

Improving Vaccine Access in Oregon: An Evaluation of Challenges and Opportunities

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List of Abbreviations

ALERT IIS	ALERT Immunization Information System
APAC	All Payer All Claim dataset
FQHC	Federally Qualified Health Center
LPHA	Local Public Health Authority
NWCPHP	Northwest Center for Public Health Practice at University of Washington
OHA	Oregon Health Authority
OHP	Oregon Health Plan
OIP	Oregon Immunization Program at Oregon Health Authority
SBHC	School Based Health Clinics
VAP	Vaccine Access Program
VFC	Vaccines For Children Program



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Introduction

The Oregon Immunization Program (OIP), part of the Oregon Health Authority (OHA), works to protect Oregonians from vaccine-preventable diseases by supporting equitable access to immunizations. As part of this work, OIP manages vaccine programs, including the Vaccines for Children (VFC) program and the Vaccine Access Program (VAP), that supply enrolled practices with immunizations for certain eligible patients. The VFC program is a federally funded initiative that supplies no cost vaccines for children under 19 who are Medicaid/Oregon Health Plan eligible, uninsured, or American Indian/Alaska Native. The VAP is a state-funded initiative that improves vaccine access for all ages by simplifying ordering and reducing upfront immunization costs for enrolled providers. Through these efforts, OIP supports clinical practices and public health agencies in delivering routine childhood immunizations and maintaining compliance with federal¹ and state² guidelines.

Oregon's immunization program faces growing challenges and a need for modernization to align with the evolving healthcare landscape and available funding resources. These challenges mirror national trends, where VFC-enrolled practices report increasing administrative burden, complex record-keeping, compliance concerns, and unpredictable vaccine supply.³ To address these challenges, Oregon is working to reform its vaccine finance model, aiming to reduce barriers for immunization providers while ensuring equitable vaccine access across the state.

Recognizing the need for a more sustainable and accessible immunization framework, Oregon has taken proactive steps to evaluate existing barriers and identify solutions that support providers and patients while enhancing access to routine immunizations. OIP partnered with the Northwest Center for Public Health Practice (NWCPHP) to conduct a comprehensive evaluation of systemic barriers within the state's publicly funded vaccine programs. This multi-method assessment aimed to better understand the operational, financial, and administrative challenges faced by practices participating in the VFC program and VAP.

This report presents key findings from the assessment, with a focus on provider experiences, factors influencing continued participation, and conditions that may contribute to voluntary disenrollment.

¹ Centers for Disease Control and Prevention. VFC Operations Guide. Centers for Disease Control and Prevention Website. <https://stacks.cdc.gov/view/cdc/134193>. Accessed January 5, 2025. https://www.cdc.gov/vaccines-for-children/media/pdfs/2024/08/vfc-ops-guide_version-4.0_july-2024_low-res-508-rev-2.pdf

² Oregon State-Supplied Vaccine Programs (VFC/VAP). <https://www.oregon.gov/oha/PH/PREVENTIONWELLNESS/VACCINES/IMMUNIZATION/IMMUNIZATIONPROVIDERRESOURCES/VFC/Pages/index.aspx>

³ O'Leary ST, Allison MA, Vogt T, Hurley LP, Crane LA, Brtnikova M, McBurney E, Beaty BL, Crawford N, Lindley MC, Stokley SK, Kempe A. Pediatricians' Experiences With and Perceptions of the Vaccines for Children Program. *Pediatrics*. 2020 Mar;145(3):e20191207. doi: 10.1542/peds.2019-1207. Epub 2020 Feb 21. PMID: 32086388; PMCID: PMC10206937.

Methods

The evaluation was conducted between October 2024 and June 2025, and included a statewide provider survey, qualitative interviews with key practice staff, a simulated patient inquiry, and a geospatial analysis to assess immunization access across Oregon.

Survey. The provider survey was distributed to staff at sites that provide immunizations throughout the state of Oregon. The survey collected information on perceived barriers to participation in state-supplied vaccine programs, immunization referral practices, and operational challenges from 160 respondents.

Interviews. In-depth interviews were conducted with 43 immunization providers from diverse clinic types, including private pediatric and family practices, School-Based Health Centers (SBHCs), Federally Qualified Health Centers (FQHCs), and Local Public Health Authorities (LPHAs). Interviewees represented 28 practices that were currently enrolled in either the VFC or VAP program, and 15 practices that were never enrolled, formerly enrolled, or were at risk of disenrollment. Interviews explored vaccine program administration, staffing, decision-making around continued participation, and reasons for program disenrollment.

