



NATIONAL ADULT IMMUNIZATION PLAN: A PATH TO IMPLEMENTATION



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
THE NATIONAL VACCINE PROGRAM OFFICE

INTRODUCTION

The National Adult Immunization Plan (NAIP) is intended to facilitate coordinated action by federal and non-federal partners to protect public health and achieve optimal prevention of infectious diseases and their consequences through vaccination of adults. As a national plan, the NAIP requires engagement from a wide range of stakeholders to achieve its full vision. The plan emphasizes collaboration and prioritization of efforts that will have the greatest impact.

The plan establishes four key goals, each of which is supported by objectives and strategies to guide implementation through 2020:

Goal 1: Strengthen the adult immunization infrastructure

Goal 2: Improve access to adult vaccines

Goal 3: Increase community demand for adult immunizations

Goal 4: Foster innovation in adult vaccine development and vaccination-related technologies

For more information about the scope and vision for the NAIP, please see the introductory section of the National Adult Immunization Plan (2016).

Priorities for Implementation

The purpose of this document is to facilitate action on the four goals outlined in the NAIP. It identifies eight implementation priorities and potential activities in support of each. Implementation priorities were selected from among 78 NAIP strategies. As such, each implementation priority maps to a distinct NAIP strategy (Appendix 1).¹ For each implementation priority, the activities presented reflect information collected from numerous immunization stakeholders about actions that are currently underway as well as those that could be undertaken in support of the priority between 2017 and 2020.

The activities in this document should be viewed as suggestions. Their inclusion here does not commit or mandate any particular agency or entity to perform any activities. While NAIP implementation does not currently have dedicated resources for implementation activities, stakeholders can use these suggested activities to inform agenda-setting and to help prioritize adult immunization-related projects or research studies.

¹The eight priorities included in this document are a subset of the 78 strategies listed in the NAIP. While seven of the NAIP strategies are reproduced here verbatim, priority area 1 “Address technical, legal, administrative, and practical barriers to greater use of electronic health records (EHRs) and immunization information systems (IIS) to collect and track adult immunization data” combines two NAIP strategies: 1.4.1 and 1.4.2.

The list of suggested activities for each priority is not meant to be exhaustive. Rather, each list represents important activities that are illustrative of actions stakeholders are currently undertaking or could undertake individually, or in partnerships, in the future to make progress toward NAIP goals.

Development of Implementation Priorities and Potential Activities

The NAIP and this follow-on document were developed through the efforts of an Interagency Adult Immunization Task Force (AITF), led by the Office of the Assistant Secretary for Health (OASH) within the Department of Health and Human Services (HHS). The Assistant Secretary for Health (ASH) serves as the director of the National Vaccine Program and leads the NAIP and its implementation. Within HHS, the National Vaccine Program Office (NVPO) facilitates collaboration and coordinates the monitoring of progress for the NAIP, which will be reviewed annually by the ASH and the National Vaccine Advisory Committee (NVAC).

The priorities and activities described here were developed and selected through extensive engagement of dozens of governmental and non-governmental subject matter experts and other key stakeholders via a survey, focus groups, semi-structured interviews, and data calls (Figure 1). At the start of the process, a stakeholder survey was conducted in 2015 to identify the most urgent and important NAIP strategies for focused attention. The highest ranked strategies were then reviewed by dozens of stakeholders in focus groups to narrow the field to eight key priorities to be featured in this this document. A data call was then conducted to solicit current, planned, and potential activities to advance each key priority. These activities were vetted and further refined through additional focus groups to arrive at the final set included here.

