Immunization Milestones: Building on the Triumphs of Vaccines

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April 29, 2025

AIM Association of Immunization Managers

About AIM

- The Association of Immunization Managers (AIM) is a nonprofit membership association comprised of the directors of the 64 federally funded state, territorial, and local public health immunization programs.
  - In 50 states, 5 major cities, DC, and 8 territories/federated states
- AIM is dedicated to:
  - Working with its partners nationwide to reduce, eliminate, or eradicate vaccine-preventable diseases
  - Promoting resources to immunization efforts
  - Promoting development and implementation of sound immunization policies and programs
  - Providing a forum for effective information sharing and leadership development

Immunization Program Activities

- Immunization programs are responsible for:
  - Vaccines for Children (VFC) program
  - Influenza and adult immunization programs
  - Monitoring and reporting of vaccine coverage and cases of vaccine preventable diseases (VPDs)
  - Annual workplans and budgets for their jurisdiction
  - Immunization education, promotion, and communication
  - Combatting vaccine disinformation
- Programs are also tasked with COVID-19 vaccine planning distribution, administration, and tracking

Session Objectives

- Attendees will learn about key milestones in vaccine history, exploring how past achievements have shaped modern immunization strategies and public health
- Attendees will learn about the importance of vaccine confidence
- Attendees will gain an understanding of how history can inspire continued progress in addressing current and future challenges

History of Vaccines and the Vaccines for Children (VFC) Program

Lives Saved by Vaccines

- Vaccines have been one of the most impactful innovations in healthcare (WHO, 2024)
- Since 1924, there have been an estimated 103 million cases of disease prevented by vaccines (CHOP, 2025)
- Over the past 50 years, vaccinations against 14 diseases have led to reduction of infant mortality by 40% (WHO, 2024)
- It is estimated that for each life saved through vaccinations, an average of 66 years of full health are gained

HISTORY OF THE IMMUNIZATION SCHEDULE

1945-1954 | 1955-1964 | 1965-1974 | 1975-1984 | 1985-1994 | 1995-2004 | 2005-Current

Recommended Vaccines

- Smallpox
- **DTP** NEW

The United States Biologics Control Act of 1902 mandated that the federal government issue licenses to makers of biological products, including vaccines. This led the way to a standardized system of vaccine regulation.

Smallpox vaccine had been available since the early 1800s. By the mid-1900s, it was generally recommended at around age 1.

The vaccine combining the whole-cell **pertussis** vaccine with **diphtheria** and **tetanus** toxoids was licensed in 1948. Combination vaccines have several advantages, including a reduced number of injections (and thereby reduced doctor's office visits) and lower costs of shipping and stocking vaccine doses.

Diphtheria Cases in the United States
1940-2007

Source: Centers for Disease Control and Prevention. Epidemiology and Prevention of Vaccine-Preventable Diseases. Atkinson W, Wolfe S, Hamborsky J, McIntyre L, eds. 11th ed. Washington DC: Public Health Foundation, 2009.

HISTORY OF THE IMMUNIZATION SCHEDULE

1945-1954 | **1955-1964** | 1965-1974 | 1975-1984 | 1985-1994 | 1995-2004 | 2005-Current

Recommended Vaccines

- Smallpox
- DTP
- **Polio** NEW

An inactivated **poliovirus** vaccine (IPV) was licensed on April 12, 1955, following results that showed Jonas Salk's poliovirus vaccine to be 80-90% effective in preventing paralytic polio. The vaccine quickly reached widespread use.

Poliomyelitis Cases Reported in the United States
1952-62

Year	Total	Paralytic	Nonparalytic	Unspecified
1952	52,879	21,269	12,802	23,808
1953	35,592	15,648	12,144	7,800
1954	38,476	18,308	13,221	6,947
1955	28,985	13,850	12,453	2,682
1956	15,140	7,911	6,555	674
1957	5,485	2,499	2,826	160
1958	5,787	3,697	1,941	149
1959	8,425	6,289	2,045	91
1960	3,190	2,525	626	39
1961	1,312	988	305	19
1962	886	707	125	54

HISTORY OF THE IMMUNIZATION SCHEDULE

1945-1954 | 1955-1964 | **1965-1974** | 1975-1984 | 1985-1994 | 1995-2004 | 2005-Current

Recommended Vaccines

- Smallpox
- DTP
- Polio
- Measles NEW

In 1972, the **smallpox** vaccine was phased out for the general population because of a low risk of infection—the last U.S. case of smallpox had occurred in 1949.

A monovalent (single virus) oral **poliovirus** vaccine (OPV) was licensed on August 24, 1960 and began to replace IPV. In 1963, a trivalent (three virus) OPV was licensed. By 1968 IPV had been phased out in the United States.

Measles struck 300,000-760,000 people a year in the United States between 1950 and 1963, until a measles vaccine was licensed and began to be used. By 1968 reported U.S. measles cases had dropped more than 97%.

In 1971, a vaccine was licensed that combined the measeles vaccine with vaccines for **mumps** (1967) and **rubella** (1969).

HISTORY OF THE IMMUNIZATION SCHEDULE

1945-1954 | 1955-1964 | 1965-1974 | **1975-1984** | 1985-1994 | 1995-2004 | 2005-Current

