caregivers might not be able to leave work or arrange childcare.	○ Host the mobile clinic during non-business hours.
	Parents and caregivers might not have the digital literacy to schedule and complete paperwork online.	○ Have paper forms available. This can also help if mobile clinics are having trouble with internet connection.
	Families might need language support.	○ Hire multilingual staff or language interpreters. ○ Work with partner organizations to provide interpreters.
Funding	Mobile clinics are resource intensive, and normal payer reimbursement does not offset costs.	○ Explore opportunities to receive funding from individual or philanthropic donors. ○ Engage volunteers in support roles.
Operations	Mobile clinics might have difficulty maintaining operations when located in areas without stable internet connection.	○ Procure a Wi-Fi hotspot to ensure the clinic has access to electronic medical records, medical billing software, and immunization registries (Leibowitz et al., 2021). ○ Have paper copies of required forms and documents as backup.
Staffing	Mobile clinics might experience high turnover as jobs are often part-time or temporary.	○ Ask volunteers to fill roles such as traffic flow management. ○ Combine staff from multiple partner organizations so that staff members are not stretched as thin.
Demand	Clinics might not have enough patients to justify the resource use or have more patients than they can manage given the number of supplies and staff. It can be hard to predict how many patients will attend the clinic.	○ Ask community partners to advertise the event and schedule appointments for community members before the clinic.

Step 4: Determine key considerations for implementation

When jurisdictions are planning to use mobile clinics to vaccinate children at community-based locations, it is important to consider the feasibility of the practice to start up, scale, and sustain the practice over time; costs related to implementing the practice in the post-pandemic environment; and environmental factors which include the policy, environment, and funding landscape.

Feasibility

The mobile clinics practice requires high levels of resources to both start up and sustain but can potentially improve vaccine equity by reaching children who are medically and/or socially underserved. Because the practice administers vaccines in locations outside of traditional health care settings, it requires significant investments in the physical infrastructure required to transport, store, and administer vaccines (start-up). The investment includes refrigeration and freezer units, digital data loggers, vehicles, billing software, and mobile technology (such as laptops, tablets, and mobile wireless internet devices) for accessing and updating patient records. Moreover, the practice requires a high level of ongoing resources compared to the other practices, given the need to maintain or retain the vehicles, vaccine stock and related supplies, technology, and staff who administer vaccines and run operations (sustain). The figure below summarizes the level of resources and complexity required to start up, sustain, and scale the practices, and includes information on how the practice can advance vaccine equity.

	Start up	Scale	Sustain	
Practice 3: Mobile clinics	⊖	⊖	⊖	• **Resources:** Similarly high levels to start up, scale, and sustain. As mobile clinics are implemented in more locations and for longer periods of time, more resources (like staff and equipment) are needed. • **Complexity:** The level of complexity can remain high as mobile clinics are implemented in more locations and for longer periods of time. • **Equity:** Mobile clinics can increase access to vaccination in medically underserved communities.

⊖ = Qualitative analysis of literature, interview, and focus group data indicate that the practice requires a high level of resources and is complex to implement.

☑ = Qualitative analysis of literature, interview, and focus group data indicate that the practice requires a low level of resources and is not complex to implement.

Jurisdictions can mitigate the cost and resources needed by using existing infrastructure and local partnerships to implement, sustain, and scale the practices. Jurisdictions might partner with health care organizations or other entities that already have infrastructure to deliver vaccinations via mobile clinics. Partners may also be able to provide resources to operate mobile clinic programs, for example by donating vehicles, supporting outreach, or providing staff and volunteers. Capitalizing on existing resources, networks, and partnerships will aid in making this practice feasible in the post-pandemic environment.

Costs

The COVID-19 public health emergency (PHE) greatly affected the cost of implementing practices such as mobile clinics. For example, during the COVID-19 pandemic, the federal government paid for most or all COVID-19 vaccines, jurisdictions experienced high staff turnover and increased labor costs, and some needed to make new investments in vaccine infrastructure to meet the urgent need and high demand for vaccines. In addition, during the COVID-19 PHE, government funding was available that offered a large number of allowances and flexibility for spending, including spending on the leasing, rental, and purchase of vans.

