



Evaluation of Immunization Programs

As Required by

**The 2018-19 General Appropriations Act,
S.B. 1, 85th Legislature, Regular Session,
2017 (Article II, Department of State
Health Services, Rider 38)**



TEXAS
**Health and Human
Services**

**Texas Department of
State Health Services**

September 2018

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Executive Summary

[The 2018-19 General Appropriations Act, S.B. 1, 85th Legislature, Regular Session, 2017 \(Article II, Department of State Health Services, Rider 38\)](#), directed the Department of State Health Services (DSHS) to study and assess the Texas Vaccines for Children (TVFC) and Adult Safety Net (ASN) immunization programs in order to:

1. Improve the cost effectiveness and quality of the programs;
2. Simplify the administration of the programs for the Department and participating providers, including seeking administrative and regulatory flexibility from the Centers for Disease Control and Prevention;
3. Expand the number and types of providers participating in the program;
4. Expand access to services for individuals eligible for the program;
5. Include stakeholder input and feedback; and
6. Ensure accountability throughout the program.

For this assessment, DSHS contracted with the University of Texas Southwestern Medical Center to analyze TVFC's and ASN's administrative processes, service delivery functions, and vaccine management requirements. In addition, DSHS surveyed all enrolled TVFC and ASN program providers and solicited input from stakeholders through the Texas Immunization Stakeholder Working Group and statewide professional physician, nursing, and pharmacy associations. Through this work and ongoing discussions with staff, immunization providers, and stakeholder groups, DSHS identified a number of opportunities for process improvement, increased accountability, the expansion of services provided, and the reduction of administrative burden.

DSHS is committed to ensuring that timely and effective vaccines are delivered to eligible populations across the state. DSHS has demonstrated this commitment through improved communication strategies, a simplified enrollment process for providers, revised vaccine inventory plans to reduce vaccine waste, increased opportunities for stakeholder feedback, and the simplification of administrative procedures through the digitization of reporting processes. DSHS continues to explore additional opportunities for improvements, but must balance each option against DSHS's obligations to ensure that the programs are meeting both federal and state standards for efficiency, cost effectiveness, and quality.

1. Introduction

[The 2018-19 General Appropriations Act, S.B. 1, 85th Legislature, Regular Session, 2017 \(Article II, Department of State Health Services, Rider 38\)](#), directs the Department of State Health Services (DSHS) to study and assess the Texas Vaccines for Children and Adult Safety Net programs in order to identify methods to:

1. Improve the cost effectiveness and quality of the programs;
2. Simplify the administration of the programs for DSHS and participating providers, including seeking administrative and regulatory flexibility from the Centers for Disease Control and Prevention;
3. Expand the number and types of providers participating in the program;
4. Expand access to services for individuals eligible for the program;
5. Include stakeholder input and feedback; and
6. Ensure accountability throughout the program.

As a result of this study, a report outlining identified efficiencies and program improvements must be submitted to the Legislative Budget Board and permanent standing committees of the Senate and House with primary jurisdiction over health and human services by September 1, 2018.

2. Background

Federal Vaccines for Children (VFC) Program

The federal Vaccines for Children (VFC) program,¹ established with the passage of the Omnibus Budget Reconciliation Act of 1993, ensures that vaccines are available at no cost to providers who serve children who might not otherwise be vaccinated because of an inability to pay. This program allows the Centers for Disease Control and Prevention (CDC) to purchase vaccines at a discount and distribute them to 64 state, territorial, and local CDC VFC awardees, who in turn manage vaccine ordering and distribution to private physicians' offices and public health clinics within their jurisdiction. All awardees operate under a cooperative agreement with the CDC in which they agree to meet CDC requirements for program management, vaccine management, vaccine accountability, and vaccine education. CDC outlines these requirements in their Immunization Program Operations Manual (IPOM), the Vaccines for Children Operations Guide, and the Vaccine Storage and Handling Toolkit.

Texas Vaccines for Children (TVFC) Program

Texas has participated in the federal VFC program since its inception in 1994, enrolling health care providers in the Texas Vaccine for Children (TVFC) program and managing the federal vaccine supply for Texas. DSHS provides funding to 50 local health departments (LHDs)² that oversee enrolled providers within their jurisdictions. In areas without an LHD, DSHS's Public Health Regions (PHRs)³ provide oversight of providers. LHDs and PHRs are referred to as "responsible entities" for these oversight duties. LHDs and PHRs also provide vaccine services through public health clinics. This statewide network of program staff oversees quality assurance and technical assistance so that providers order, handle, store, and administer vaccines according to manufacturer and federal requirements.

¹ More information on the federal VFC program can be found at www.cdc.gov/vaccines/programs/vfc/index.html.

² Information on DSHS' immunization contract requirements for local health departments can be found at www.dshs.texas.gov/immunize/lhd.shtm.

³ A map of local and regional public health coverage can be found in [Appendix A](#).

Currently, 3,200 providers (clinics) and over 12,000 prescribing clinicians are enrolled in TVFC, enabling more than 4.3 million Texas children to access immunizations at their medical home or public clinic sites. In order to enroll in TVFC, providers must be licensed as a Medical Doctor, Doctor of Osteopathy, Nurse Practitioner, Certified Nurse Midwife, Physician Assistant, or Registered Pharmacist.