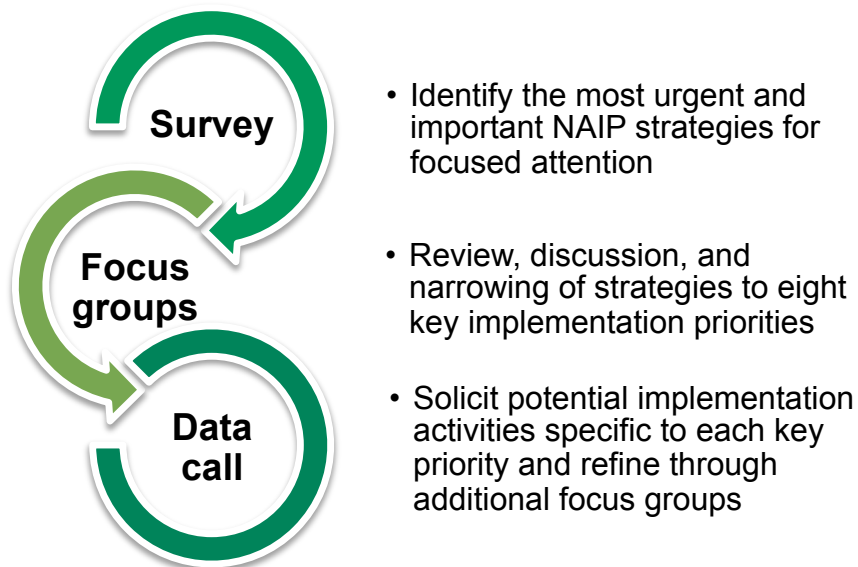


Figure 1: Implementation Guidance Development Process

While the NAIP provides a comprehensive overview of the challenges in adult immunization, this document focuses on a limited set of priorities, recommending the initial steps most essential to progress. Eight priorities, with three to eleven associated activities each, were selected to galvanize stakeholders around a common set of NAIP strategies and coordinate efforts to move them forward. While the focus of the NAIP and this follow-on document is on adults, some of the priorities are directed at the larger immunization system and will have benefits beyond the adult population. In these cases, focusing exclusively on adults would represent a missed opportunity to improve the health of all.

Monitoring Progress

NVPO, in partnership with the AITF, will regularly track and annually summarize progress on achieving the goals and priorities in the NAIP and present the results to NVAC and the ASH. An update on progress on activities in support of the NAIP and progress towards meeting NAIP indicators (Table 3 of the NAIP) will also be presented at an NVAC meeting, which will be open to the public and attended by many stakeholders.

Stakeholder Involvement

Federal leadership and the participation of diverse stakeholders are critical to implementing the NAIP. Successful implementation depends on state, local, territorial, and tribal governments; health care providers; professional associations; advocacy groups; vaccine manufacturers; academia and research organizations; payers and health plans; employers; and the general public working together to overcome barriers and improve access to adult vaccinations.

The National Adult and Influenza Immunization Summit (NAIS) <http://www.izsummitpartners.org/> is frequently mentioned in this document as having a specific role in implementation. The organizational partners who participate in the Summit represent many of the public and private entities listed above that are involved in adult immunization. NAIS partners have met regularly since 2012 and partnered to identify and implement solutions to strengthen adult immunization in the United States.

Stakeholder groups are shown in Table 1.

TABLE 1. ADULT IMMUNIZATION STAKEHOLDERS

Stakeholder Category	Agency/Entity
Federal government, HHS agencies	Administration for Community Living Administration for Children and Families Agency for Healthcare Research and Quality Centers for Disease Control and Prevention Centers for Medicare & Medicaid Services Food and Drug Administration Health Resources and Services Administration Indian Health Service National Institutes of Health Office of the Assistant Secretary for Health Office of the Assistant Secretary for Public Affairs Office of the Assistant Secretary for Planning and Evaluation Office of the Assistant Secretary for Preparedness and Response Office of Global Affairs Office of Minority Health Office of the National Coordinator for Health Information Technology Partnership Center, Office of the Assistant Secretary for Health Office of Disease Prevention and Health Promotion Office on Women’s Health Office of Adolescent Health Regional Health Administrators
Federal government, other departments/agencies	Department of Defense Department of Homeland Security Department of Veterans Affairs Department of Justice Federal Occupational Health Office of Personnel Management
Government, non-federal	State, territorial, tribal, and local public health agencies and governments

Stakeholder Category	Agency/Entity
Non-governmental stakeholders	Academia/research organizations Health care providers Vaccine industry Health care systems Community immunizers Professional associations Health care payers and plans Employers Foundations Schools and training programs Community and patient advocacy organizations Philanthropic organizations Adult immunization coalitions General public

Organization of This Document

Each of the following eight sections is structured around a different implementation priority. Priorities are listed in the order in which they first appear as strategies in the NAIP. Each chapter provides:

- An overview of the NAIP goal and objective that the priority is nested within.
- A list of critical implementation activities that could be undertaken from 2017-2020.