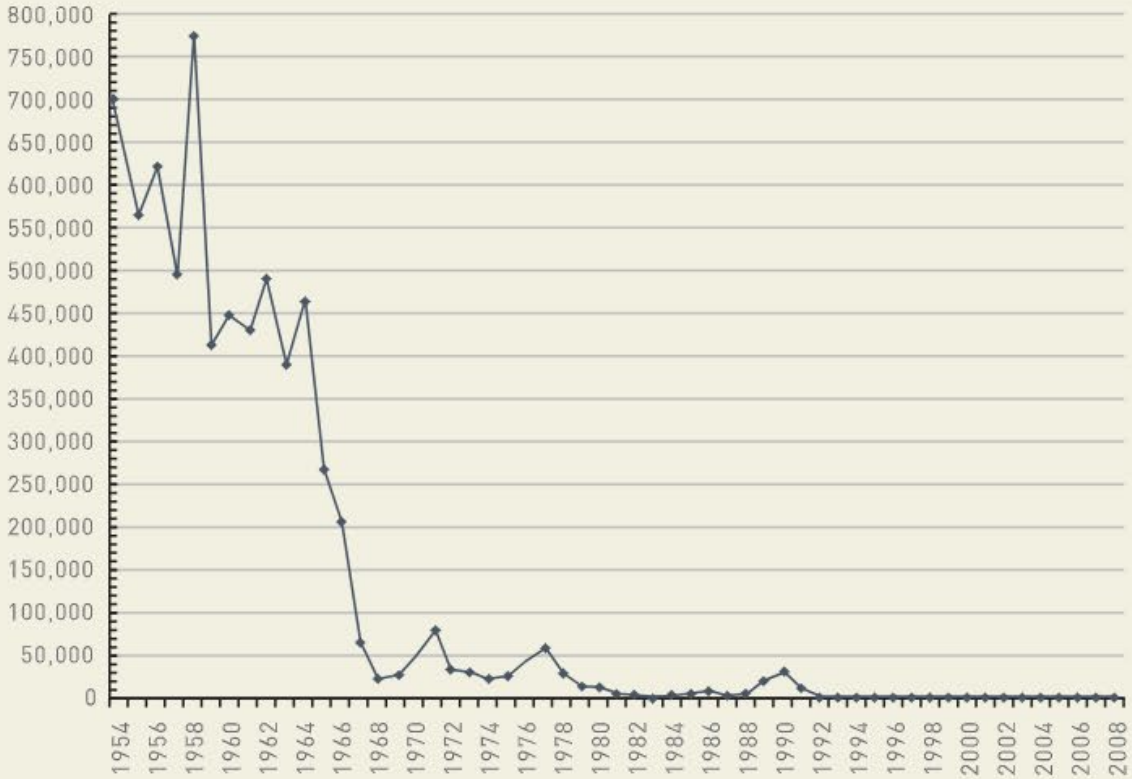
Recommended Vaccines

- DTP
- Polio (OPV)
- MMR NEW

The **measles**, **mumps**, and **rubella** vaccine began to be more widely used after mumps vaccination was recommended for all children in 1977.

In 1977, 57,345 cases of measeles were reported in the United States. By 1984, the number of cases had fallen by 95%, to 2,587.

Reported Measles Cases in the United States by Year
1954-2008



HISTORY OF THE IMMUNIZATION SCHEDULE

1945-1954 | 1955-1964 | 1965-1974 | 1975-1984 | **1985-1994** | 1995-2004 | 2005-Current

Recommended Vaccines

- DTP
- Polio (OPV)
- MMR
- Hib NEW
- Hepatitis B NEW

On August 20, 1994, the Pan American Health Organization reported that three years had passed since the last case of wild **polio** in the Americas, making it the first World Health Organization Region to eradicate the disease.

Low vaccination rates led to an outbreak of **measles** between 1989 and 1991, sickening 55,000 Americans and killing more than 100.

A polysaccharide vaccine for ***Haemophilus influenzae* type B (Hib)** was licensed for use in children 18 months and older in 1985. It was replaced by conjugate vaccines licensed in 1990 and recommended in 1991. Hib meningitis affected more than 12,000 American children annually, killing 600 and leaving many others with seizures, deafness, and developmental disabilities. After introduction of the vaccine, the number of meningitis-related deaths from Hib dropped to fewer than 10 per year.

The **hepatitis b** vaccine was recommended for all infants beginning in 1991.

HISTORY OF THE IMMUNIZATION SCHEDULE

1945-1954 | 1955-1964 | 1965-1974 | 1975-1984 | 1985-1994 | **1995-2004** | 2005-Current

Recommended Vaccines

- DTaP
- Polio (OPV/IPV)
- MMR
- Hib
- Hepatitis B
- **Influenza** NEW
- **Varicella** NEW
- **Rotavirus** NEW
- **Pneumococcal** NEW

The **DTaP** (diphtheria-tetanus-acellular pertussis) vaccine was licensed in 1991, and was phased in as part of the DTP vaccination schedule. The "aP" in the vaccine name is for "acellular pertussis," indicating that the vaccine uses only parts of the pertussis bacteria. This results in fewer side-effects than the previous whole-cell vaccine. DTaP replaced all usage of the DTP vaccine in 1999.

Due to the decreased risk of wild **poliovirus** infection, ACIP recommended that IPV replace two doses of OPV in 1996. By 2000 OPV was completely phased out in the U.S., but continues to be used in other locations.

For the 2004 **influenza** season, the Advisory Committee on Immunization Practices (ACIP) recommended influenza vaccination for children aged 6-23 months.

Licensed on March 17, 1995, the **varicella** (chickenpox) vaccine is 85%-90% effective in preventing all varicella infections, and up to 100% effective in preventing moderate and severe chickenpox. It was recommended for all children in 1996.

The first vaccine for **rotavirus**, a common cause of severe childhood diarrheal illness, was licensed and recommended for routine childhood immunization in 1998. However, the vaccine was withdrawn in 1999 due to safety concerns. Post-licensure monitoring revealed an association between the vaccine and an extremely rare but potentially fatal intestinal problem.

A conjugate **pneumococcal** vaccine was licensed in 2000 that provided greater efficacy in patients less than 2 years old, and was recommended for all children 2-23 months old in 2000. Pneumococcal disease has dropped by almost 80% since the introduction of the PCV7 vaccine in 2000.

HISTORY OF THE IMMUNIZATION SCHEDULE

1945-1954	1955-1964	1965-1974	1975-1984	1985-1994	1995-2004	2005-Current

Recommended Vaccines

- DTaP
- Polio
- MMR
- Hib
- Hepatitis B
- Influenza
- Varicella
- Rotavirus
- Pneumococcal
- **HPV** NEW
- **Hepatitis A** NEW
- **Meningococcal** NEW

In 2006, recommendations for seasonal **influenza** vaccination were extended to all children aged 6 months to 4 years. In 2007, children under age 5 were included. In 2010, ACIP expanded its recommendations for seasonal influenza vaccination to include all people older than 6 months who do not have a contraindication to the vaccine.

The CDC has stated that "before introduction of a vaccine in 2006, **rotavirus** caused an estimated 20 to 60 deaths [and] 55,000 to 70,000 hospitalizations…in the U.S. each year." Studies performed since 2006 demonstrate a decline in rotavirus activity. A study of representative U.S. laboratories showed that in 2008-2009 the number of positive rotavirus test results was 60% lower than in the prevaccine era.

The first **human papillomavirus (HPV)** vaccine was licensed in 2006. HPV vaccination is recommended by ACIP for adolescents at age 11-12.

The first **hepatitis A** vaccine was licensed in 1995 and recommended for all children on May 19, 2006.

Since 2005, the **meningococcal** vaccine has been recommended for all adolescents at age 11–12.

