



America's Health
Insurance Plans

Stakeholder Roundtable: Improving Adult Immunization Rates

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TWEETS

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🐦 Solutions to improve adult vaccination rates include health IT and team-based care

🐦 Roundtable: Must educate providers, consumers, media about safety and efficacy of adult vaccines

🐦 Health plans value immunizations for their ability to prevent disease and reduce unnecessary health care costs

KEY TAKEAWAYS



Influenza, pneumococcus, and hepatitis B are highly communicable diseases, and a heavy burden for adults ages 65 years and older at increased risk. All these conditions are preventable with appropriate vaccination.



Improving adult immunization rates is a national priority. In 2015, the Department of Health and Human Services (HHS) National Vaccine Program Office drafted a five-year, national strategic plan to improve protection against vaccine-preventable diseases among adults.



Team-based care where immunizations are provided at convenient locations and by multiple providers can improve access to adult immunizations.



Leveraging health information technology to improve documentation and immunization information sharing among health care providers, pharmacies, retail clinics, and public health agencies will enhance efficient access to more complete immunization information and help identify gaps to address health disparities.



Multiple communication channels, including social media, can be used to educate providers, consumers, and the media about adult vaccine safety and efficacy.

Executive Summary

Influenza, pneumococcus, and hepatitis B are highly communicable diseases that carry a heavy burden on the health care delivery system for adults ages 65 years and older at increased risk for these diseases. An estimated 90% of all seasonal flu-related deaths and between 50% and 60% of seasonal flu-related hospitalizations in the U.S. occur in people ages 65 years and older. In 2014, flu-associated hospitalization rates among people 65 years and older were the highest recorded since The Centers for Disease Control and Prevention (CDC) began tracking these rates in 2005.¹ Many of the 175,000 hospitalizations each year result from pneumococcal pneumonia with a case-fatality rate of 5% to 7% annually. The case-fatality rate is much higher among adults 65 years and older.² For those at high-risk, hepatitis B can be 50 to 100 times more infectious than HIV.³

The CDC Advisory Committee on Immunization Practices (ACIP) convenes each year to make recommendations for routine administration of vaccines to the pediatric, adolescent, and adult populations. Adult immunizations, however, remain far below the goals of Healthy People 2020. Published by the U.S. Department of Health and Human Services (HHS), **Healthy People 2020** provides the nation's 10-year goals and objectives for health promotion and disease prevention.

Improving adult immunization rates has become a national priority. In 2010, the HHS National Vaccine Program Office (NVPO) released **The National Vaccine Plan**, a 10-year roadmap for improving protection from vaccine-preventable diseases across the lifespan. In response to a growing national call for increased focus on adult vaccination, the NVPO drafted a five-year, national strategic plan in 2015 to facilitate the coordination of federal and nonfederal partners in achieving optimal prevention of vaccine-preventable diseases among adults. The draft plan was circulated for a public comment period in February and is currently being revised based on public feedback. The final plan is anticipated for release later in 2015.

To discuss the NVPO's recently released draft plan and to identify opportunities to accelerate improvements within the adult vaccine ecosystem, America's Health Insurance Plans (AHIP) hosted the Adult Vaccine Roundtable, a national dialogue with health care leaders held on February 19 in Washington, D.C. Senior leaders representing health insurance plans, the federal government, public health, clinicians, consumers, pharmacies and other immunization partners came together in an informal, highly interactive session focused on three goals:

1. Building a common understanding of different stakeholder perspectives on adult vaccines;
2. Increasing awareness of evidence-based strategies to increase adult immunization rates by addressing barriers; and
3. Leveraging accelerators, using the National Adult Immunization Plan as a strategic framework.

This report summarizes the key topics discussed during the Roundtable including the national adult vaccine landscape, participating stakeholder perspectives, accelerators for increasing adult immunization rates, and recommended action steps for health plans and other stakeholders.

The accelerators and recommended actions to improve adult vaccination rates resulting from the Roundtable are also applicable to improving childhood vaccination rates and include the areas described below.