In the post-PHE environment, jurisdictions will have less of this type of government funding and will likely need to find new ways to fund practice implementation. For example, government funding is now available for the leasing of vans, but not purchase.

Cost Categories

Below are the categories of costs immunization program managers may consider as they are calculating the cost of the promising practice for their own jurisdiction. This includes the cost of vaccines, staff time for vaccine administration, and vaccine storage and handling.

1. Program administration
2. Vaccinations
3. Staff time
4. Transportation
5. Refrigeration and storage
6. Scheduling and logistics
7. Training
8. Outreach

The tables that follow provide considerations and factors that affect cost for each category.

Program administration

Costs may include: salaries for program director and/or managers

Considerations	Factors that affect cost
? How many managers will you need based on the size of your program? **? What is the current demand for qualified staff?**	• Hourly rates for staff time will vary by jurisdiction. • The Bureau of Labor Statistics estimates the salary of a manager in the United States to be approximately $62.50/hour, or $93.75/hour when accounting for fringe benefits (BLS, 2022). Rates may be higher during periods of increased demand.

Vaccinations

Costs may include: vaccine purchase for non-VFC eligible, vials, syringes

Considerations	Factors that affect cost
? What is the expected VFC eligibility of the population? **? For the non-VFC population, are there other funding mechanisms to cover vaccines? Is there a mechanism to purchase private stock and bill for reimbursement?** **? What ancillary supplies will you need to buy or acquire through partnerships to offer vaccinations?**	• Medicaid and CHIP programs cover all Advisory Committee on Immunization Practices (ACIP)-recommended vaccines for children and vaccine administration without cost sharing (including COVID-19 vaccines). • Other ancillary supplies related to vaccinations, such as bandages and alcohol wipes, might affect the total cost of vaccinations.

Staff time

Costs may include: staff time to prepare and administer vaccinations, staff time for intake, staff time for IIS data entry, security, and to test methodology for collecting and sharing data

Considerations	Factors that affect cost
? How many staff will you need for vaccination administration based on your vaccination goals? **? How many staff will you need for data entry based on your vaccination goals?** **? What is the current demand for qualified staff?** **? Will partners or volunteers be providing any services, such as traffic flow management or security?**	• Based on feedback from AIM's Legacy Council Staff, average staff time for vaccine administration is 20 minutes/vaccination for two staff, including time for IIS entry. • Hourly rates for staff time will vary by jurisdiction. • The Bureau of Labor Statistics estimates the median rate for a registered nurse in the United States to be approximately $40/hour, or $60/hour when accounting for fringe benefits (BLS, 2022). Rates may be higher during periods of increased demand.

Transportation

Costs may include: leasing of vehicles, retrofitting vehicles, annual maintenance, fuel

Considerations	Factors that affect cost
? **What are current guidelines on allowable costs?** ? **Do you have partners who can donate vans?**	• The General Services Administration (GSA) authorized reimbursement for privately owned vehicles is $0.66/mile as of January 1, 2023 (GSA, 2023). • Government funding is now available for the leasing of vehicles, but not purchase.

Refrigeration and storage

Costs may include: plug-in refrigeration units, digital data logger thermometers, electrical power

Considerations	Factors that affect cost
? **What existing supplies do you already have?** ? **And do they meet current storage and handling guidelines?**	• The cost of refrigeration can vary widely. • An AIM Legacy Council member noted that a cost of $5,000 may be typical for purpose-built refrigerators, with digital data logger thermometers and backup power systems.

Scheduling and logistics

Costs may include: staff salary for scheduling and logistics for mobile clinics

Considerations	Factors that affect cost
? **What partners do you already have to support mobile clinics?** ? **How familiar are your partners with supporting mobile clinic operations?**	• CDC guidance on what to consider when planning to operate a COVID-19 vaccination clinic includes a variety of operational and logistics considerations, such as involving public health department staff leadership, establishing critical partnerships, identifying disproportionality impacted communities, and strategically selecting sites (CDC, 2023a). • Hourly rates for staff time will vary by jurisdiction.