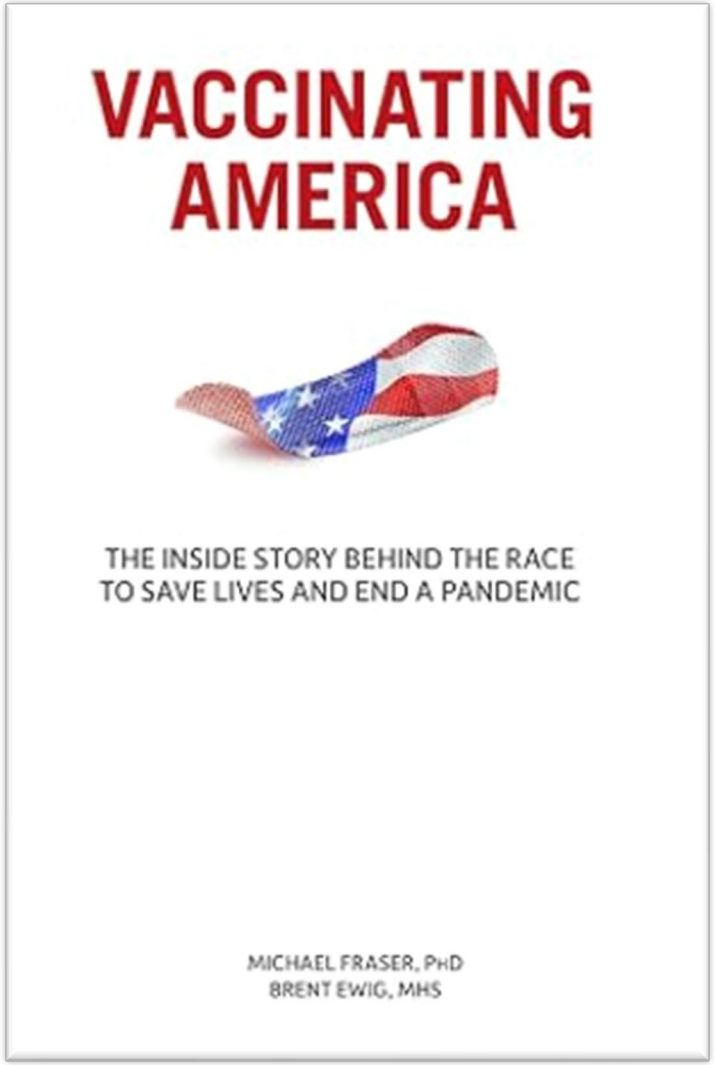
As of 9/30/2017

Impact of the COVID-19 Vaccine

- The COVID-19 pandemic marked several unprecedented innovations in the world of immunizations (Fraser & Ewig, 2022)
- The first COVID-19 vaccine was administered less than one year after the genetic code for the virus was released
- Within the first year of COVID-19 vaccine development:
  - Almost 600 million doses were administered
  - More than 60% of the population were vaccinated
  - 200 million Americans were protected

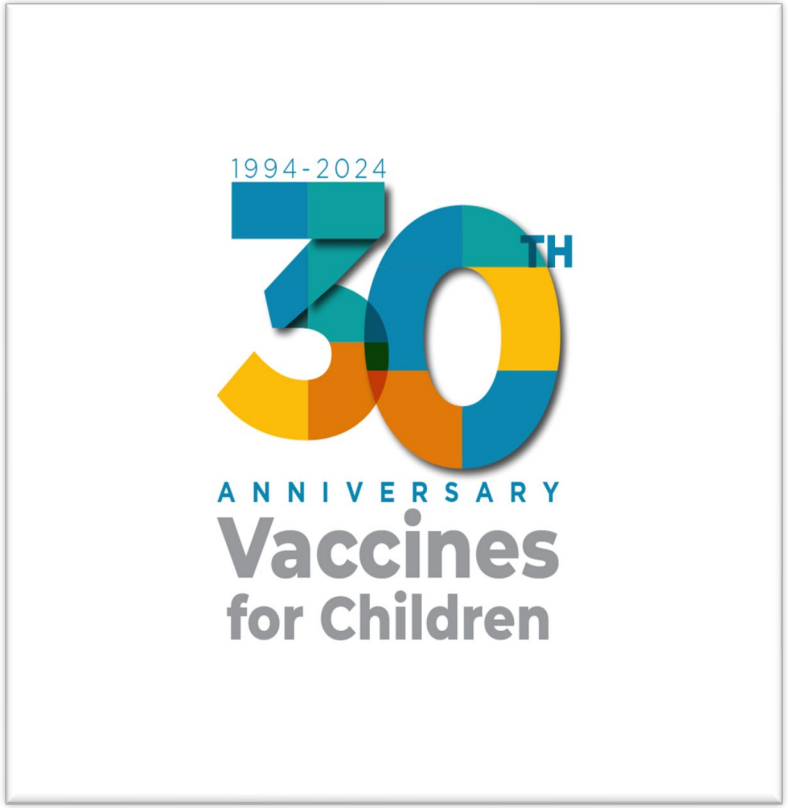
Impact of the COVID-19 Vaccine

- This book provides insight on the groundbreaking vaccination campaign that took place during the pandemic
- It was co-authored by AIM's Chief Policy and Government Relations Officer, Brent Ewig



History of VFC

- The VFC program became operational on October 1, 1994 (CDC, n.d.)
- The program was developed as a response to measles epidemic that occurred in the United States from 1989-1991
  - The investigation of the epidemic identified that more than half of the cases of measles were in unvaccinated children
  - The primary barrier to vaccination in unvaccinated children was the cost of the vaccine



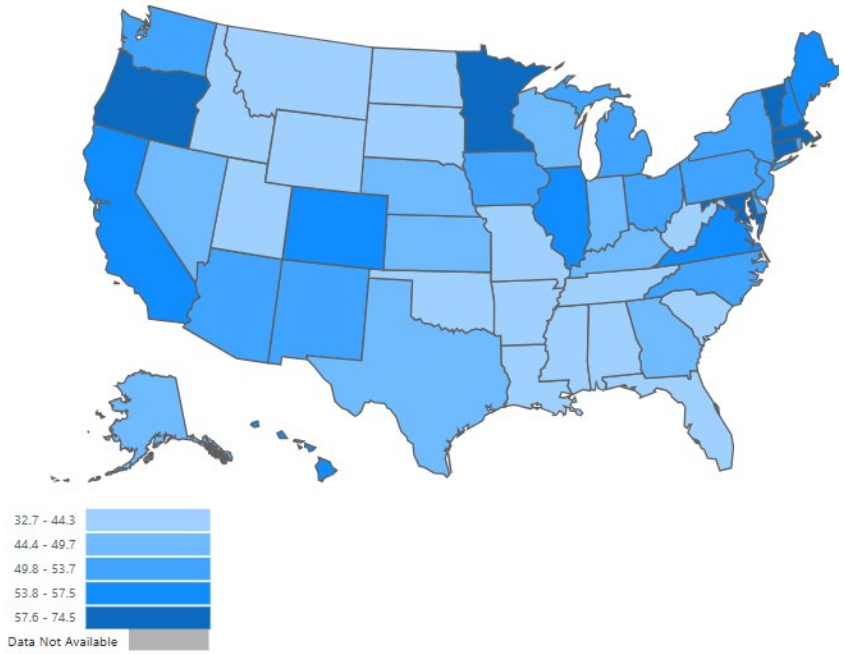
Lives Saved by VFC

- The VFC program is an entitlement program for eligible children, ages 18 and younger (CDC, 2024)
- The program provides vaccines at no-cost to eligible children through enrolled public and private healthcare providers
- The VFC program provides vaccines that protect against 19 different diseases
- The program prevents 472 million illness and 29.8 million hospitalizations