Facilitating Integrated, Team-Based Care

- Increase efforts to expand access for all recommended immunizations to pharmacists, convenient care clinics, etc. Develop a template for states to use to encourage consistent and efficient approaches to improve access and patient education.
- Incorporate adult immunization screening and awareness into health plan enrollment processes (e.g., during health risk assessments, health fairs, biometric testing, etc.) as well as health plan wellness, case management, and disease management programs.
- Enhance workplace immunization opportunities beyond influenza vaccines. Consider annual work-site administration opportunities for employees, spouses, and dependents for all recommended vaccines.
- Encourage community partnerships with entities that serve diverse populations (e.g., churches, barber shops, salons, etc.) to raise awareness about the importance of vaccinations and how and where they can be accessed.
- Encourage telemedicine vendors to incorporate recommendations for adult and child vaccine issues into each patient interaction. Promote mobile solutions such as pop-up immunization centers.

Leveraging Health IT

- Facilitate health plan access to immunization information system (IIS) databases to validate gaps in immunization care. Since patients often change health plans or may receive vaccines at alternate care sites, it is difficult to assess immunization status via claims alone. Lack of connectivity to immunization databases can lead to false gaps causing added administrative burdens, including patient and physician dissatisfaction, especially when such gaps must be evaluated for quality concerns.
- Consider contractually requiring nonphysician providers of vaccinations such as pharmacists to submit data to state and local immunization registries and monitor compliance.

- Ensure that vaccine administrative data is sent to IIS. Adult immunization registries are not widely known or accessed by many adult-oriented physicians. Therefore, use of IIS must be universal for all vaccine providers and should include accessing records prior to vaccination and reporting to IIS after vaccination.
- Leverage electronic prescribing systems to increase adult immunization rates. Have pharmacists document immunizations administered to prescribing physicians.

Raising Awareness with Health Care Professionals and Consumers

- Publish patient and provider immunization resources and tools to clarify coverage of ACIP “A” and “B” recommended immunizations for children and adults. Direct individuals to where vaccines may be obtained—including alternative locations—and explain exceptions to ACA first-dollar coverage rules (These tools are currently available at www.dol.gov).
- Test innovative communication methods such as social media messaging and web-based platforms to encourage people to get needed vaccines (online, text, Twitter, etc.). Consider stronger messaging regarding potential outcomes for those who are not immunized.

Measuring and Tracking Progress

- Document and distribute best practices for increasing immunization rates and metrics in aggregate for the percent of members who are up-to-date on vaccinations. Additional work will be needed to reach agreement on an approach to measuring and reporting on progress.

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Background

AHIP's National Vaccine Roundtable brought together 40 key stakeholders from the vaccination community to identify barriers to increasing adult immunization rates and discuss opportunities for collaboration among stakeholder groups (Appendix A). Senior leaders representing health insurance plans, the federal government, public health, clinicians, consumers, pharmacies and other immunization partners came together in an informal, highly interactive session focused on three goals:

1. Building a common understanding of different stakeholder perspectives on adult vaccines;
2. Increasing awareness of evidence-based strategies to increase adult immunization rates by addressing barriers; and
3. Leveraging accelerators by using the National Adult Immunization Plan as a strategic framework.

Each participant was invited to discuss his or her perspective on the adult vaccine ecosystem, challenges to adult immunization, and ideas to overcome those challenges.

National Landscape: Adult Vaccination Rates

To kick off the roundtable discussion, the CDC provided a summary of the national landscape for adult vaccination rates based on annual data collected around the burden of vaccine-preventable diseases. For example:

- Influenza is responsible for approximately 226,000 hospitalizations and 3,000-49,000 deaths each year. More than 90% of annual deaths from influenza occur among adults age 65 and older.
- In 2013, approximately 13,000 cases of invasive pneumococcal disease were reported among adults age 65 years and older.
- Of the 41,880 reported cases of pertussis in 2012, about 9,000 were reported among adults.

- An estimated 3,350 total acute cases of hepatitis B were reported in 2010.
- About 1 million cases of herpes zoster are reported annually.