Simulated Patient Inquiry. A simulated patient inquiry was conducted with 16 practices to assess referral patterns for OHP-covered pediatric patients seeking immunizations at non-enrolled primary care practices. Callers inquired about the referral locations for a VFC-eligible child requiring routine vaccines.

Geospatial Analysis. Using immunization data from the ALERT Immunization Information System (ALERT IIS) (2023–2024) and insurance claim data from the All Payer All Claims dataset (APAC) (2022–2023), the analysis produced coverage maps to visualize areas of Oregon served by immunization providers. Additional sources included the Centers for Disease Control and Prevention (CDC) Social Vulnerability Index and the Oregon Department of Transportation's All Public Roads data. The final dataset included 1,402 practices: 1,182 from ALERT IIS and 220 from the APAC dataset.

Together, this multi-perspective assessment describes provider participation, challenges, and access-related implications of Oregon's state-supplied immunization programs. The individual activities, methodology used, and sample size are described in Table 1.

Table 1. Evaluation Activities Description

Activity	Methodology	Sample Size & Description
Oregon immunization provider survey: barriers experienced by practices enrolled in Vaccines for Children (VFC) program and Vaccine Access Program (VAP)	Online survey	160 staff from practices enrolled in either the VFC or VAP program
Qualitative evaluation of provider experiences with the Vaccines for Children (VFC) program and Vaccine Access Program (VAP)	Key informant interviews	32 staff from practices enrolled in either the VFC or VAP program
Qualitative evaluation of practices regarding disenrollment from Oregon's Vaccines for Children (VFC) program	Key informant interviews	11 practices that were never enrolled, formerly enrolled, or at risk of being disenrolled from VFC or VAP programs
Examination of immunization referral practices among a small sample of Oregon clinics	Simulated patient calls	16 practices that generally refer pediatric patients elsewhere for immunizations services
Geospatial analysis of immunization service providers in Oregon	Geospatial analysis	1,402 practices (identified from APAC and ALERT IIS datasets) that provide pediatric immunization services in Oregon



Overall Findings

Enrollment status, practice type, practice size, and geographic location all influenced the number and severity of barriers reported by practices. VAP-enrolled practices, particularly LPHAs, as well as small⁴ practices with limited prescribing providers and staff, and those located in rural or frontier areas, experienced more pronounced challenges. SBHCs also reported a high number of barriers.

I. Key Barriers to Participating in Oregon's State-Supplied Vaccine Program

The top barriers to participation in Oregon's state-supplied vaccine programs, Vaccines for Children (VFC) and Vaccine Access Program (VAP), as identified across both survey and interview responses, include:

- The increasing **financial** cost of program participation.
- The administrative burden of program requirements and managing two **separate stocks** of immunizations for patients who qualify for state-supplied immunizations and those who do not.
- Challenges in **training and retaining staff** to support immunization services.
- The increasing overall **complexity** of being an immunization provider, which compounds other barriers.
- Insufficient **communication** and **support** from OIP.

Financial Barriers to Participation

Increasing financial costs were frequently mentioned as a top barrier to participation in the state-supplied vaccine program by both VFC- and VAP-enrolled practices. Reported financial barriers included 1) **high upfront cost** of purchasing immunizations not supplied by VFC/VAP, as well as the cost of vaccine storage and handling equipment; 2) **inadequate reimbursement from both commercial insurance and VFC** for vaccine-related costs; and 3) **financial losses** due to potential vaccine wastage. Specific financial constraints varied by enrollment status, practice size, type, and location.

1. High Upfront Financial Costs

Practices reported that it was difficult to break even on the cost of providing immunization services, citing staffing, supplies, and overhead costs as higher than what is received in payment. Participants described burdensome upfront costs of purchasing private vaccines, especially when minimum order quantities exceeded their actual needs. Small practices, including private practices, LPHAs, and SBHCs, often do not benefit from bulk ordering discounts available to larger practices or those affiliated with major health systems, further exacerbating the financial burden.

⁴ Throughout this report, "small practices" is used as an inclusive term encompassing both small (2-5 licensed providers) and solo (1 licensed provider) practice settings.

2. Inadequate Reimbursement Rates

Insufficient reimbursement from both commercial insurance and the VFC vaccine administration fee⁵ was a common concern. While commercial reimbursement previously helped offset staff costs and supplies for VFC- and VAP-eligible patients, commercial reimbursement rates have not kept pace with the rising costs of providing clinical immunization services. This barrier had the biggest impact on small practices, private pediatric practices, and LPHAs and SBHCs. Additionally, among practices in frontier areas, half reported that insufficient commercial insurance reimbursement was a major burden. Among VFC clinics, the most frequently reported barrier to participating in the state-supplied vaccine program was the insufficient VFC vaccine administration fee.