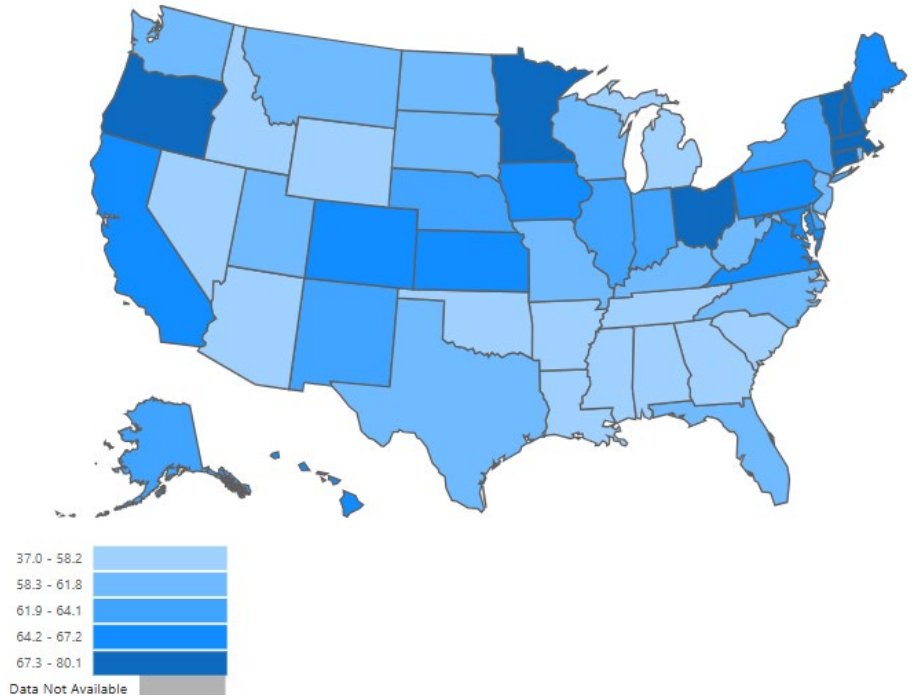
State of Vaccine Confidence in the U.S.

Vaccine Confidence in the United States

Confidence in COVID-19 Vaccine Safety



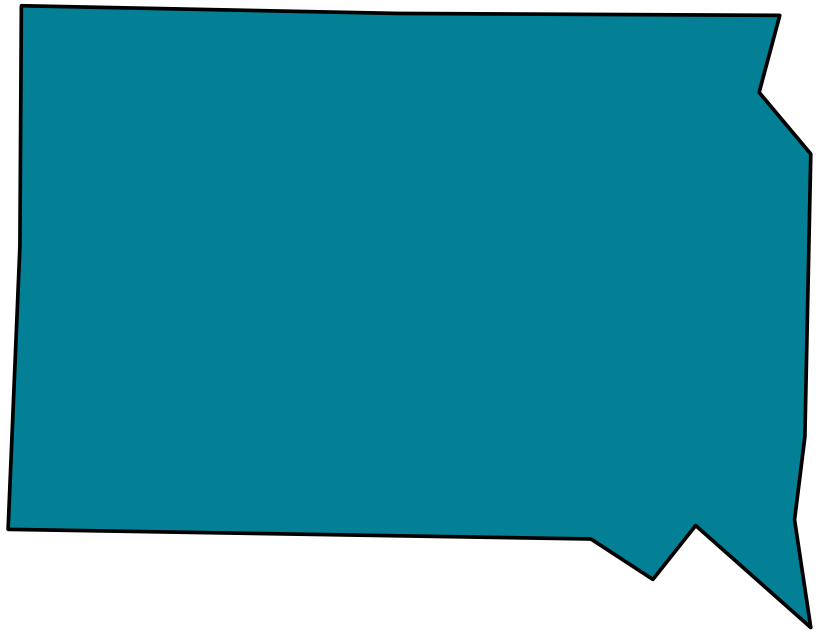
Confidence in Flu Vaccine Safety



Source: https://www.cdc.gov/respvaxview/dashboards/vaccination-behavioral-social-drivers.html

Vaccine Confidence in South Dakota

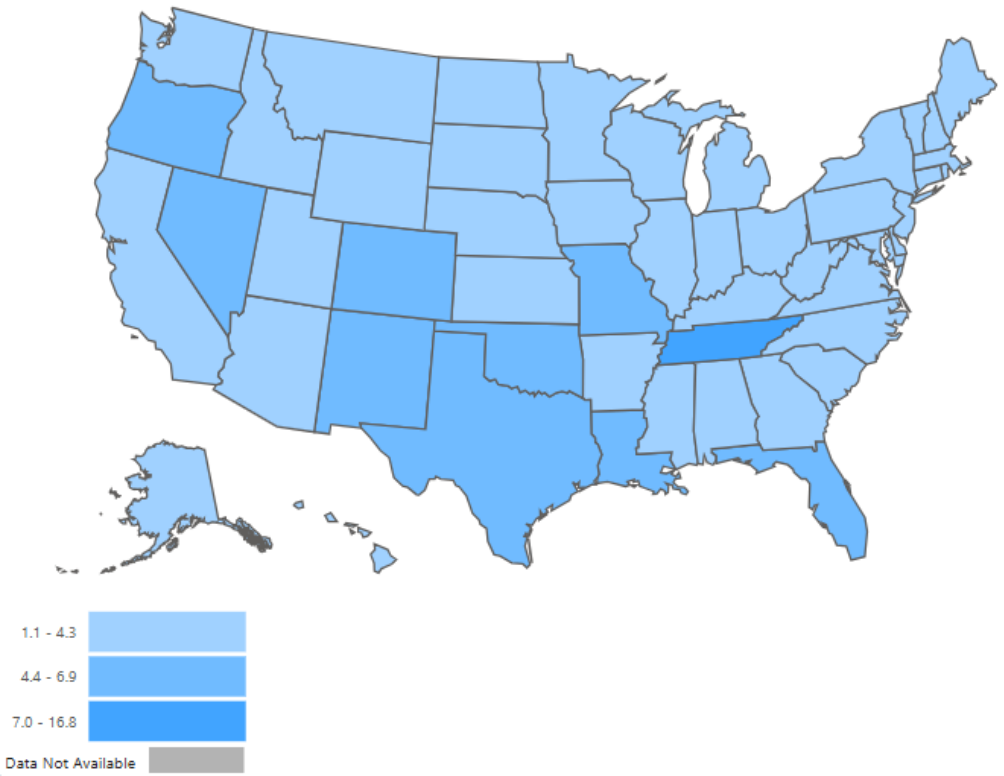
- 39.4% of Adults in South Dakota report confidence in the safety of the COVID-19 vaccine (CDC, 2025)
  - The national average is 50.3%
- 60.3% of adults in South Dakota report confidence in the safety of the flu vaccine
  - The national average is 61.8%