All of these conditions are preventable with appropriate vaccination per age group or condition. The CDC Advisory Committee on Immunization Practices (ACIP) was established under the Public Health Service Act and develops written recommendations for routine administration of vaccines to the pediatric, adolescent, and adult populations.⁴ Each year, the ACIP updates the adult immunization schedule by summarizing existing ACIP policies and developing new recommendations based on vaccine research and scientific data related to vaccine safety and effectiveness. The American College of Physicians (ACP), the American Academy of Family Physicians (AAFP), the American College of Obstetricians and Gynecologists (ACOG), and the American College of Nurse-Midwives work with the ACIP to develop the annual adult immunization schedule. The ACIP's recommendations are approved by the CDC Director and published by the CDC in its Morbidity and Mortality Weekly Report (MMWR).

In 2014, the ACIP voted to expand its recommendation for the use of pneumococcal vaccines to older adults. The ACIP now recommends the PCV-13 vaccine (followed by a dose of the 23-valent pneumococcal polysaccharide (PPSV-23) vaccine 6-12 months later), for all adults age 65 years or older who have never received a pneumococcal vaccine or whose vaccination history is unknown. This year, the ACIP recommended serogroup B meningococcal (MenB) vaccine series for certain persons aged ≥ 10 years who are at increased risk for meningococcal disease. In addition, ACIP indicated that a serogroup B meningococcal (MenB) vaccine series may be administered to adolescents and young adults 16 through 24 years of age to provide short term protection against most strains of serogroup B meningococcal disease. The preferred age for MenB vaccination is 16 through 18 years of age. ACIP recommendations are available at www.cdc.gov.

In addition to tracking the burden of vaccine-preventable diseases and vaccination rates for adults, the CDC also uses data collected annually from the National Health Interview Survey (NHIS) to assess

adult vaccination rates for specific vaccines. Using nationally representative samples, the NHIS gathers information through an annual in-home survey on the health and health care of individuals across the country. Respondents are also asked questions about receiving recommended vaccinations for adults. Vaccines tracked by the NHIS include the pneumococcal vaccine, Td and Tdap, hepatitis A, hepatitis B, herpes zoster, and human papillomavirus vaccines. Vaccination status of health care personnel is also captured through the survey. The 2013 NHIS data showed a slight increase in adult vaccination for HPV, herpes zoster, and Tdap among non-Hispanic white adults; however, there were no improvements in adult vaccination rates for other routinely recommended vaccines, and racial and ethnic disparities for Tdap and herpes zoster vaccination have widened since 2012. For health care personnel, Hispanics and non-Hispanic blacks had lower vaccination rates than whites for Tdap, and Hispanic health care personnel had lower vaccination rates than whites for hepatitis B.

While the CDC uses data collected from the NHIS to assess vaccination rates for specific vaccines and to identify gaps and disparities among adult vaccination, there are limitations to the NHIS process attributed to patient reporting, recall, exclusions, and a response rate of 61%.

In addition to assessing vaccination rates using the NHIS data, the CDC collaborates with provider and patient organizations, communications groups, and other vaccine stakeholders, to increase awareness of adult vaccines and improve immunization rates among adults. The CDC provides funding to Federally Qualified Health Centers and Rural Health Clinics to support immunizations for uninsured children and adults. One of CDC's signature collaborations is the National Adult and Influenza Immunization Summit (NAIIS), established in 2012, through which the Adult Immunization Practice Standards were developed. The summit is a year-round collaboration with five active working groups and over 300 participants representing over 100 organizations all working to increase the uptake of ACIP's recommended vaccines and reach HP2020 vaccine coverage goals for adults.

In 2012, the NAIIS put out a call for Adult Immunization Practice Standards for health care professionals to assess immunization status, recommend

vaccines, administer vaccines (or refer patients to a provider who can immunize), and document vaccines received by patients. Practice standards also stress that all providers have a role in ensuring that patients are up-to-date on vaccines. The CDC encourages the use of vaccine registries given their value in coordinating patient care and ensuring patients get the right vaccines at the right time.

National Adult Immunization Plan

Increasing adult immunization rates is a priority for the U.S. Department of Health and Human Services (HHS). The National Vaccine Program Office (NVPO), part of HHS, coordinates among the federal agencies involved in vaccine and immunization activities. The National Vaccine Advisory Committee (NVAC) recommends ways to prevent human infectious diseases through vaccine development and provides direction to prevent adverse reactions to vaccines. This advice is presented to the Assistant Secretary for Health, who serves as the Director of the National Vaccine Program Office on matters related to program responsibilities. In response to a call from the NVAC for a strategic plan to increase adult immunizations, the NVPO drafted a five-year, national, strategic framework for increasing adult immunizations in collaboration with diverse stakeholders. A draft copy of the *National Adult Immunization Plan* was released in early February by the NVPO for a public comment period.