The following is a description of the steps to become and remain a TVFC provider:

1. **Provider Enrolls in the Program** - A provider initiates enrollment by submitting a TVFC provider agreement form. Within two weeks, the responsible entity makes contact to begin the process of verifying the provider's capacity and assisting the provider in completing the steps for enrollment.⁴ During an initial site visit, the responsible entity coordinates with the provider to complete paperwork and establish a regular vaccine management plan and emergency vaccine storage and handling plan. The responsible entity educates the provider on vaccine storage and handling, immunization standards, patient eligibility, ImmTrac2 (the Texas Immunization Registry), and vaccine inventory management requirements. The provider designates staff as program coordinators who must complete CDC and DSHS training modules. Finally, the provider documents storage unit temperatures for 10 days, and the responsible entity sets their vaccine maximum stock levels⁵. The units are monitored for 10 days to verify that proper temperatures are maintained for vaccine viability.
2. **Provider Places Order** - The enrolled provider places a vaccine order through the DSHS Electronic Vaccine Inventory (EVI) system. DSHS establishes a vaccine inventory plan with suggested quantities for the maximum number of doses a provider needs to maintain a 75-day supply of vaccine. The responsible entity verifies storage capacity and approves the order. The CDC sets policies on provider ordering requirements to minimize shipping costs and vaccine loss or waste.
3. **Manufacturer Sends Order Directly to the Facility** - The vaccine manufacturer sends the order directly to the provider's facility. The provider must store public stock (vaccine provided at no cost by the federal or state government for eligible children) separately from private stock (vaccine

⁴ More information on the enrollment process can be found in the *TVFC/ASN New Provider Enrollment Checklist* found at www.dshs.texas.gov/immunize/tvfc/docs/TVFC---2017-New-Provider-Enrollment-Checklist.pdf

⁵ For more detail on providers' vaccine inventory plan and calculated maximum stock levels (MSLs), see [Appendix B](#).

purchased by the provider for children not eligible for TVFC). The provider must also manage inventory to CDC requirements.

4. **Provider Administers Vaccines** - The provider administers the vaccine to patients. The CDC requires the provider to check patient eligibility at each encounter and to document doses administered.
5. **Responsible Entity or Quality Assurance Contractor Conducts Site Visit** - The responsible entity or a quality assurance contractor conducts site visits, including visits to review compliance and to educate on quality assurance.
6. **Provider Re-Enrolls Annually** - The provider re-enrolls annually in the program. To do so, the CDC requires that TVFC program staff verify the following: provider licenses (and checks against Office of Inspector General's List of Excluded Individuals and Entities); calibration certificates (data loggers that capture storage temperatures); ratio of data loggers to storage units; provider profile; and demographic information. This leads back to the second step above (Provider Places Order).

Children 18 years of age or younger who meet at least one of the following criteria are eligible to receive TVFC vaccine: enrolled in Medicaid or Medicaid-eligible; uninsured; underinsured (defined as having private health insurance that does not cover vaccines or only covers selected vaccines); enrolled in the Children's Health Insurance Program (CHIP); or American Indian or Alaskan Native (in accordance with 25 USC §1603).

Adult Safety Net (ASN) Program

Since 2003, DSHS has operated the Adult Safety Net program as a safety net for uninsured Texas adults at risk for vaccine-preventable diseases. Primarily funded through state general revenue, the ASN program offers 12 vaccines in its formulary.⁶ DSHS manages ASN program enrollment, vaccine ordering, and storage and handling in tandem with the policies and requirements of the TVFC program, as outlined above. Approximately 530 providers are enrolled in the program from the following types of health care organizations: DSHS PHRs; city or county LHDs; federally qualified health centers (FQHCs); and rural health clinics (RHCs).

Only adults 19 years of age or older who are not covered by any form of health insurance are eligible to receive ASN vaccines. Individuals covered by Medicare or Medicaid, or those who are underinsured, are not eligible.

⁶ More information about the ASN available vaccines can be found at www.dshs.texas.gov/immunize/ASN/public

3. TVFC and ASN Program Assessment Findings

DSHS initiated its assessment of the Texas Vaccines for Children (TVFC) and Adult Safety Net (ASN) programs in 2017 by conducting a survey of all re-enrolling providers. This survey assessed providers' satisfaction with site visits, program communication, and program outcomes (e.g., increases in immunization rates among their patients and benefits to their provider practice).

In 2018, DSHS contracted with the University of Texas Southwestern Medical Center to analyze TVFC's and ASN's administrative processes, service delivery functions, and vaccine management requirements. This effort involved conducting interviews of DSHS staff and current and former vaccine providers, including 12 in-depth, on-site interviews of major providers in the Houston and Dallas areas.

Finally, for the purposes of this assessment, DSHS solicited input from members of the Texas Immunization Stakeholder Working Group (TISWG) and associations of health professionals, including the Texas Medical Association, Texas Pediatric Society, Texas Nurses Association, and Texas Pharmacy Association.

Assessment Findings

For current TVFC and ASN providers that participated in on-site work sessions and phone interviews, there is overwhelming agreement that the TVFC and ASN programs are very important public health services, and providers are fully supportive of the program missions to increase immunization coverage rates and reduce outbreaks of vaccine-preventable diseases. While most providers recognize the need for process improvement, they all desired to continue their participation in the programs. They expressed optimism through their willingness to provide their feedback through this study in the hopes that they will see improvements on process efficiency and some degree of relief on their efforts and investments.