Intent to Vaccinate for Flu

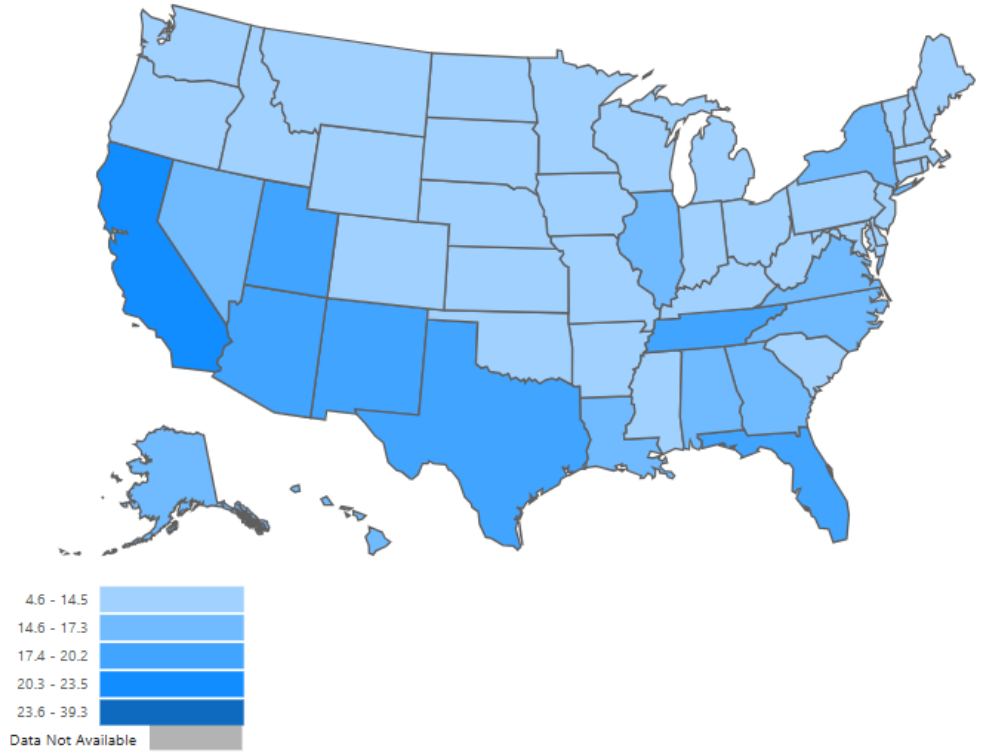
Indicator (Vaccination coverage and intent (among all adults 18+)): Definitely will get the 2024-2025 flu vaccine

Characteristic (All adults 18+ years): All adults 18+ years



Indicator (Vaccination coverage and intent (among all adults 18+)): Probably will get the 2024-2025 flu vaccine or are unsure

Characteristic (All adults 18+ years): All adults 18+ years

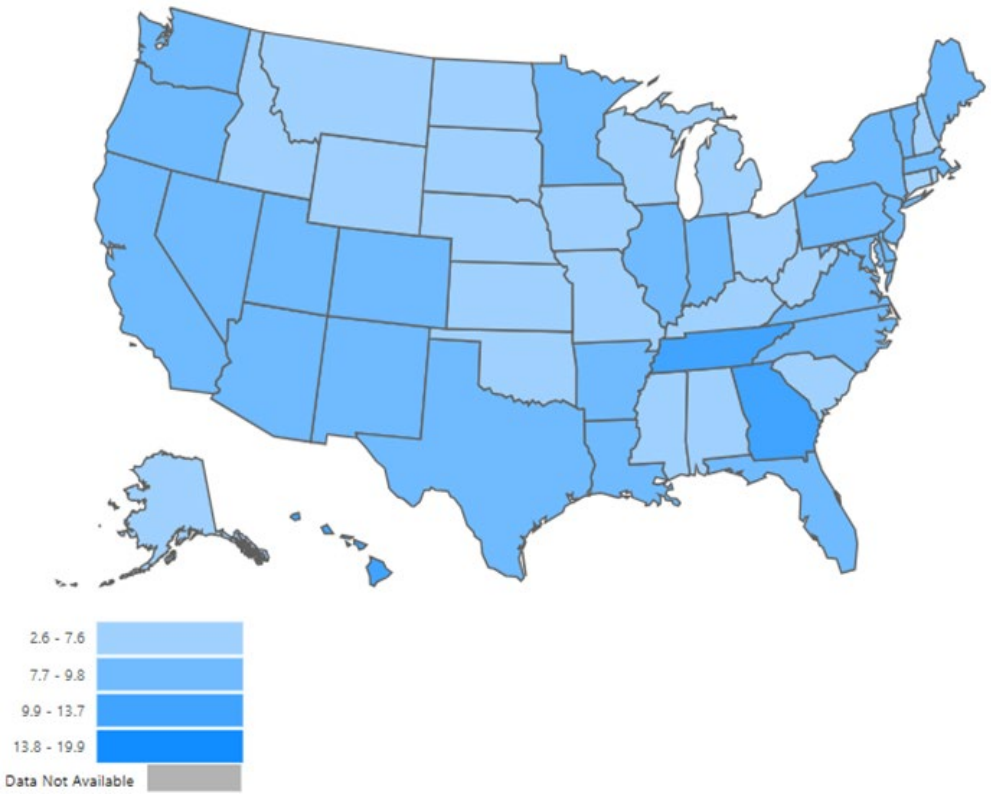


Source: https://www.cdc.gov/respvaxview/dashboards/vaccination-behavioral-social-drivers.html