Training

Costs may include: staff time to participate in trainings, required training materials

Considerations	Factors that affect cost
? What level of training do staff already have? **? What type of staff can administer vaccinations in your jurisdiction?** **? Do staff have the knowledge and tools to respond to vaccine hesitancy during the event?**	• Recommended CDC trainings for administering COVID-19 vaccinations include: (1) COVID-19 training modules, (2) routine vaccination administration training, and (3) routine vaccine storage and handling training (CDC, 2023b). • The AIM Legacy Council suggested that these and other trainings can take up to 80 hours. • The Bureau of Labor Statistics estimates the median rate for a registered nurse in the United States to be approximately $40/hour, or $60/hour when accounting for fringe benefits (BLS, 2022). Rates may be higher during periods of increased demand.

Outreach

Costs may include: systems to manage outreach, staff time to conduct outreach

Considerations	Factors that affect cost
? Does your jurisdiction currently have enough staff to conduct outreach? **? If not, are there partnerships your jurisdiction could leverage to support outreach efforts?**	• Evidence in adjacent contexts suggests that multimodal marketing can enhance vaccination efforts for mobile clinics (Hannings et al., 2022). • The outreach modality and the number of individuals receiving outreach will affect the cost of outreach.

How much would it cost to implement this practice in your jurisdiction?

AIM has hypothetical examples available for jurisdictions to use as a starting point to calculate the potential costs to implement this practice. Actual expenses for your immunization program will vary widely based on program specifics and if/how you engage with vaccine purchase and administration. Find the examples and the detailed technical economic analysis in the Evaluation of Five Promising Practices Used During the COVID-19 Public Health Emergency to Improve Pediatric COVID-19 Immunization Rates technical report (available in the Promising Practices to Improve Pediatric COVID-19 Immunization Rates Toolkit).

Environmental factors

Jurisdictions using mobile clinics to vaccinate children in community settings will need to navigate environmental factors, including policies, which can help or challenge the implementation of the mobile clinics. The table below provides examples of specific policies and environmental factors that organizations may consider when implementing mobile clinics for children.

Examples of policies and environmental factors that affect the implementation of mobile clinics

Environmental factor or policy	Questions for implementers to consider	Example(s) of policy or environmental factor affecting the practice	Action steps
Policies related to providers' scope of practice	• Can pharmacists vaccinate children in our jurisdiction? • If so, how can we work with pharmacist partners to implement mobile clinics?	• California allows pharmacists to administer COVID-19 vaccines to children (CA A 1064).	○ Check with your jurisdiction's licensing boards to understand scope of practice regulations in your jurisdiction. ○ Engage state lawmakers through education surrounding policies related to providers' scope of practice (see AIM's Immunization Program Policy Resource Guide).
Policies on minor consent for vaccination	• Can minors consent for vaccination in our jurisdiction or do we need to obtain parental consent? What ages can self-consent? • What processes and protocols do we have in place to capture parental consent, if needed? • What processes or protocols do we have in place to gather consent from the minor?	• Jurisdictions such as Alabama, Florida, and Nevada do not allow minors to get the COVID-19 vaccine without parental or guardian consent. • In contrast, Washington, DC, adopted Law 23-193, which allows a minor of at least 11 years old, to consent to receive a vaccine where the vaccination is recommended by the United States ACIP. Per the law, informed consent is established if a minor is able to comprehend the need for, the nature of, and any significant risks inherent in the medical care.	○ Consult this webpage on state laws on minor consent from SchoolHouse Connection to understand minor consent in your state. ○ Engage lawmakers through education surrounding policies related to informed and minor consent laws (see AIM's Immunization Program Policy Resource Guide).