For each activity, a potential lead and in some cases, one or more collaborating organizations are listed as suggestions, but this does not require or exclude the participation of any organization. In this document, the term *NAIP partners* refers to the broad array of public and private entities listed in Table 1. *Federal government partners* refers to agencies within the federal government. *HHS* refers to one or more agencies within the U.S. Department of Health and Human Services. In select cases, we identify a specific agency within HHS or a specific stakeholder group as a potential lead.

Priority Area 1: Address Technical, Legal, Administrative, And Practical Barriers To Greater Use Of Electronic Health Records (EHRs) And Immunization Information Systems (IIS) To Collect And Track Adult Immunization Data

NAIP Goal 1: Strengthen the adult immunization infrastructure

NAIP Objective 1.4: Increase the use of electronic health records (EHRs) and immunization information systems (IIS) to collect and track adult immunization data

Suggested Activities

1. Federal government partners can work with EHR developers to include standardized Best Practice Alerts (based on the Advisory Committee on Immunization Practice recommendations) within their immunization modules as a standard component.
2. Federal government partners can encourage providers and EHR systems that support adult vaccines to build functionality for accurate evaluation of vaccine history and forecast of vaccines due. These systems need to use relevant historical data and/or services from IIS to make these timely decisions. Guidance on these decisions is provided by the Clinical Decision Support for Immunization (CDSi) resources, which provide an implementation-neutral foundation for development and maintenance of clinical decision support engines.²
3. Federal government partners can work with other partners, such as the Association of State and Territorial Health Officials, the American Immunization Registry Association, and the Network for Public Health Law, to develop ways to address non-technical barriers to IIS data sharing across jurisdictional boundaries.³
4. Federal government partners can explore technical and policy options to implement inter-jurisdictional exchange of immunization data, including exploring the effectiveness of the Public Health Immunization Cross-jurisdictional pilot project, which allows participating sites to exchange immunization data across jurisdictions.⁴
5. Federal government partners can facilitate on-boarding of health care providers waiting in the IIS onboarding queue through novel strategies such as supporting centralized service centers.

²For additional information about CDSi please see, <http://www.cdc.gov/vaccines/programs/iis/cdsi.html>.

³For additional information about cross-jurisdictional sharing of state IIS data please refer to the memorandum on the ASTHO website:

<http://www.astho.org/Public-Policy/Public-Health-Law/Cross-Jurisdictional-Sharing-IIS-Data/>.

⁴For additional information about the Public Health Immunization Cross-jurisdictional pilot please see, <https://www.healthit.gov/techlab/jpg/node/4/submission/1291>.

6. Federal government partners and research organizations can study the impact of requirements originally associated with the Medicare and Medicaid EHR Incentive Program on adult provider IIS use.
7. ONC can design and launch a new pilot program in multiple states to test novel economic incentives to encourage providers to use existing EHR platforms or upgrade platforms to submit and accept immunization records to and from the state IIS.
8. Federal government partners can support an IIS assessment process that independently measures and encourages alignment with interoperability standards, functionality standards such as de-duplication, and data quality.
9. Federal government partners can continue ongoing pilot work to examine consumer access to IIS data, explore integration of IIS data with existing consumer portals, identify states in which laws and regulations do not allow patient access to IIS data, and develop tools and guidance for states interested in reducing legal, operational, and resource barriers.
10. Federal government partners and research organizations can assess the extent to which the use of EHRs and IIS impact patient safety. For example, stakeholders can examine the impact EHRs and IIS on the ability to identify vaccine recipients when a safety concern occurs and link these concerns with specific lots.
11. Federal government partners and research organizations can assess how EHRs are incorporated in adult provider work flow in different settings including pharmacies, with special emphasis on usability and capture of needed data.