Intent to Vaccinate for COVID-19

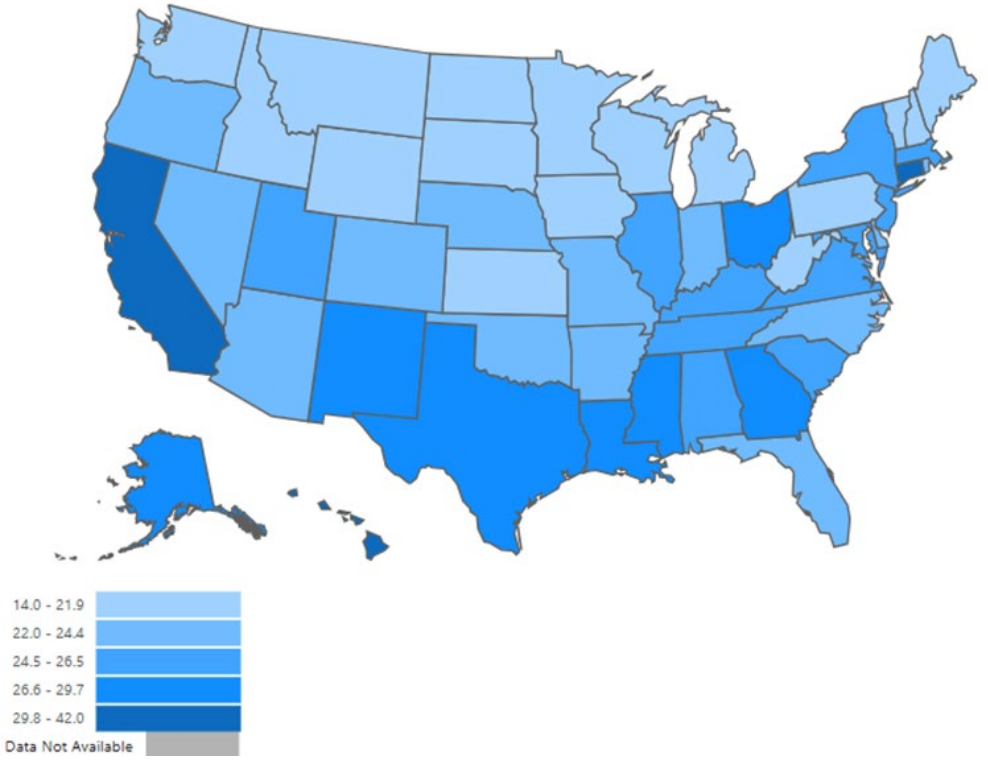
Indicator (Vaccination coverage and intent (among all adults 18+)): Definitely will get the 2024-2025 COVID-19 vaccine

Characteristic (All adults 18+ years): All adults 18+ years



Indicator (Vaccination coverage and intent (among all adults 18+)): Probably will get the 2024-2025 COVID-19 vaccine or are unsure

Characteristic (All adults 18+ years): All adults 18+ years



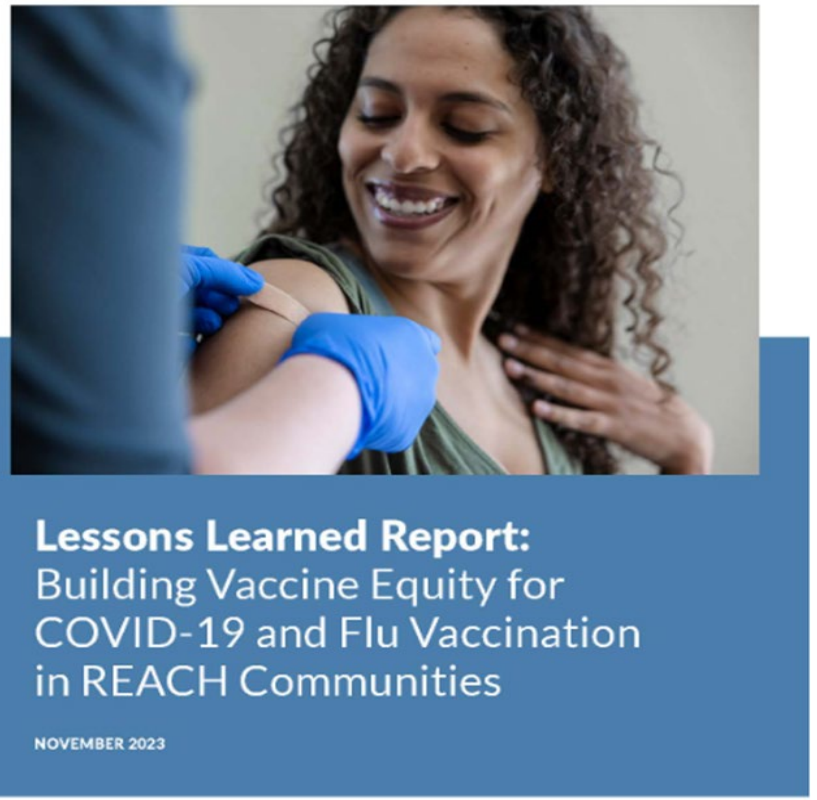
Source: https://www.cdc.gov/respvaxview/dashboards/vaccination-behavioral-social-drivers.html

Where do we go from here?

Lessons learned from our past…

Lessons Learned Report

- AIM's iREACH team partnered with Neimand Collaborative to evaluate and document the successes and challenges of working with community-based organizations to increase flu and COVID-19 vaccination rates
- The report also explores ways to strengthen and sustain the partnerships and activities developed over the last few years to create meaningful change in REACH communities