3. Potential Vaccine Wastage

Financial loss due to vaccine wastage resulting from over-ordering and forecasting challenges was a commonly cited concern, particularly among smaller practices purchasing private stock. For example, providers explained that if a manufacturer required them to order a minimum of ten doses of a vaccine, but they only administered five, the remaining five would expire and result in financial loss. Additionally, ordering private vaccine stock from manufacturers or distributors often required forecasting patient needs far in advance, especially for the influenza vaccine. Accurately estimating demand was particularly difficult due to fluctuating patient volumes and uncertain uptake, and providers noted that overestimates led to wastage, while underestimates forced them to scramble to obtain doses from other practices, often at a higher cost or with delays that disrupted immunization schedules.

Administrative Burden of Program Requirements and Managing Separate Immunization Stocks

Practices participating in the state-supplied vaccine program must comply with stringent state and federal requirements, including enhanced temperature monitoring, vaccine storage standards, staff training, extensive documentation, and complex vaccine eligibility coding. These program complexities made providing immunizations more difficult, could potentially result in documentation and eligibility coding errors, and created significant operational challenges.

This was particularly an issue for LPHAs, small practices, and those in frontier areas, all of whom reported greater difficulty managing VFC/VAP program requirements. For LPHA clinics, challenges were related to purchasing and managing vaccine stock for their low numbers of patients who do not qualify for state-supplied immunizations. Staff representing SBHCs noted that the inability to track shipments caused extreme difficulties in shipment planning and receiving, as orders were often delivered after school buildings were closed. FQHC representatives also reported burdens with duplicative systems, cold-chain documentation,⁶ immunization coding, and ordering.

For VFC-enrolled practices, the administrative burden created by managing two separate immunization stocks for VFC- and commercially-insured children was frequently mentioned as a significant barrier that required duplicative ordering and tracking, and careful estimates. Many practices described the ordering process as challenging to navigate and resource-intensive.

⁵ The VFC vaccine administration fee is the per-injection amount healthcare practices can charge to patients. The U.S. Centers for Medicare & Medicaid Services (CMS) sets a maximum allowable administration fee for vaccine administered to VFC-eligible children for each state; in Oregon, that fee cap is \$21.96. There is no administration fee cap for doses administered to other client types.

⁶ A cold chain is a temperature-controlled supply chain that includes all vaccine-related equipment and procedures. The cold chain begins with the cold storage unit at the manufacturing plant, extends to the transport and delivery of the vaccine and proper storage at the provider facility, and ends with administration of the vaccine to the patient (Centers for Disease Control and Prevention (CDC). Vaccine Storage and Handling. Epidemiology and Prevention of Vaccine-Preventable Diseases. Updated May 16, 2024).

Administrative burdens were reported as less significant for private pediatric and family practices and for clinics affiliated with large healthcare systems. These practices often have more resources and staff to manage program requirements.

Staffing Shortages and Training Barriers

Most practices reported that training staff on the complex program rules and eligibility coding requirements was time-consuming, often taking up to a year for staff to become proficient. Many participants described a limited hiring pool of healthcare workers, high staff turnover, and lengthy training requirements as barriers to sustaining immunization services. Staff from FQHCs and SBHCs in particular identified hiring, retaining, and training staff as significant barriers. Practices emphasized that staffing challenges were not limited to state-supplied programs, as managing the growing number of immunization products and increasing lack of patient confidence in vaccines posed difficulties for immunization practices in general. However, the additional complexities of program requirements further compounded existing staffing constraints.

Several interviewees from small practices and frontier counties described a lack of capacity to train or supervise new staff, particularly in areas such as vaccine inventory management, coding, and eligibility systems. Small practices often had few or no clinical support staff, and some described the strain of having a single individual responsible for all aspects of program compliance, including daily, weekly, and annual tasks and program requirements.

Increased Complexity of Being an Immunization Provider

Practices frequently noted growing challenges and complexities in providing immunizations, particularly staff from LPHAs, SBHC, private family practices, and small practices. Practices cited the addition of new vaccines to the CDC-recommended schedule, increasing administrative complexity, (e.g., burdensome ordering processes and strict cold-chain requirements), difficulty hiring and retaining skilled staff, and an increasing number of patients questioning the efficacy of immunizations as factors that made vaccine management more difficult.