Former providers viewed the TVFC and ASN programs as overly burdensome and expressed frustrations with the programs that eventually outweighed their desire to participate. Some of their primary reasons for leaving the programs were:

- Paperwork was viewed as too burdensome.
- Program requirements were viewed as excessive, unnecessary, and too time-consuming.

- School settings felt they were subjected to excessive storage and handling requirements, excessive audits, and patient qualifications that were too strict.
- The cost of participation was viewed as too high.
- Ordering vaccines was viewed as difficult or time-consuming, especially when the responsible entity identified a problem and was unable to resolve it.

The following six sections outline the key findings of the assessment, organized in the order as presented in Rider 38.

1. Improve the Cost Effectiveness and Quality of the Programs

- **Key Finding: Most organizations reported current staffing levels are sufficient to manage program activities.** Several providers indicated that operationalizing their daily, weekly, and monthly vaccine inventory tracking tasks did not significantly increase the workload of existing staff.
- **Key Finding: Vaccine storage and handling requirements for refrigerators, freezers, and temperature data loggers⁷ were typically not in place before providers enrolled in the TVFC or ASN program.** Providers described having to purchase additional temperature data loggers and storage units to meet the CDC's program requirements.
- **Key Finding: Providers, PHRs, and LHDs reported a need for better training on how to effectively manage immunization program activities at the practice level,** not just on the requirements of participating in the program.
- **Key Finding: Providers reported difficulty in maintaining adequate vaccine stock levels for their patient population.** Some providers also experienced difficulties in making seasonal orders that were outside of their average maximum stock levels.⁵

Program Constraints

While some providers report concerns related to the upfront costs and time required to prepare to store and handle vaccines, it is important to recognize that the CDC's standards for vaccine storage and handling are the same for both public

⁷ A data logger is a digital device designed to continuously monitor the temperature inside a refrigerator or freezer. The device includes digital memory capabilities to record data at customizable intervals to store logs of temperature readings.

and private stock vaccines. These standards ensure the viability and effectiveness of the vaccine and reduce wasted vaccine due to storage and handling issues.

A primary benefit for providers to participate in the TVFC program is the ability to ensure that children receive vaccines in their medical home with no vaccine ordering costs to the provider. Pediatric vaccines provided through the federal VFC program would cost providers between approximately \$20 to \$200 per dose under private contracts⁸ with pharmaceutical companies.

While DSHS tries to identify providers who already have vaccine storage and handling infrastructure before they enroll in TVFC or ASN, there are no strong mechanisms for doing so comprehensively. The primary source of data on providers who already receive vaccines and have the pre-existing infrastructure that makes them ready for TVFC or ASN enrollment is pharmaceutical companies. Access to that information is limited and thus DSHS must conduct outreach to providers whose infrastructure status is unknown. As a result, many recruited providers have to make the investment to meet the CDC requirements for the appropriate storage and handling of vaccines before enrolling.

DSHS Actions Taken

DSHS understands the positive impact that high-quality, consistent communication and training has in making TVFC and ASN program providers successful. In that vein, DSHS implemented major improvements to both its communication protocols and learning management system, as outlined in detail below.

Communication

Prior to 2017, provider communication was conducted via e-mail directly to providers, LHDs, and PHRs. The management of contact information and the release of e-mails was cumbersome, as messages had to be communicated to over 6,000 contacts each time a message was sent. DSHS has since transitioned to the use of web-based e-mail subscription management system (GovDelivery) that allows for simplified management of an unlimited number of contacts as well as staggered communication to the PHRs, LHDs, and providers. This has streamlined communication and allowed DSHS to communicate with more individuals within the provider facility (including the medical directors) and allowed for more routine

⁸ The current CDC Vaccine Price List can be found at https://www.cdc.gov/vaccines/programs/vfc/awardees/vaccine-management/price-list/index.html#modalIdString_CDCTable_0

communication of program updates. Beginning in September 2018, DSHS will begin sending a monthly newsletter of key updates to both providers and responsible entities. This is being done in an effort to consolidate important information into a single format.

Provider Training

In an effort to improve provider training, DSHS invested in an upgrade of its web-based, on-demand Vaccine Education Online (VEO) learning management system. This upgrade enabled the program to develop and deploy the first state-developed training on TVFC and ASN program policies and procedures. In the fall of 2017, DSHS implemented the ability for providers to earn continuing education credits for the TVFC program training module. Additional modules on provider practices are expected to be added to VEO in order to train providers on how to implement requirements within their facilities. Long term, DSHS plans to collaborate with public health partners to ensure that training opportunities exist for providers through the professional organizations with which they are already heavily engaged (e.g., medical associations, nurse associations).

Adequate Vaccine Stock Levels

In an effort to combat increasing vaccine losses, the DSHS Immunization Unit implemented a centralized, automated method for calculating a provider's vaccine maximum stock levels (MSLs) in February 2017. The ability to centrally calculate and adjust MSLs on a monthly basis ensures that providers order at their suggested quantities, not more or less than their data suggests. Before this change, the process of monitoring and adjusting providers' vaccine MSLs was done annually. Any interim adjustments were the responsibility of each responsible entity (LHD or PHR). This manual review and recalculation led to delays in providers having appropriate MSLs to ensure they received an adequate volume of vaccines. Previously, providers would order more than their data reflected they should, leading to an average of \$10 million of vaccine loss each year. The vast majority of those losses were due to vaccines expiring in provider vaccine storage units.