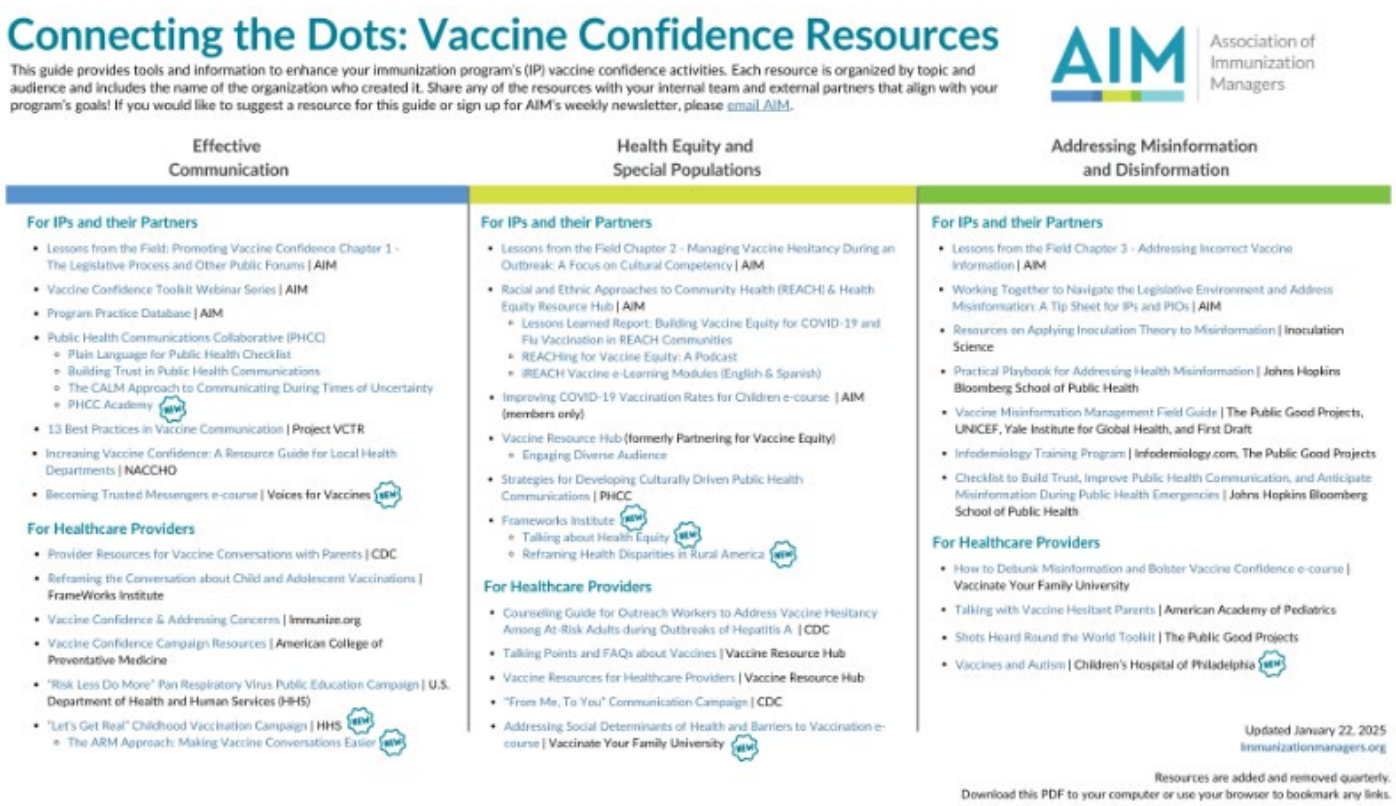


Key Lessons Learned

- The key informant interviews and virtual roundtable discussions revealed several key insights
  - Using trustworthy messengers is the most effective way to combat misinformation and build vaccine confidence
  - Vaccination messaging should be tailored and culturally relevant to community of focus
  - Community partnerships and relationships should be continually cultivated even during times of non-crisis

Connecting the Dots: Vaccine Confidence

- The guide provides tools and information that support enhancing vaccine confidence activities
- This resource is updated quarterly
- The most recent update focuses on effective communication, health equity, and addressing misinformation and disinformation



Connecting the Dots: Vaccine Confidence Resources

This guide provides tools and information to enhance your immunization program's (IP) vaccine confidence activities. Each resource is organized by topic and audience and includes the name of the organization who created it. Share any of the resources with your internal team and external partners that align with your program's goals! If you would like to suggest a resource for this guide or sign up for AIM's weekly newsletter, please email AIM.

AIM Association of Immunization Managers

Effective Communication

For IPs and their Partners

- Lessons from the Field: Promoting Vaccine Confidence Chapter 1 - The Legislative Process and Other Public Forums | AIM
- Vaccine Confidence Toolkit Webinar Series | AIM
- Program Practice Database | AIM
- Public Health Communications Collaborative (PHCC)
  - Plain Language for Public Health Checklist
  - Building Trust in Public Health Communications
  - The CALM Approach to Communicating During Times of Uncertainty
  - PHCC Academy (NEW)
- 13 Best Practices in Vaccine Communication | Project VCTR
- Increasing Vaccine Confidence: A Resource Guide for Local Health Departments | NACCHO
- Becoming Trusted Messengers e-course | Voices for Vaccines (NEW)

For Healthcare Providers

- Provider Resources for Vaccine Conversations with Parents | CDC
- Reframing the Conversation about Child and Adolescent Vaccinations | FrameWorks Institute
- Vaccine Confidence & Addressing Concerns | Immunize.org
- Vaccine Confidence Campaign Resources | American College of Preventative Medicine
- "Risk Less Do More" Pan Respiratory Virus Public Education Campaign | U.S. Department of Health and Human Services (HHS)
- "Let's Get Real" Childhood Vaccination Campaign | HHS (NEW)
  - The ARM Approach: Making Vaccine Conversations Easier (NEW)

Health Equity and Special Populations

For IPs and their Partners

- Lessons from the Field Chapter 2 - Managing Vaccine Hesitancy During an Outbreak: A Focus on Cultural Competency | AIM
- Racial and Ethnic Approaches to Community Health (REACH) & Health Equity Resource Hub | AIM
  - Lessons Learned Report: Building Vaccine Equity for COVID-19 and Flu Vaccination in REACH Communities
  - REACHing for Vaccine Equity: A Podcast
  - iREACH Vaccine e-Learning Modules (English & Spanish)
- Improving COVID-19 Vaccination Rates for Children e-course | AIM (members only)
- Vaccine Resource Hub (formerly Partnering for Vaccine Equity)
  - Engaging Diverse Audience
- Strategies for Developing Culturally Driven Public Health Communications | PHCC
- Frameworks Institute (NEW)
  - Talking about Health Equity (NEW)
  - Reframing Health Disparities in Rural America (NEW)

For Healthcare Providers

- Counseling Guide for Outreach Workers to Address Vaccine Hesitancy Among At-Risk Adults during Outbreaks of Hepatitis A | CDC
- Talking Points and FAQs about Vaccines | Vaccine Resource Hub
- Vaccine Resources for Healthcare Providers | Vaccine Resource Hub
- "From Me, To You" Communication Campaign | CDC
- Addressing Social Determinants of Health and Barriers to Vaccination e-course | Vaccinate Your Family University (NEW)

Addressing Misinformation and Disinformation

For IPs and their Partners

- Lessons from the Field Chapter 3 - Addressing Incorrect Vaccine Information | AIM
- Working Together to Navigate the Legislative Environment and Address Misinformation: A Tip Sheet for IPs and PIOs | AIM
- Resources on Applying Inoculation Theory to Misinformation | Inoculation Science
- Practical Playbook for Addressing Health Misinformation | Johns Hopkins Bloomberg School of Public Health
- Vaccine Misinformation Management Field Guide | The Public Good Projects, UNICEF, Yale Institute for Global Health, and First Draft
- Infodemiology Training Program | Infodemiology.com, The Public Good Projects
- Checklist to Build Trust, Improve Public Health Communication, and Anticipate Misinformation During Public Health Emergencies | Johns Hopkins Bloomberg School of Public Health

For Healthcare Providers

- How to Debunk Misinformation and Bolster Vaccine Confidence e-course | Vaccinate Your Family University
- Talking with Vaccine Hesitant Parents | American Academy of Pediatrics
- Shots Heard Round the World Toolkit | The Public Good Projects
- Vaccines and Autism | Children's Hospital of Philadelphia (NEW)

Updated January 22, 2025
immunizationmanagers.org

Resources are added and removed quarterly.
Download this PDF to your computer or use your browser to bookmark any links.