The draft *National Adult Immunization Plan* differs from other strategic plans such as the National Vaccine Plan or U.S. Prevention Strategy, in that it is entirely focused on adult vaccines and includes metrics to track progress over time. The draft plan is national in scope and emphasizes diverse stakeholder collaboration in implementation, which includes a role for the HHS Adult Interagency Task Force (AITF), a small, focused team comprised of core federal agency partners who will coordinate and lead implementation of the plan. There are four goals:

1. Strengthen the adult immunization infrastructure;
2. Improve access to adult vaccines;

3. Increase community demand for adult immunizations; and
4. Foster innovation in adult vaccine development and vaccination-related technologies.

Each goal includes specific objectives, along with indicators to help monitor implementation progress and identify potential gaps. The draft plan also includes a strong emphasis on health information technology (HIT) as a potential accelerator for enabling information sharing and improving adult immunization rates.

The draft plan was a central point of discussion for the Roundtable participants who offered feedback and recommendations that were incorporated into AHIP's comment letter to the NVPO on the draft plan. Currently, the draft plan is being revised based on feedback received during the public comment period.

Adult Vaccine Ecosystem: Stakeholder Perspectives

The adult vaccine ecosystem is comprised of multiple stakeholder groups, including primary care providers, consumers, pharmacies and other alternate sites of care, and public and private payers including health plans. All stakeholders agreed on the importance of reducing vaccine-preventable diseases by increasing vaccination rates across the lifespan of a person and reducing ethnic and racial disparities. While there were varying points of view from the stakeholders, there was consensus on the need to work together to improve overall rates.

Primary Care Providers

Most adults rely on their personal physician to advise them regarding which vaccines and other preventive measures are needed to support their health. Primary care providers play a critical role in ensuring the safety and efficacy of adult vaccines through proper storage, handling, and administration. In addition, primary care providers counsel patients on vaccines, communicate the benefits and risks of vaccination to patients, and monitor and report side effects. The primary care providers participating in the Roundtable included internists, family practitioners, obstetricians, and gynecologists.

Key themes discussed from their perspective included:

- Workflow challenges and limited time with patients make it difficult for providers to always discuss vaccines with adult patients;
- To be successful in providing vaccines, primary care practices need tools and resources to help with purchasing, retention, storage, financial management, and adherence to complex regulatory requirements of vaccine storage and management;
- To effectively deliver adult vaccines in the primary care office setting, practices will need to leverage staff to ensure there is no disruption in physician workflow and that there is sufficient time to see patients; and
- Electronic health records (EHRs) can help primary care practices improve adult vaccination rates by making it easier to manage medication orders and generate reports or reminders when patients need vaccines.

Pharmacies as Alternate Sites of Care

Pharmacies, many of which have become mini-clinics, play an important role as an alternate site of care for adult vaccines. Pharmacies are among the most accessible locations for receiving adult immunizations; they offer extended hours and are in a unique position to help identify gaps in care and health disparities within specific populations. All stakeholders offered perspectives on the role of pharmacies in providing vaccines. For example:

- Pharmacies are very convenient in most communities, are easily accessible, and offer extended hours;
- People typically visit pharmacies for everyday needs and more frequently than they visit their physicians;
- Pharmacists have specialized knowledge and often have close relationships with their patients to help

them understand and manage their medications. This creates a good opportunity to review and discuss recommended immunizations;

- Pharmacists are experienced in collaborating with physician practices and consider themselves as complementary to physicians;
- Pharmacies are committed to ensuring that information about vaccinations is shared with the consumer's personal physician and they may do so through automated faxes or secure electronic messages to providers' EHRs;
- Pharmacies want to be part of the solution to get needed vaccines to the right population; and
- Flu shots are the most popular vaccine administered in community pharmacies, which present an opportunity to assess vaccination status for other recommended vaccines.