Additionally, DSHS streamlined the vaccine-loss reporting process to reduce the administrative burden for providers, LHDs, and DSHS. This improved process allows responsible entities to quickly identify providers experiencing high volumes of vaccine loss. As a result, they could provide timely technical assistance to those providers in order to maintain the cost-effectiveness of the federal VFC program.

Future Activities

DSHS recognizes and agrees that more opportunities for training need to be available to providers on how to adequately manage the TVFC and/or ASN program within their facility. This training will be especially helpful to those providers who have found it difficult to manage their vaccine inventories and avoid running out of vaccine supply. When vaccine inventories are not routinely managed, some providers resort to ordering excessively large quantities of vaccines in an effort to avoid running out of vaccine stock. This trend has led the TVFC and ASN programs to experience massive losses of vaccines each year due to vaccines expiring in storage units before they can be used. To ensure that the federal VFC program is cost-effective, DSHS intends to make a heavy investment in the next two years for adequate provider training on vaccine inventory management and the avoidance of vaccine waste.

DSHS will communicate with the CDC regarding opportunities for developing provider trainings on VFC best practices. Providers have reported a need for the program to develop trainings on the practical implementation of requirements within their facility. Given that these requirements are national standards, seeking support from the CDC in the development of these trainings may help expedite their availability and release.

2. Simplify the Administration of the Programs for DSHS and Participating Providers, Including Seeking Administrative and Regulatory Flexibility from the Centers for Disease Control and Prevention (CDC)

- **Key Finding: Some providers perceived an exceptional administrative burden in being required to do a full inventory of all vaccines to be able to place an order for one type of vaccine.** Providers described scenarios where one or two vaccines are in high demand but the process for re-ordering requires providers to report on the number of doses they have administered for every vaccine type they have available within their practice.
- **Key Finding: Providers expressed that there were a lot of program changes making it difficult to keep up-to-date.** Providers are made aware of program changes through e-mails and memorandums. Providers reported a

large volume of e-mail communication and unclear notations or highlights for important or critical e-mails.

- **Key Finding: Paper forms are required as part of program reporting, in addition to using electronic systems.** Providers identified a need to use more electronic processes and integrated systems. While electronic processes account for the majority of reporting, some reporting aspects are decentralized and supplemented by paper records. Often, these paper records are required for the submission and approval of vaccine orders (i.e., temperature recording forms).

Program Constraints

While DSHS acknowledges the extra effort involved when providers must do a full inventory before ordering, CDC requirements state that VFC awardees (states, territories, or local areas receiving CDC VFC funds and vaccine) must require providers to submit vaccine inventory with each order (2018 VFC Operations Guide, pg. 62). This helps to prevent stockpiling or inventory build-up and serves to prompt the provider to order all vaccines at the same time. The program's use of maximum stock levels (MSLs) in a provider's vaccine inventory plan reinforces this standard. Providers must take into account their current inventories and unit storage capacities when placing orders to ensure that they have adequate storage for all vaccines. Thus, they are required to report on their current inventory at the time they place any vaccine orders. This requirement also reduces shipping and administrative costs associated with the delivery of vaccines.

The CDC recommends that providers place orders when they have a four-week supply of vaccine available, to ensure there is enough in stock to allow for any potential delays. The CDC also recommends smaller, more frequent orders rather than larger orders to minimize the amount of vaccine loss if an incident occurs during shipment or in the vaccine storage unit. Providers may place more frequent vaccine orders if their vaccine administration is higher than expected each month. Providers are not required to order each month, but as needed to maintain a 75-day supply of vaccine. Certain circumstances allow for MSL adjustments on rare occasions. The provider must request a review and obtain permission from their responsible entity before ordering more than their suggested MSL quantity.

While the CDC has the lead responsibility for policy development, operational oversight, and technical assistance to awardees of the VFC program, each awardee is responsible for the management and implementation of the VFC program at the state, local, and territorial levels. Efforts to bring the TVFC and ASN programs up to

federal standards have led to a rapid succession of changes, primarily communicated through e-mail and web-based trainings.

DSHS Actions Taken

Throughout 2017, DSHS coordinated bi-monthly, in-person meetings of the Texas Immunization Grantee Leadership (TIGL) team⁹ to review and update all administrative policies for the TVFC and ASN programs. A comprehensive revision of the *TVFC and ASN Provider Policy Manual*¹⁰ was completed and released in November 2017. In 2018, DSHS hosted TIGL meetings to develop and release the *TVFC and ASN Operations Manual for Responsible Entities*¹¹. The rapid development of these manuals created a need to clearly and concisely communicate updated policies and practices to providers. These policies were implemented to bring the program in line with CDC requirements that DSHS was overdue in implementing within the program. Unfortunately, the pace of the updates led to many changes in a short period of time. To combat this moving forward, DSHS intends to negotiate implementation timelines for future releases of policy changes. This will ensure that providers are informed of any necessary changes well in advance of their implementation and are afforded an opportunity to adjust their processes to meet the CDC requirements over time.