Communication Challenges with OIP

Communication challenges emerged as a notable barrier for practices, largely due to the complexity of administrative requirements and program rules. Participants frequently reported experiencing miscommunications and described guidance from OIP as unclear, particularly regarding program changes and terminology. They expressed frustration over what was considered a lack of clear, timely, centralized communication from OIP and emphasized the need for a single location from which they could look up practice-specific site visit findings, enrollment status, modifications to program requirements, and other program announcements.

Some participants misunderstood certain program rules, such as requirements relating to purchasing a separate private stock of immunizations and the distinctions between VFC versus VAP enrollment. The use of some terms, such as “billable” and “private stock,” was also considered inconsistent and caused confusion among clinical staff, as these terms can hold different meanings for OIP staff versus clinical staff and may vary according to enrollment type.

II. Disenrollment Risks

Practices indicating some likelihood of disenrollment from the VFC or VAP program cited high costs, administrative challenges, and issues with retaining and training staff as the top reasons for potential future disenrollment, although none within the next year. LPHA clinics indicated the highest likelihood of future disenrollment, citing high costs, their own budget reductions, and inadequate staffing. This is particularly concerning, as some LPHAs serve as the only safety net immunization provider in their jurisdiction. If these clinics discontinue services, their communities could lose access to state-supplied routine childhood immunizations.

Frontier and rural communities were particularly vulnerable to the downstream impacts of a provider disenrolling from a state-supplied vaccine program. A few participants described communities where only one provider remained enrolled, raising concerns about where eligible patients may receive care if that provider were to disenroll.

III. Immunization Referrals from Practices That Provide Well-Child Services but not Childhood Immunizations

A small sample of practices that provide well-child services but not childhood immunizations were asked where they would refer VFC-eligible pediatric patients for immunizations. These providers commonly referred families to LPHAs, pharmacies, or other private practices. However, most pharmacies are not enrolled in the VFC program and therefore are unable to serve children covered by OHP, limiting the usefulness of pharmacy referrals for OHP-covered families. Similarly, not all LPHAs in Oregon offer clinical immunization services, and many that do operate within limited hours, making it challenging for some families to access services.

IV. Geographic Distribution of Practices that Immunize Children and Implications for Immunization Access

Using the ALERT IIS and APAC datasets, 1,402 practices⁷ that provide immunization services to pediatric patients in Oregon were geolocated. VFC- and VAP-enrolled practices accounted for slightly less than half of identified providers. As expected, practices were concentrated in high population urban areas throughout the state, particularly within 20 miles of the I-5 corridor and west of US-97. Geospatial analysis showed that VAP-enrolled clinics serve a particularly important role in providing immunization access in rural and frontier areas of the state. The analysis also identified a few regions where strategic expansion of state-supplied vaccine programs could improve access.

Key findings include 1) VAP-enrolled practices make up a large percentage of immunizing providers in rural and frontier areas; 2) geographic distance and social vulnerability can limit access to immunizations, and 3) some limited identifiable regions where strategic expansion could improve vaccine access.

⁷ Pharmacies are not included in this number.

1. Enrolled Practices in Rural and Frontier Areas

Immunization access in rural and frontier areas relies heavily on VAP-enrolled practices, especially remote unincorporated communities. In frontier counties, VAP-enrolled practices accounted for nearly half (49%) of all immunizing practices. In comparison, VAP-enrolled practices accounted for 29% of practices in rural counties and 18% in mixed urban-rural counties. In contrast, VFC-enrolled practices account for only 10% of all immunizing providers in frontier counties and slightly more than a quarter of all practices in rural and mixed urban-rural (29% and 26%, respectively).

2. Distance and Vulnerability

Rural and frontier census tracts are more likely to have populations with more than 30 minutes of drive time to access immunizations. Some census tracts have both geographic distance and high social vulnerability⁸ in terms of low socio-economic status and disadvantaged household characteristics and housing type, particularly in counties such as Clackamas, Morrow, and Coos.

3. Areas to Improve Immunization Access

The frontier census tracts with the highest concentration of residents are near Eugene, Klamath Falls, Baker City, Medford, and Salem. Recruiting immunization practitioners in or near these census tracts to enroll in VFC or VAP has the potential to serve the greatest number of residents. Expansion of state-supplied vaccine to other areas of the state is constrained by the limited number of non-enrolled practices and would likely require pharmacies or mobile clinics to be engaged to fill the gaps.