Priority Area 2: Evaluate The Impact Of Current Adult Vaccination Quality Measures And The Feasibility Of Future Quality Measure Development Projects

NAIP Goal 1: Strengthen the adult immunization infrastructure

NAIP Objective 1.5: Evaluate and advance targeted quality improvement initiatives

Suggested Activities

1. HHS can work with partners to compile a list of current federal and non-federal performance measures on adult immunization,⁵ removing redundant measures and harmonizing existing ones, with the goal of reducing the total number of adult measures in circulation.
2. Federal government partners can work with private sector partners to assess the feasibility of an adult vaccination composite measure, inclusive of multiple routinely recommended vaccinations.
3. Federal government partners can categorize existing quality and performance measures into groups corresponding to each of the four adult immunization standards – assess, recommend, administer or refer, and document – so that progress can be tracked for each standard.
4. Federal government partners can monitor developments with respect to new value-based payment models in the wider health care system and explore opportunities to ensure vaccination is represented in measurement efforts to improve quality.
5. Federal government partners can support quality improvement initiatives that aim to reduce racial/ethnic disparities in vaccination rates.

⁵For additional information about quality measurement, see http://www.qualityforum.org/Prioritizing_Measure_Gaps_-_Adult_Immunization.aspx

Priority Area 3: Evaluate the impact of financial barriers, such as co-pays, on adult vaccination uptake

NAIP Goal 2: Improve access to adult vaccines

NAIP Objective 2.1: Reduce financial barriers for individuals who receive recommended adult vaccines

Suggested Activities

1. Federal government partners can monitor changes in grandfathered health plans (i.e., private plans not subject to Affordable Care Act requirements that eliminate patient cost sharing for recommended adult vaccines), the number of Americans covered under grandfathered plans, and variation across plans in coverage of adult vaccines.
2. Federal government partners can examine and report variation across Medicare Part D plans in patient cost-sharing for ACIP-recommended vaccines.
3. Federal government partners can track state Medicaid coverage of vaccines for adults, including which vaccines are covered, vaccine and vaccine administration payments to providers, and in-network provider requirements.
4. Federal government partners can work with other partners to identify successful programs for identification and vaccination of uninsured adults and develop a toolkit to support implementation in additional jurisdictions.

Priority Area 4: Research the total costs of providing vaccination services in a provider setting to improve understanding of costs associated with the range of activities that are needed to ensure efficient and effective immunization services (e.g., ordering, handling, storage, administration, patient recall/reminders, and counseling)

NAIP Goal 2: Improve access to adult vaccines

NAIP Objective 2.2: Assess and improve understanding of providers' financial barriers to delivering vaccinations, including stocking and administering vaccines

Suggested Activities

1. HHS can support health services research examining the factors affecting provider decisions to stock and administer adult vaccines.
2. HHS can support studies to examine the costs to vaccinate by different provider types (e.g., OB/GYN, family practice) and in different regions of the United States.
3. Using the data from the studies above, federal government partners can develop guidance on how providers can calculate their own time costs, given labor costs within their region.
4. HHS can examine variance across Medicare Part D plan sponsors for vaccine payment.
5. NAIS partners can use medical claims data to support the development of a payer "report card" that rates payers on reimbursement for adult vaccines.
6. HHS and NAIS partners can develop and disseminate guidance on accessing the business case for adult vaccinations.
7. Researchers can evaluate how the transition to value-based care across the healthcare system will impact adult immunization provisions, including ongoing questions about provider network adequacy.
8. HHS can explore how medical claims data can be used to describe the frequency with which claims for adult immunizations are rejected, types of rejection, and reasons for rejection.
9. Academic partners can explore how the decision to stock and administer adult vaccines and the role of cost considerations in that decision vary across entities such as integrated delivery networks vs. individual providers.