DSHS has already begun reducing its reliance on paper-based processes. For the fall of 2017, DSHS improved the enrollment process for new and re-enrolling providers by implementing an electronic version of the enrollment and re-enrollment forms. The electronic format allows both DSHS and providers to capture and store more accurate data.

Future Activities

The size and scale of the TVFC and ASN programs makes it difficult to implement new CDC requirements within a short timeframe. DSHS intends to request advance notice from CDC of impending program changes. Additionally, DSHS intends to

⁹ The TIGL team is comprised of the DSHS Immunization Unit director, both DSHS vaccine group managers, two CDC-assigned public health advisors, all eight DSHS regional immunization program managers, and the program managers of the two direct grantees of federal funding, San Antonio Metropolitan Health District and Houston Health Department.

¹⁰ The *TVFC and ASN Provider Policy Manual* can be found at www.dshs.texas.gov/immunize/tvfc/provider-eligibility.aspx

¹¹ The *TVFC and ASN Operations Manual for Responsible Entities* can be found at www.dshs.texas.gov/immunize/lhd.shtm

negotiate implementation timelines that will allow it to meet said requirements without major disruption to provider practices. This will allow DSHS to create and deploy trainings for providers on how to implement the changes within their facility long before they become program requirements.

While DSHS has made efforts to incorporate the existing paper processes into the Electronic Vaccine Inventory (EVI) application, these efforts are stalled by the system's limitations around enhancements and upgrades. DSHS is exploring the development of a provider portal aimed at integrating all provider documentation and reporting. The program seeks to consolidate provider information, increase access to data for providers, eliminate any reliance on paper-based reporting and decrease the administrative burden on providers.

3. Expand the Number and Types of Providers Participating in the Program

- **Key Finding: Stakeholder feedback expressed concerns about the limitations on which types of healthcare organizations can be ASN program providers.** The types of eligible providers are limited to the following: DSHS PHR offices; city or county LHDs; FQHCs; and RHCs.
- **Key Finding: Stakeholder feedback suggests that there is a need for increased provider recognition.** Some providers feel that there is no real recognition given for doing a good job.

Program Constraints

DSHS understands the desire to expand provider participation in ASN by increasing the types of providers who can enroll in the program. When considering provider expansion, DSHS must take into consideration available funding for vaccine purchases for eligible populations and the administrative burden of overseeing providers with eligible populations that represent less than 25 percent of their patients served. The provider types for ASN were chosen to ensure that participating providers were those most likely to provide services to completely uninsured adults (the population eligible for ASN). This focus on a smaller number of high-impact providers allows the program to more efficiently use the funds allocated to adult vaccinations.

DSHS Actions Taken

While any expansion of the ASN program is limited by funding, other opportunities exist to increase adult immunizations across the state. In an effort to make adult immunizers more aware of the adult immunization standards, DSHS has been implementing a targeted outreach and education initiative across the entire spectrum of adult immunizers in Texas, including pharmacy immunizers, since 2017. This has led to direct, in-person trainings on immunizations being scheduled for over 1,200 immunizing pharmacists across the state in 2018.

DSHS agrees that not enough recognition is available to high-performing providers and is working with regional and local partners to develop recognition programs for providers across the state. DSHS has taken a more active role in existing provider recognition programs occurring at the local levels by providing keynote addresses during provider recognition events and providing data to aid in the identification of high impact providers. This year, the DSHS Perinatal Hepatitis B Prevention Program sent recognition certificates to all hospitals recognized for being on the Immunization Action Coalition's National Perinatal Hepatitis B Honor Roll.

Future Activities

Moving forward, DSHS is committed to increasing its recognition of high-impact providers at the state and national level. DSHS will collaborate with the TIGL team and community organizations to nominate eligible individuals for the annual CDC Childhood Immunization Champions Award.¹² Additionally, DSHS is committing to investing in the recognition of providers at the state level. This will be done through the identification of key metrics and the development of a statewide provider recognition program. DSHS will discuss opportunities for provider recognition with the CDC. Program activities from all grantees are reported to the CDC and there may be an opportunity for DSHS to receive technical assistance in this area and learn of innovative recognition activities among other grantees. The goal is to identify opportunities to provide more consistent recognition to our providers moving forward.

¹² The CDC Childhood Immunization Champion Award is an annual award issued to champions in each participating state during National Infant Immunization Week. More information can be found at www.cdc.gov/vaccines/events/niw/champions/

4. Expand Access to Services for Individuals Eligible for the Program

- **Key Finding: TVFC Providers described screening for patient eligibility to be minimally invasive, but some providers described confusion with eligibility for underinsured patients.** Most providers utilize their electronic health record (EHR) systems to verify patient eligibility. Providers expressed a need for more guidance on eligibility requirements for underinsured patients.
- **Key Finding: Providers described having difficulty finding out where to refer adults who may be eligible for ASN program vaccines.** Providers want a reliable list for referrals. An annual list of ASN providers exists on the DSHS website¹³, but in recent years the list has not been distributed to providers or routinely updated as changes occur to the provider population.
- **Key Finding: Stakeholder feedback expressed that there is a significant lack of awareness among Texans of the ASN program.** Increased communication and outreach should be focused on high-risk populations, such as restaurant workers, childcare facility workers, and long-term care facility workers.