Consumers

Consumers are often unaware of the vaccines that are recommended for them and may have misperceptions about the efficacy and safety of some vaccines. Key themes discussed from the consumer perspective included:

- Consumers need and want convenient and accessible sites and hours to receive vaccines;
- Financial barriers, if any, for consumers to access the vaccines they need should be minimized;
- Providers delivering vaccines to consumers should be “adequately” compensated or they may not be willing to offer vaccines;
- If primary care providers do not deliver vaccines or refer consumers elsewhere, consumers may lose their motivation and not follow through; and
- Disparities in vaccine rates persist and it is important to understand what factors influence different racial and ethnic populations.

Health Plans

Health insurance plans and the clients they represent have long valued immunizations for their ability to prevent disease and reduce unnecessary health care costs. Health plans partner with physician practices, state and local public health agencies, pharmacies, and other alternate sites of care to increase awareness and availability of vaccines, and to address system barriers that impact access. Key activities discussed included:

- Working with physician practices to ensure that prevention and wellness and age-appropriate vaccines are given equal attention—similar to chronic and acute care needs—including offering vaccines during an office visit;
- Continued emphasis on promoting and tracking preventive services including vaccines for adults, consistent with ACIP recommendations, to increase adult immunization rates;
- Continued implementation of value-based incentive payment arrangements that reward preventive care, including adult vaccines, to improve performance;
- Assessing adult vaccination status during the transitions of care process for adults is an opportunity to address gaps and disparities within adult immunization;
- Positive messaging about vaccine safety, effectiveness, and public health benefits is important in encouraging adults, including diverse populations, to get appropriate vaccines;
- Raising awareness among adult members about the vaccines they should receive and the available options to access them; and
- Providing support if needed to help ensure that providers have adequate resources to administer vaccines for adults.

Challenges: Perception and Reality

Patient Access

PERCEPTION: The Affordable Care Act (ACA) would improve adult immunization rates by eliminating all cost and access barriers to vaccines for consumers.

REALITY: While the ACA requires coverage of certain preventive services, including routinely recommended vaccines at no cost share, vaccination rates for adults remain low. In addition, the preventive services coverage policies of the ACA do not apply to the entire population, such as those covered by transitional or grandfathered health plans, Medicare, and some state Medicaid plans.

Non-uniform coverage requirements for ACIP routinely recommended vaccines create variability regarding consumer copay and out-of-pocket costs. While the ACA mandates coverage of ACIP routinely recommended vaccines, the law provides employers, states, and individuals the option of continuing coverage that would have otherwise been cancelled in 2014 through “grandfathered” and “transitional” health plans, which are exempt from many of the ACA coverage requirements.

Grandfathered plans are plans that were in existence on March 23, 2010 and that have not made significant changes to their coverage policies. Grandfathered plans are not required to adhere to many of the ACA preventive services coverage requirements. Employers can decide to offer coverage to employees through job-based grandfathered plans and individuals can choose to self-insure under an individual grandfathered plan.⁵ While the percentage of employers offering at least one grandfathered health plan has decreased considerably (from 72% in 2011 to 54% in 2013), a recent study of employer health benefits found that 37% of employers in 2014 offered at least one grandfathered health plan to its employees and at least 26% of covered workers had enrolled in a grandfathered plan that year.⁶

In addition, states had the option of continuing individual and small group health plans that also would have been cancelled in 2014. As with grandfathered plans, transitional plans are not subject to the same preventive service policies of the ACA. As of May 2014, at least 20 states had authorized such coverage extensions for their transitional health plans through 2017 (Appendix B).

Moreover, state Medicaid programs can vary in their coverage of adult immunizations depending upon the beneficiaries’ source for eligibility. Medicaid programs are run jointly by federal and state governments. Coverage of immunizations for adults under traditional Medicaid is generally an optional benefit, although many states have chosen to provide such coverage. States that adopt the new ACA option to cover low-income adults without disabilities are required to include immunizations for those beneficiaries.