Environmental factor or policy	Questions for implementers to consider	Example(s) of policy or environmental factor affecting the practice	Action steps
Policies on whether entities need minor/parent/guardian consent to report vaccinations to the IIS	• How do our jurisdiction's policies on minor or parental consent to report vaccinations to the IIS affect the comprehensiveness of data in the IIS?	• Illinois and Michigan use implicit consent with the ability for parents/guardians to opt out of having their child's information in the IIS. • New Hampshire and Ohio require entities to obtain explicit consent from parents/guardians before reporting vaccination information to the IIS.	◯ Consult this School-House Connection webpage on state laws on minor consent to understand minor consent in your state. ◯ Engage lawmakers through education surrounding policies related to informed and minor consent laws (see AIM's Immunization Program Policy Resource Guide).
Organized groups supporting or hindering the implementation of practices	• Are there any organizations or groups in our jurisdiction who would stop this practice? • What measures can we take to make sure children feel comfortable and safe to receive vaccines?	• An anti-vaccine organized group in the Southwest worked to shut down mobile clinics at schools. • A jurisdiction in the Southwest provided other health services at their mobile clinics. This allowed community members who might otherwise experience harassment if they were seen getting the COVID-19 vaccine at the mobile clinic to say they were receiving other services.	◯ Consider notifying local law enforcement of your clinic in the case of threats or individuals who attempt to disrupt operations. ◯ Combat misinformation from anti-vaccine groups (see AIM's COVID-19 Vaccines: Vaccine Safety FAQs, Dispelling Vaccine Myths and CDC's How to Address COVID-19 Vaccine Misinformation).

Other resources to implement this practice

Below are resources for mobile clinics:

AIM

- **Promising Practices to Improve Pediatric COVID-19 Immunization Rates Toolkit:** In this toolkit, find more resources, including tip sheets and slide decks, to implement five promising strategies to improve vaccination rates.
- **Evaluation of Five Promising Practices Used During the COVID-19 Public Health Emergency to Improve Pediatric COVID-19 Immunization Rates Technical Report** (available in the Promising Practices to Improve Pediatric COVID-19 Immunization Rates Toolkit): This technical report includes detailed information about this study, including feasibility, policy, and costs analyses of each practice.
- **COVID-19 Resource Guide:** This guide compiles existing communications messaging and materials that you can use to support immunization program outreach.
- **COVID-19 Vaccines: Vaccine Safety FAQs, Dispelling Vaccine Myths:** This PowerPoint slide set was developed by iREACH Subject Matter Experts to answer frequently asked questions about COVID-19 vaccine safety and dispel common myths about COVID-19 vaccines.

- **How Can Community-Based Organizations Help Support the COVID-19 Vaccination Effort?:** This resource provides community-based organizations (CBOs) with tools to assist in stopping the spread of COVID-19 and tips for supporting vaccine access.
- **How Can Faith Leaders Help Support the COVID-19 Vaccination Effort?:** This guide discusses strategies for faith leaders to support COVID-19 vaccination, including messages to share with their communities and tips for supporting vaccine access at their house of worship.
- **Immunization Program Policy Toolkit:** This toolkit is designed to equip immunization programs with the tools and information necessary to appropriately and effectively engage with elected officials.
- **Vaccine Confidence Connect the Dots:** This guide provides immunization programs with the tools and information necessary to promote vaccine confidence across the nation and its territories.

CDC

- **12 COVID-19 Vaccination Strategies for Your Community:** This field guide presents 12 COVID-19 vaccination strategies adapted from evidence-based practices implemented nationwide to help increase vaccine confidence and uptake.
- **Guidance for Planning Vaccination Clinics:** This webpage from the CDC provides considerations for vaccination clinic staffing, location and layout, and coordination with partners, and lists pre-clinic, during the clinic, and post-clinic activities.
- **Hosting Off-Site COVID-19 Vaccination Clinics:** This 18-minute webinar from the CDC covers considerations for hosting off-site COVID-19 vaccination clinics.
- **How to Address COVID-19 Vaccine Misinformation:** On this page, the CDC shares strategies for communicating accurate information about COVID-19 vaccines, responding to gaps in information, and confronting misinformation with evidence-based messaging from credible sources.
- **Recommended trainings for administering COVID-19 vaccinations:** (1) COVID-19 training modules, (2) routine vaccination administration training, and (3) routine vaccine storage and handling training.
- **Satellite, Temporary, and Off-Site Vaccination Clinic Supply Checklist:** This page compiles supplies that may be needed to conduct a satellite, temporary, or off-site vaccination clinic.
- **Vaccine Storage and Handling Toolkit:** This is a comprehensive guide that reflects best practices for vaccine storage and handling from ACIP recommendations, product information from vaccine manufacturers, and scientific studies.
- **VFC Operations Guide:** This guide reflects VFC program policies, processes, and requirements.
- **VFC Vaccine Price List:** This website provides vaccine contract prices and lists the private sector vaccine prices for general information.