Priority Area 5: Identify legal, practical, and policy barriers that may impede expansion of the adult immunization provider network, and communicate those challenges

NAIP Goal 2: Improve access to adult vaccines

NAIP Objective 2.3: Expand the adult immunization provider network

Suggested Activities

1. National and state advocacy organizations and coalitions can consider legal and policy changes regarding the use of non-physician health care professionals to assess and administer vaccines.
2. Provider and advocacy organizations can disseminate information to increase awareness of web-based systems that allow providers to submit electronic claims directly to Part D plans.
3. HHS can support research on how to define and measure network adequacy with respect to immunization delivery with the goal of using this information to develop recommendations.
4. NAIS partners can develop additional tools for vaccination clinics (including temporary clinic settings looking to expand beyond influenza vaccination) to ensure appropriate vaccine handling, storage, and administration.

Priority Area 6: Encourage all providers, including providers in complementary settings,⁶ to implement the NVAC Standards for Adult Immunization Practice, which includes assessing patients' vaccination status at every clinical encounter, strongly recommending needed immunizations, and either administering vaccines (including documentation in an IIS) or referring patients to others who administer vaccinations

NAIP Goal 3: Increase community demand for adult immunizations

NAIP Objective 3.2: Educate and encourage *health care providers* to recommend and/or deliver adult vaccinations

Suggested Activities

1. NAIS partners can develop playbooks of best practices (including use of incentives) to encourage adoption and implementation of the standards for adult immunization practice.
2. NAIS partners can conduct national standing orders workshops across the country to help practices and medical systems implement and sustain standing orders.
3. Federal and NAIS partners can develop tools and guidance to support incorporation of the standards into practice workflow (e.g., referral to providers who offer vaccinations, how to deliver a strong recommendation).
4. NAIS partners can educate various stakeholder groups about the standards and their implementation through the use of stock presentations to minimize variation in messaging.
5. Health professions schools (e.g., medical, dental, nursing, pharmacy) can ensure that students receive training on adult immunization, including the standards.
6. Advocacy organizations can articulate how to incorporate the NVAC standards into laws or regulations.
7. HHS can regularly monitor implementation of the standards and disseminate results to adult immunization stakeholders.
8. HHS can promote the NVAC standards through their cooperative agreements with provider organizations as a vehicle to improve adult vaccination rates.

⁶Complementary settings are defined as un-traditional settings for vaccination outside of physicians' offices such as workplaces, schools, community health centers, and pharmacies.

Priority Area 7: Engage community leaders in reaching the public with information about the importance of adult vaccination

NAIP Goal 3: Increase community demand for adult immunizations

NAIP Objective 3.3: Educate and encourage *other groups* (e.g., community and faith based groups, tribal organizations) to promote the importance of adult immunization

Suggested Activities

1. All levels of government and community partners can expand and improve their use of social media to increase public awareness of adult vaccine recommendations.
2. HHS can identify communities with the highest performance on adult vaccination measures and investigate the role of their communications strategies in helping to achieve high vaccination rates.
3. Federal government partners can identify best practices for engaging special populations, including women, faith-based communities, and minorities, in improving immunization knowledge and attitudes. These best practices can be communicated and applied broadly through a national campaign, drawing upon resources such as Regional Minority Health Consultants within the HHS Office of Minority Health.
4. State, and local government partners can identify community leaders outside the health care and public health systems (e.g., faith-based leaders, teachers/school administrators, adult day care center administrators, public library administrators, local recreation center administrators, and local business owners) to identify additional vulnerable populations who can benefit from vaccine education.
5. HHS can engage community organizations in translating key adult immunization materials for non-English-speaking patients.
6. HHS can review existing patient-facing apps for the management of various health conditions to assess inclusion of vaccine recommendations and conduct outreach to app developers who do not include vaccine-related content.