Program Constraints

The federal VFC program is an entitlement program that requires screening and documentation of eligibility status (by category) for all patients from birth through 18 years of age. In order for children to receive vaccines through the federal VFC program, eligibility screening and documentation must take place at each visit before receiving the immunization. CDC requires DSHS to ensure that all providers fully understand the federal VFC eligibility categories and are performing this basic program requirement (2018 CDC VFC Operations Guide, pg. 12).

The ASN program acts as a safety net vaccination program for adults. Only completely uninsured adults are eligible for participation in the program because they may not otherwise have access to vaccines. DSHS recognizes its responsibility to raise awareness through immunization education and media outreach efforts. These efforts are the focus of near-term plans that DSHS anticipates will increase the engagement of both Texas providers and consumers of the TVFC and ASN programs.

¹³ The list of ASN providers can be found at www.dshs.texas.gov/immunize/ASN/public.aspx.

DSHS Actions Taken and Future Activities

In 2017, as part of the coordinated effort with TIGL to review and update policies for the TVFC and ASN programs, DSHS sent a memo to providers regarding the TVFC eligibility criteria for underinsured patients and included these updates in the November 2017 version of the policy manual.

DSHS has developed a comprehensive plan to update its website to bring attention to the importance of adult immunizations, including targeted information for providers. In the fall of 2018, the DSHS website will be redesigned with additional focused content on the importance of adult immunizations targeting both individuals and providers. To ensure providers are aware of ASN locations across the state, DSHS will update its ASN provider listing website monthly¹⁴ and highlight the website address in the upcoming *TVFC Provider Policy Manual*.

To address the need for increased awareness of the program to eligible populations, DSHS will be launching an adult immunization awareness media campaign targeting both providers and adults in mid-2019. Digital, broadcast, web, and print resources will promote the importance of adults maintaining their recommended vaccinations and offer specific information about the ASN program for uninsured adults.

5. Include Stakeholder Input and Feedback

- **Key Finding: Stakeholder feedback expressed a strong recommendation that a clinical survey of physicians be used when developing changes to the ASN vaccine formulary¹⁵.** The stakeholder offered that conducting a clinical survey allows physicians the opportunity to participate in the prioritization of vaccines in the ASN formulary. These clinical recommendations can contribute to policy decision-making in cases where budgetary constraints require the vaccine formulary to be restricted or adjusted.
- **Key Finding: Stakeholder feedback recommended that the program develop collaborative, targeted communication for the goals of upcoming influenza season.** The stakeholder expressed that there is an elevated interest among physicians to receive communications from DSHS earlier in the season.

¹⁴ The ASN provider listing website can be found here <https://dshs.texas.gov/immunize/ASN/public.aspx>

¹⁵ The vaccines offered in the ASN formulary can be found at www.dshs.texas.gov/immunize/ASN/public.aspx.

- **Key Finding: Stakeholder feedback expressed a significant need for more targeted educational communication for its immunizing pharmacists.** They communicated the need for succinct information on how to respond to patients' questions and provide reliable referrals.

Program Constraints

CDC recommends the use of provider surveys to solicit feedback from enrolled federal VFC providers (2018 CDC VFC Operations Guide, pg.90).

Regarding decision-making on the ASN vaccine formulary, funding restrictions make it difficult to expand the formulary to accommodate any new vaccines. Prioritization is currently based on state and national data reflecting the incidence and impact of various vaccine-preventable diseases. DSHS welcomes feedback on decision-making related to the formulary but will be restricted by the funding available for vaccine purchase. DSHS is addressing feedback about collaborative stakeholder communication through several initiatives outlined below.

Currently, most communication regarding influenza is made directly with enrolled providers. That said, DSHS is open and receptive to collaboration with the broader healthcare community on the identification of goals for the upcoming influenza season.

DSHS Actions Taken and Future Activities

In an effort to begin soliciting feedback from stakeholders, DSHS implemented a provider satisfaction survey to solicit feedback on the quality and effectiveness of the programs from the providers' perspectives beginning with the TVFC and ASN re-enrollment cycle in the fall of 2017. This input is being incorporated with this report's assessment and findings used to develop a framework for ongoing stakeholder input during each annual re-enrollment period.

Beginning in early fall 2018, DSHS is publishing newsletters designed to provide seasonal, audience-specific information on immunization activities throughout the state. Newsletter audiences will include public stakeholders to promote important collaborative information, TVFC and ASN enrolled providers to communicate program-related information and reduce the use of e-mails, and LHDs and PHRs who serve as responsible entities to communicate program-related information. DSHS will use the earliest editions of these newsletters to highlight influenza season activities.

DSHS agrees that pharmacies are an important stakeholder in immunizations and is developing plans to collaborate with the existing pharmacy associations to increase pharmacy education on immunizations. Findings related to the need to increase pharmacy education on immunizations were immediately addressed in partnership with the Texas Pharmacy Association. In July 2018, DSHS presented on immunizations and ImmTrac2, the Texas Immunization Registry, at the Texas Pharmacy Association's annual conference. Additional collaboration between DSHS and pharmacy groups across the state is expected.

DSHS is addressing the need for pharmacist education through its adult immunization campaign activities. In 2018, DSHS and its quality assurance contractor are visiting over 1,200 pharmacy locations to educate licensed pharmacists on the adult immunization standards and provide resources for communicating with clients about immunizations.