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Immunization Coalition Toolkit

- This toolkit is a comprehensive resource that provides background on the structure and scope of current immunization coalitions
- The toolkit includes examples, case studies, strategies, and tools that state/jurisdictional immunization programs can use to build, improve, or support immunization coalitions

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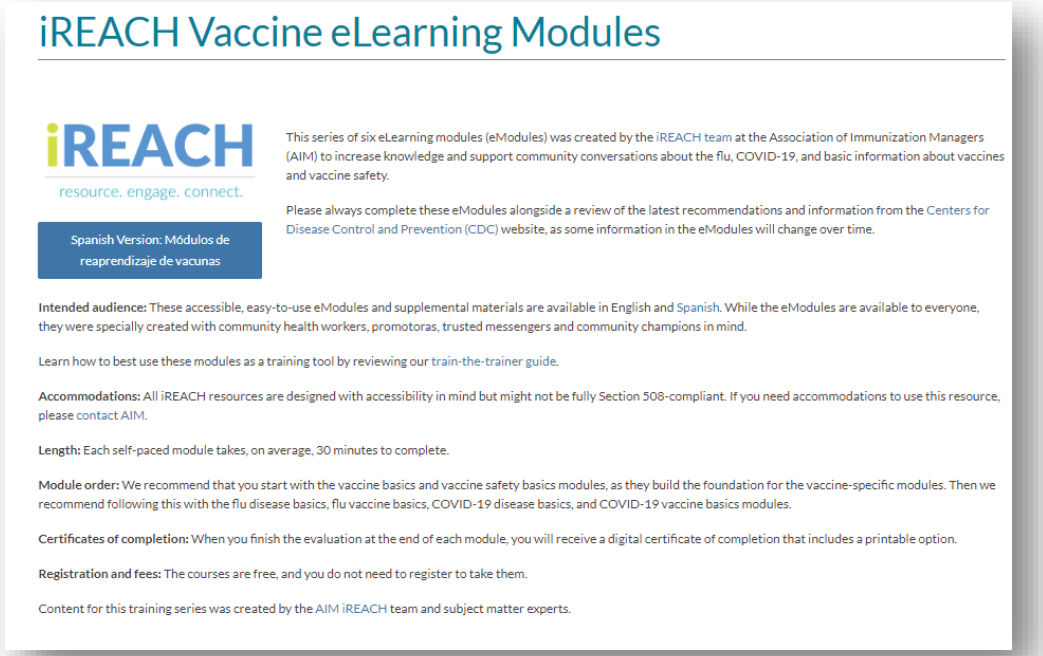
iREACH Vaccine eLearning Modules

- This series of six publicly accessible eLearning modules were created to increase knowledge and support community conversations about the flu, COVID-19, and basic information about vaccines and vaccine safety
- The modules were created with community health workers, trusted messengers, and community champions in mind
- The eModules and supplemental materials are accessible, easy-to-use, and available in English and Spanish



iREACH Vaccine eLearning Modules

iREACH

resource. engage. connect.

Spanish Version: Módulos de reaprendizaje de vacunas

This series of six eLearning modules (eModules) was created by the iREACH team at the Association of Immunization Managers (AIM) to increase knowledge and support community conversations about the flu, COVID-19, and basic information about vaccines and vaccine safety.

Please always complete these eModules alongside a review of the latest recommendations and information from the Centers for Disease Control and Prevention (CDC) website, as some information in the eModules will change over time.

Intended audience: These accessible, easy-to-use eModules and supplemental materials are available in English and Spanish. While the eModules are available to everyone, they were specially created with community health workers, promotoras, trusted messengers and community champions in mind.

Learn how to best use these modules as a training tool by reviewing our train-the-trainer guide.

Accommodations: All iREACH resources are designed with accessibility in mind but might not be fully Section 508-compliant. If you need accommodations to use this resource, please contact AIM.

Length: Each self-paced module takes, on average, 30 minutes to complete.

Module order: We recommend that you start with the vaccine basics and vaccine safety basics modules, as they build the foundation for the vaccine-specific modules. Then we recommend following this with the flu disease basics, flu vaccine basics, COVID-19 disease basics, and COVID-19 vaccine basics modules.

Certificates of completion: When you finish the evaluation at the end of each module, you will receive a digital certificate of completion that includes a printable option.

Registration and fees: The courses are free, and you do not need to register to take them.

Content for this training series was created by the AIM iREACH team and subject matter experts.

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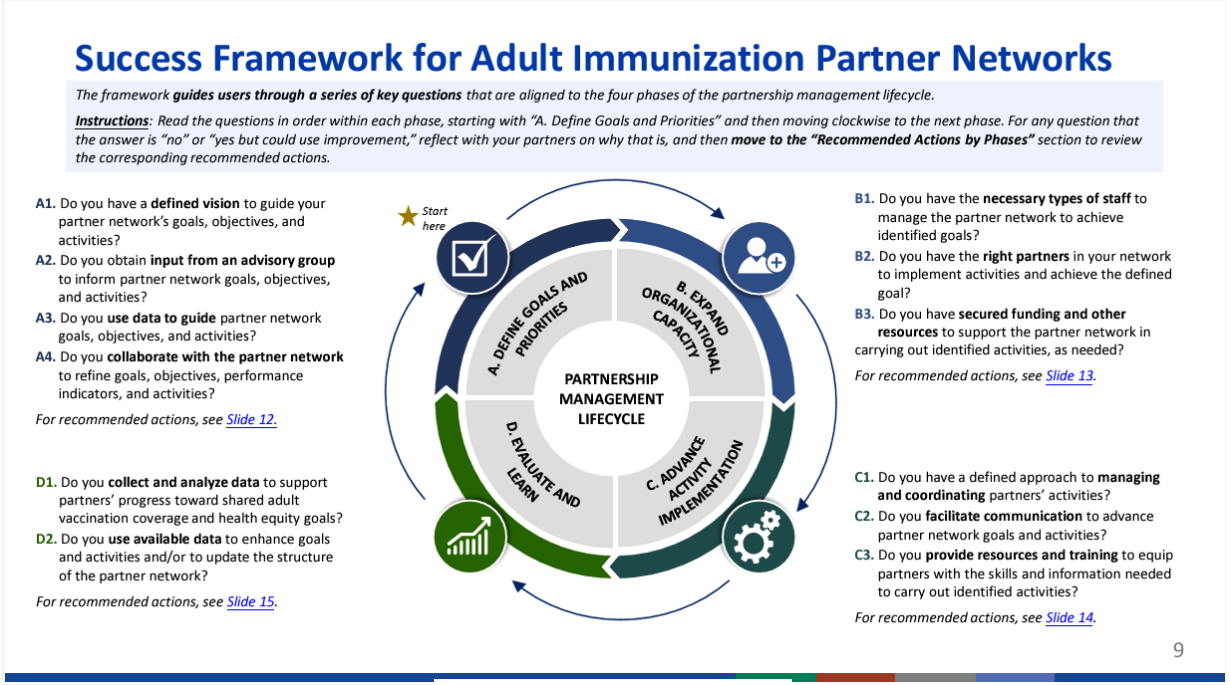
Success Framework for Adult Immunization Partner Networks

- The framework is designed to help jurisdictions expand capacity and improve adult vaccination coverage with a health equity focus through building and sustaining partnership networks

- The framework has been successfully implemented in diverse adult immunization programs and can be used by programs of any size



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Upcoming Events at AIM

Please join us for our 2025 Leadership in Action Conference!

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