Immunize.org

- **Ask the Experts: COVID-19:** This page is frequently updated with answers to questions about COVID-19 vaccine products, recommendations, and more.
- **Checklist of Best Practices for Vaccination Clinics Held at Satellite, Temporary, or Off-Site Locations:** This PDF created by the Influenza Work Group of the National Adult and Influenza Immunization Summit includes supplies and necessary considerations before the clinic, during the clinic, and after the clinic.

- **Checklist of Current Versions of U.S. COVID-19 Vaccination Guidance and Clinic Support Tools:** This checklist provides links to key COVID-19 vaccination resources and indicates when they were last updated.
- **Clinical Storage and Handling Resources:** This page contains numerous clinical storage and handling resources, including temperature logs, suggestions to improve immunization services, and skills checklists for vaccine administration.
- **COVID-19 Clinical Resources:** This page provides clinical resources related to COVID-19 vaccination.
- **Improving the Vaccination Experience:** This page provides materials for providers and vaccine recipients on addressing vaccination anxiety, reducing vaccination pain, and other strategies for improving the vaccination experience.
- **Medical Management of Vaccine Reactions in Children and Teens in a Community Setting:** This table describes procedures to follow if various reactions occur in children and teens, including a supply list.
- **Supplies You May Need at an Immunization Clinic:** This one-page form lists patient resources, routine clinic supplies, medical emergency supplies, and other supplies that may be needed at immunization clinics.

Other

- **Autism Society of America's Guide to Accessible Vaccination:** This guide provides tips on how to reduce barriers to vaccination and increase vaccination equity and uptake among the Autism community.
- **Centers for Medicare & Medicaid Services Toolkit of Vaccine Coverage and Administration for Medicaid and Children's Health Insurance Program Individuals:** This vaccine toolkit equips states with the tools necessary to meet the needs of people with Medicaid and the Children's Health Insurance Program (CHIP) coverage. The kit helps states understand coverage, cost-sharing, and payment for vaccines, including vaccines administered as part of the Inflation Reduction Act (IRA) under Medicaid, CHIP, and the Basic Health Program (BHP).

Appendix A
Supply and Staff Checklist

The checklist of supplies below can serve as a starting point for organizations interested in operating mobile vaccine clinics.

Vaccine supplies

- ◯ Professional grade freezer, refrigeration unit, electric mobile refrigerator, or freezer
- ◯ Digital data logger thermometers
- ◯ Transportation coolers
- ◯ Vaccine

Mobile unit supplies

- ◯ Mobile units or vans, annual maintenance, and mileage
- ◯ Insurance for mobile unit
- ◯ Utilities (electricity, heating, and cooling)
- ◯ Seating area for patients waiting for vaccines and after receiving vaccines
- ◯ Private areas for patients to receive vaccines with chairs for the patient and vaccination provider
- ◯ Tents to cover seating areas in case of heat or precipitation

Clinical administration and office supplies

- ◯ Consent and insurance forms for patients, vaccine information sheets (VIS)
- ◯ Clinic supplies (syringes, bandages, alcohol prep pads, sharps containers, hand sanitizer, gloves, partition screens, needles, etc.)
- ◯ Office supplies (pens, clipboards; signage for clinic hours, dates, and patient flow, etc.)
- ◯ Hotspot for internet connection
- ◯ Laptops or tablets for data entry
- ◯ Software to plan staffing, track doses administered, document consent, bill insurance, and share data with IIS
- ◯ Access to medical records and billing forms
- ◯ Access to immunization registry
- ◯ Language and translation services
- ◯ Vaccine information statements and immunization record cards
- ◯ Medical emergency supplies (blood pressure monitor, epinephrine, H1 antihistamine, etc.)