6. Ensure Accountability Throughout the Program

- **Key Finding: Providers report inconsistencies between the information given by site reviewers and the program staff at the regional and state level.** The LHDs and contracted quality-assurance site reviewers are the key source for program-related education and compliance during site reviews.

Program Constraints

All requirements and recommendations outlined within the CDC's *VFC Operations Guide* for immunization grantees are to ensure accountability at all layers of the program.

The CDC has an expectation that every funded program works toward meeting all CDC requirements and recommendations for program implementation and vaccine storage and handling. Failing to meet these guidelines can lead to funding reductions as well as increased federal administrative oversight. The DSHS program has a responsibility to ensure that the state maintains its eligibility for program participation by meeting all CDC guidelines. That said, DSHS is trying to make meeting those requirements and recommendations as simple to implement as possible.

DSHS Actions Taken and Future Activities

DSHS recognizes the criticality of the consistent implementation of policies and procedures across the program. In an effort to align at all levels, the TIGL team

worked over multiple in-person sessions to update both the *TVFC Provider Policy Manual* and the *TVFC Operations Manual for Responsible Entities*. Additionally, the program required that its quality assurance contractor, the Texas Medical Foundation, attend all regional and LHD trainings and cite the program's guiding documents when holding providers accountable to program policies.

In an effort to ensure that both providers and LHDs have tools that simplify adherence to program policies, the DSHS Immunization Unit has developed multiple guides and trainings to support its TVFC partners. For example, a new provider checklist was created to guide DSHS PHR and LHD staff members to onboard new facilities into the programs. This detailed checklist outlines all of the requirements and policies that DSHS PHRs and LHDs must directly communicate with providers in order to onboard them fully into the TVFC and ASN programs. DSHS is developing additional guides to train providers on how to manage their inventory at the practice level.

4. Conclusion

This evaluation of the Texas Vaccines for Children (TVFC) program and the Adult Safety Net (ASN) program identifies key opportunities for improvements in communication, education, and administrative processes. Simultaneously, this assessment illustrates a broad commitment among program providers to immunize children and adults against vaccine-preventable diseases. The public health program staff at the state, regional, and local level are engaged in meeting the standards that the Centers for Disease Control and Prevention (CDC) has established for a high-quality, accountable system of vaccine delivery and administration.

Assessment findings and ongoing discussions with immunization providers and stakeholders identified a number of opportunities for program improvements. These opportunities include:

- Develop a more effective communication plan that addresses issues of inconsistency and quality of delivery (versus quantity of messages) by giving the providers a better sense for the reasoning behind program changes and requirements. Leverage social media, online forums, and other creative ways for consistent communication.
- Develop a more effective training plan that addresses the issues of inconsistent requirements enforcement and one that explores other delivery methods, such as webinars, provider forums, etc. Offer training on a variety of topics such as initial enrollment, vaccine management, use of data loggers, etc.
- Better leverage technology to reduce or eliminate manual processes.
- Explore ways to incentivize providers to participate in the programs.
- Continue to engage providers and other stakeholders for continuous program improvement opportunities.
- Engage in negotiation with the CDC about implementation of key policy changes.
- Provide earlier notice, whenever possible, of upcoming policy changes.

DSHS embraces these opportunities to improve service delivery and grow participation in the TVFC and ASN programs, and action has already begun on these priorities as part of our vital commitment to meeting our Texas public health goals.

List of Acronyms

| Acronym | Full Name |
|----------------|--|
| ACIP | Advisory Committee for Immunization Practices |
| AFIX | Assessment, Feedback, Incentives, and eXchange Program |
| ASN | Adult Safety Net Program |
| CDC | Centers for Disease Control and Prevention |
| CHIP | Children’s Health Insurance Program |
| DSHS | Department of State Health Services |
| EHR | Electronic Health Record |
| EVI | DSHS Electronic Vaccine Inventory System |
| FQHC | Federally Qualified Health Center |
| HHD | Houston Health Department |
| IPOM | Immunization Program Operations Manual |
| LHD | Local Health Department |
| MSL | Maximum Stock Level |
| PHR | Public Health Region |
| RHC | Rural Health Clinic |
| SAMHD | San Antonio Metropolitan Health District |