Priority Area 8: Encourage ongoing efforts to develop and license new and improved adult vaccines, including support for research, development, and licensure of vaccines; improved effectiveness; and longer duration of immunity

NAIP Goal 4: Foster innovation in adult vaccine development and vaccination related technologies

NAIP Objective 4.1: Develop new vaccines and improve the effectiveness of existing vaccines for adults

Suggested Activities

1. HHS can collaborate with researchers and manufacturers to encourage and reduce barriers to the development of adult vaccines with small market potential (e.g., vaccines for emergency preparedness).
2. NAIPS partners can produce materials to educate stakeholders on the cost, challenges, and barriers associated with bringing an adult vaccine to market.
3. The National Institutes of Health (NIH) can provide pre-clinical research resources (e.g., pre-clinical testing and manufacturing services for vaccines, vaccine components including adjuvants, and vaccine delivery systems) to scientists in academia and manufacturers worldwide to advance translational research on vaccines against emerging and re-emerging infectious diseases affecting adults.
4. NIH can continue to support clinical trials to investigate promising vaccine candidates for adults through the Vaccine and Treatment Evaluation Units (VTEUs) and other mechanisms.
5. HHS can prioritize the development of vaccines that meet unmet medical needs (e.g., a universal influenza vaccine) and associated technologies and platforms for manufacturing.
6. Federal government partners can facilitate open communication between manufacturers and the federal government to document the sources of uncertainty that manufacturers face, including unmet medical needs and potential target populations for new and existing vaccines for adults.
7. Federal government partners can identify novel influenza strains with pandemic potential and identify priorities for vaccine seed strain development.

APPENDIX 1: MAPPING OF IMPLEMENTATION PRIORITIES TO NAIP GOALS, OBJECTIVES, AND STRATEGIES

NAIP Goal	NAIP Objective	NAIP Strategy/Implementation Priority
<p>Goal 1: Strengthen the Adult Immunization Infrastructure</p>	<p>Objective 1.4: Increase the use of electronic health records (EHRs) and immunization information systems (IIS) to collect and track adult immunization data</p>	<p>Address technical, legal, administrative, and practical barriers to greater use of electronic health records (EHRs) and immunization information systems (IIS) to collect and track adult immunization data</p>
	<p>Objective 1.5: Evaluate and advance targeted quality improvement initiatives</p>	<p>Evaluate the impact of current adult vaccination quality measures and the feasibility of future quality measure development projects</p>
<p>Goal 2: Improve Access to Adult Vaccines</p>	<p>Objective 2.1: Reduce financial barriers for individuals who receive recommended adult vaccines</p>	<p>Evaluate the impact of financial barriers, such as co-pays, on adult vaccination uptake</p>
	<p>Objective 2.2: Assess and improve understanding of providers' financial barriers to delivering vaccinations, including stocking and administering vaccines</p>	<p>Research the total costs of providing vaccination services in a provider setting to improve understanding of costs associated with the range of activities that are needed to ensure efficient and effective immunization services (e.g., ordering, handling, storage, administration, patient recall/reminders, and counseling)</p>
	<p>Objective 2.3: Expand the adult immunization provider network</p>	<p>Identify legal, practical, and policy barriers that may impede expansion of the adult immunization provider network, and communicate those challenges</p>

NAIP Goal	NAIP Objective	NAIP Strategy/Implementation Priority
<p>Goal 3: Increase Community Demand for Adult Immunizations</p>	<p>Objective 3.2: Educate and encourage health care providers to recommend and/or deliver adult vaccinations</p>	<p>Encourage all providers, including providers in complementary settings, to implement the NVAC Standards for Adult Immunization Practice, which includes assessing patients' vaccination status at every clinical encounter, strongly recommending needed immunizations, and either administering vaccines (including documentation in an IIS) or referring patients to others who administer vaccinations</p>
	<p>Objective 3.3: Educate and encourage other groups (e.g., community and faith-based groups, tribal organizations) to promote the importance of adult immunization</p>	<p>Engage community leaders in reaching the public with information about the importance of adult vaccination</p>
<p>Goal 4: Foster Innovation in Adult Vaccine Development and Vaccination-Related Technologies</p>	<p>Objective 4.1: Develop new vaccines and improve the effectiveness of existing vaccines for adults</p>	<p>Encourage ongoing efforts to develop and license new and improved adult vaccines, including support for research, development, and licensure of vaccines; improved effectiveness; and longer duration of immunity</p>