Staff

- ◯ Clinic leads to manage staff and logistics
- ◯ Administrative staff to register patients and enter data into the registry; help with set-up and teardown
- ◯ Volunteers to manage traffic flow and provide water to patients
- ◯ Interpreters, community health workers, or volunteers for language interpretation
- ◯ Driver for the mobile van or unit
- ◯ Security staff to ensure patient and staff safety
- ◯ Community health workers or outreach workers to conduct outreach, media, and marketing
- ◯ Event coordinators to plan the event and coordinate with partners
- ◯ Vaccine coordinators to order vaccines and provide staff training and education

Appendix B: Tips for Implementing Mobile Clinics to Vaccinate Children Against COVID-19 at Community-Based Locations

When implementing mobile vaccination clinics (mobile clinics) and expanding clinics to new locations, jurisdictions should consider the unique contexts of their communities to provide the best possible care.

Partner with community organizations to improve trust

- Partner with community organizations to serve as champions and trusted messengers when bringing mobile clinics to new locations, especially when considering historically marginalized communities or communities that might be unfamiliar with the mobile clinic operator.
- Hire community members to serve as community health workers, raising awareness of the clinic and building trust with patients.

Understand and address language barriers of the particular community

- Hire staff or interpreters who speak the languages and local dialects of the community or ask partner organizations if they can provide interpreters for the clinic.
- Develop and provide translations of specific medical terminology for interpreters to use, such as side effects, common concerns, and information on the vaccine-preventable disease.

Account for unique weather conditions or terrain when planning and securing supplies

- When operating in hot weather, consider operating clinics during the evening, using funds or donations from partners to provide water for patients and staff, and having enough staff to ensure there are breaks to avoid overheating.
- Set up tents outside the clinic for protection from sun and precipitation. Tents can also help provide privacy for patients.
- In areas that are geographically difficult to reach, work with emergency managers and local jurisdictions to navigate logistical challenges to providing services.

Be prepared for adverse vaccine events

- Ensure mobile clinic staff are trained in emergency medical response and know where the nearest emergency department is located.
- Supply the mobile clinic with medical emergency supplies, such as a blood pressure monitor, epinephrine, and an H1 antihistamine.

Connect patients to medical homes for follow-up and essential health care services

- For vaccines that require multiple doses, ensure that patients without a medical home know where and when they can receive their follow-up doses, whether through the mobile clinic or other local providers.
- Collect information on local safety net or Medicaid providers and share the providers' information with families verbally, with QR codes, or via printed handouts.

Understand the policy, environmental, and funding context

- Understand policies related to which providers can vaccinate children to inform staffing plans.
- Consider how policies on minor consent affect clinic processes and protocols to obtain consent from parents and/or minors.
- Consider whether any local groups would hinder implementation of your program.
- Consider notifying local law enforcement of your clinic in the case of threats or individuals who attempt to disrupt operations.
- Ensure local ordinances around permitting are followed.
- Develop and implement processes for verifying insurance information to accurately bill for vaccinations.
- Understand expenses will vary widely based on jurisdiction specifics and use of existing staff, infrastructure, funding support, and partnerships.
- Mitigate costs by partnering with organizations that already have infrastructure to operate mobile clinics.

During the COVID-19 public health emergency (PHE), government funding was available that offered a large number of allowances and flexibilities for spending, including spending on the leasing, rental, and purchase of vans. In the post-PHE environment, jurisdictions will have less of this type of government funding and will likely need to find new ways to fund practice implementation. For example, government funding is now available for the leasing of vans, but not purchase.

Understand the demand for COVID-19 vaccines in the community

- Work with community partners to publicize mobile clinic events through flyers, social media, and other dissemination channels that are popular within the community.
- Ask patients to register for appointments online ahead of the clinic to get a sense of how many people will attend.
- Use information on demand and appointment registration to right-size the supplies needed.

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