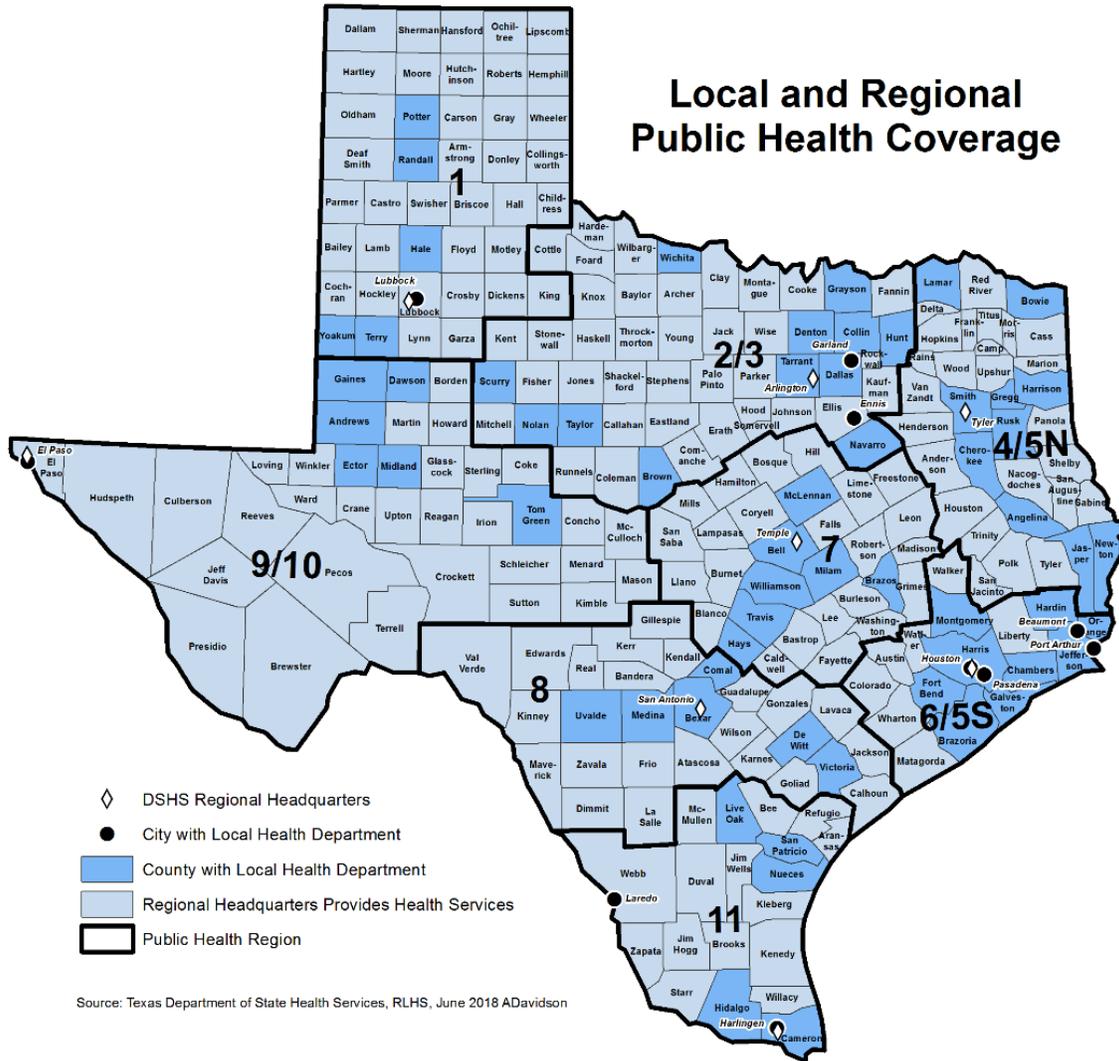
| | |
|-------|--|
| TISWG | Texas Immunization Stakeholder Working Group |
|-------|--|

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| TVFC | Texas Vaccines for Children Program |
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| VEO | Vaccine Education Online |
|-----|--------------------------|

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|-----|---------------------------------------|
| VFC | Federal Vaccines for Children Program |
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Appendix A. Map of Texas' Local and Regional Public Health Coverage



Appendix B. Vaccine Inventory Plan and Maximum Stock Levels

The following information comes from the *2018 TVFC and ASN Provider Manual*, found at www.dshs.texas.gov/immunize/tvfc/publications.aspx#provider-manual:

The TVFC/ASN provider vaccine inventory plan requires all enrolled providers to maintain a 75-day supply of vaccine inventory. All providers should place vaccine orders monthly. The CDC recommends that providers place orders when they have a four week supply of vaccine available, to ensure there is enough vaccine in stock to allow for any potential delays. The CDC also recommends smaller, more frequent orders rather than larger orders to minimize the amount of vaccine loss if an incident occurs during shipment or in the vaccine storage unit. Providers may place additional orders. Providers are not required to order each month, but as needed to maintain a 75-day supply of vaccine.

The maximum stock level (MSL) is a calculated peak dose inventory (per vaccine type). The suggested quantity is the maximum number of doses a provider needs to maintain the 75-day inventory. Providers must take into account their current inventories and unit storage capacities when placing orders to ensure that they have adequate storage for all vaccines. Special circumstances may allow for monthly MSL adjustments on rare occasions. The provider must request a review and obtain permission from their responsible entity prior to ordering more than their suggested MSL quantity.

Upon initial enrollment, the responsible entity will work with the TVFC/ASN provider to develop MSLs based on the provider's patient population. All MSLs are monitored and revised in EVI. Newly enrolled providers may have their MSL reassessed by their Responsible Entity after 6 months with the TVFC/ASN Program. MSLs are recalculated on a monthly basis based upon doses administered data. The monthly average MSL is determined from this data. Providers may not order vaccine in excess of their suggested quantity without permission from their responsible entity.

Increasing and Decreasing Maximum Stock Levels

A provider's MSL may be increased or decreased at any time if the number of patients served changes, or if there are any applicable changes to the status of the facility that might impact vaccine usage. TVFC/ASN providers can notify their responsible entity if they feel a change is needed. Changes may also be made by DSHS based upon the data gathered during the calendar year.

To determine appropriate MSLs for the Back-to-School season, calculations will be done by DSHS to determine the new MSL utilizing the reporting data from the previous calendar year.

Providers that consistently order below their suggested quantity may have their MSL lowered. Providers that place multiple orders during a given month may have their MSL increased. Final determination is made depending on the frequency and duration of the provider's ordering pattern.