V. Provider-Identified Opportunities for Improvement

Throughout the survey and interviews, participants shared a range of suggestions to improve provider experiences with the state-supplied immunization programs. Providers enrolled or formerly enrolled in the VFC and VAP programs provided specific recommendations to improve program accessibility by reducing program complexity, improving vaccine ordering, reducing financial barriers, and improving communication and support from OIP. Recommendations are summarized below by key areas:

Reduce Program Complexity

- *Reevaluate the two-stock requirement.* Having to maintain two separate vaccine stocks for different client eligibility categories was burdensome and error prone. One suggestion was to have a single stock for all patients, with the state billing insurers for privately insured children. Another suggestion was for insurers to pay the state a flat per capita fee to fund vaccine procurement along with other state and federal funding sources, similar to universal vaccine purchase models used in other parts of the country.
- *Modernize ALERT IIS.* Participants suggested improvements to Oregon's ALERT IIS, including rapid feedback on eligibility coding errors, and barcode scanning options to simplify inventory management.

⁸ Social vulnerability factors can include a higher percentage of people with limited English proficiency, adults without health insurance, individuals living below the federal poverty level, and households spending a significant portion of income on housing. Other factors include a higher percentage of residents under age 17, adults, and individuals living in group quarters. Not all counties exhibited every vulnerability factor.

Improve Vaccine Ordering

- *Allow more responsive ordering.* Participants suggested OIP reconsider tiered ordering⁹ requirements that may not align with unpredictable vaccine demand.
- *Improve order tracking.* Participants also requested improvements in tracking immunization orders and notifications about deliveries.

Reduce Financial Barriers

- *Support additional funding options to offset low administration fees.* Financial challenges were seen as a key barrier to providing vaccines. Participants suggested OIP could publicize available funding opportunities, such as grants, that practices could apply for. Another suggestion was to allow VAP providers to bill commercial insurers a percentage above the vaccine cost, which would help offset unreimbursed administrative expenses.
- *Support insurance negotiations.* Several providers expressed frustration with commercial insurers' low and outdated reimbursement rates and requested support in negotiation or regulation to ensure reimbursement keeps pace with rising vaccine and operational costs.

Improve OIP Communication and Support

- *Reinstate live training sessions.* Participants valued previously offered live training sessions. These sessions were seen as a helpful and quick way to get questions answered.
- *Improve resource accessibility.* Tip sheets were generally seen as helpful, but OIP's current webpage could be reorganized to improve accessibility and navigation. Additionally, participants requested a centralized source for updates, enrollment status, and site visit records they could reference when needed.
- *Use consistent terminology.* Participants noted that jargon and inconsistent terminology created confusion.
- *Support small clinic enrollment.* Participants from small clinics not currently enrolled in VFC or VAP said they would benefit from more support in understanding and completing enrollment requirements.
- *Provide resources that promote vaccine confidence.* Participants recommended that OIP provide educational resources for patients and staff to increase confidence in vaccine efficacy and safety, including visual aids and multilingual resources.

⁹ Tiered ordering refers to the cycle frequency with which VFC/VAP providers are assigned for ordering state-supplied vaccines.





VI. Conclusion

Ongoing financial, administrative, and staffing challenges make it difficult for small, rural, and publicly funded clinics, such as LPHAs and many SBHCs, to remain in Oregon's state-supplied vaccine programs. If VAP-enrolled practices, many of which are small, rural, or publicly funded, were to disenroll from the program, it would substantially reduce access to childhood immunizations in underserved areas. Rural and frontier communities would face longer travel times and fewer care options, increasing the strain on already overburdened public health systems. Similarly, the withdrawal of LPHAs would pose a serious risk to local immunization access, as these clinics often provide critical immunization services to underserved communities and serve as a primary referral option for practices that refer VFC-eligible patients elsewhere for immunization services.

Nearly half of all practices that provide routine childhood immunizations in Oregon are enrolled in the VFC or VAP program. Rural and frontier communities in particular are heavily reliant on VFC- and especially VAP-enrolled practices, which offer broader geographic coverage compared to non-enrolled practices. VAP-enrolled practices have the largest service area coverage across the state and are often the sole immunization service provider in remote unincorporated areas. Most people in Oregon live within a 30-minute drive of a state-supplied immunizing practice, however rural and frontier regions face greater distance and social vulnerability challenges. Some of the greatest barriers to access occur in communities that experience both geographic isolation and high social vulnerability. Expanding access in these areas will likely require engaging pharmacies or mobile clinics, particularly in frontier regions.

Despite the challenges associated with Oregon's state-supplied vaccine programs, most practices emphasized that, despite these burdens, the programs and support from the Oregon Immunization Program have enabled them to continue vaccinating their underserved pediatric patients and serving their communities.



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