Finally, the ACA's mandate for coverage of routinely recommended vaccines does not apply to vaccines provided under Medicare. Medicare, the federal health insurance program for people 65 years and older and individuals with disabilities, has its own coverage rules for vaccines. By statute, Medicare Part B covers vaccines for influenza, pneumococcal disease, and hepatitis B for persons at increased risk. These vaccines are covered at no cost, as long as the provider administering the vaccine accepts Medicare assignment.⁷

Prior to 2006, when Medicare Part D took effect, Medicare's coverage of preventive vaccines only extended to the three vaccines noted above. Medicare did not cover any other preventive immunizations. The passage of Medicare Part D ensures Part D beneficiaries now have coverage for vaccines not previously covered under Medicare Parts A or B, as long as the vaccines are reasonable and necessary to prevent illness. For example, this includes coverage for the hepatitis B vaccine for a beneficiary who does not meet the Part B coverage criteria as a person at increased risk, the herpes zoster vaccine, and the MMR vaccine to prevent measles, mumps, and rubella. CMS further mandates that Part D plans include all commercially available vaccines on their formularies. Part D vaccines may be dispensed and

administered in different settings (e.g., by pharmacists in pharmacies, by physicians in physician offices) depending on factors such as state laws regarding the administration of vaccines and product administration complexity.

Part D plan sponsors are required to provide coverage for the vaccines regardless of setting, although Part D vaccines dispensed and administered in physician offices are considered out-of-network (OON) claims. However, CMS has provided guidance to Part D sponsors on different options for ensuring access to Part D vaccines, and Part D plans have worked to implement options to meet enrollee vaccination needs.

As in the case of Part D covered drugs and biologics, Part D plans may require cost-sharing for vaccine coverage. We note that cost-sharing for vaccines can vary among Part D plans. For example, some sponsors offer vaccine coverage at little or no cost to enrollees. The federal government does not set pricing for drugs under the Part D program, since Part D was designed to foster competition between plans in an effort to make available a range of options to beneficiaries for quality drug coverage at affordable costs. Instead, plans must submit competitive bids each year to determine the overall cost of the benefit, although benefit structures must meet minimum defined requirements. This approach has allowed sponsors to offer more affordable coverage for beneficiaries in the form of reduced premiums, deductibles, and cost-sharing, and provide increased value for the Part D program overall.

In order to reduce confusion, it is important to clarify and communicate with stakeholders about how vaccines are covered under various insurance programs such as ACA, grandfathered and transitional plans, Medicare, and Medicaid.

PERCEPTION: Adults must get their vaccination from their primary care physician.

REALITY: Alternate sites of care enhance convenient access to adult vaccines and are complementary to primary care.

Alternate sites of care such as pharmacies, public health agencies, retail clinics, health fairs, and employer-based clinics are well-positioned to increase immunization rates

for adults. Physicians typically administer vaccinations during traditional office hours, which can be difficult for many working adults. Alternative sites of care, like pharmacies and retail clinics, tend to be conveniently located within a community and offer extended hours. About 30% of vaccines provided in pharmacies are given after hours during weekday evenings, weekends, and federal holidays.⁹ Community health centers, which provide primary health care services to medically underserved communities, also offer vaccinations. When vaccines are provided in alternate sites of care, it is important that the information be shared with the person's primary care physician.

Public health agencies also play an important role in providing vaccinations, particularly for underserved populations. Reductions to Federal 317 funding may hinder public health entities from providing this service unless they ramp up their third-party billing efforts to allow entities to bill for the vaccines provided to privately insured adults. Since 2010, AHIP has collaborated with the CDC to provide training and technical assistance to state public health agencies on the core requirements for billing private health plans for immunization services provided to insured patients who receive vaccines at public health clinics.

Adequacy of Payment

PERCEPTION: Inadequate payment for the administration of vaccines prevents physician practices, alternate sites of care, and public health agencies from delivering adult vaccines.

REALITY: Provider challenges to obtaining and administering adult immunization are multifaceted. Management and administrative complexity, costs, and workflow challenges are cited by providers as barriers to providing vaccines for adults.

The number and cost of vaccines routinely recommended have increased in the last decade, as have the costs associated with vaccine administration. In some cases, vaccines recommended by the CDC's ACIP may be manufactured in the form of only one product, by one manufacturer (e.g., Prevnar13®), which

can prevent competitive pricing that may lower the costs of adult vaccines. Newer vaccines added to the adult immunization schedule within the last 10 years are substantially higher in cost and necessitate a higher provider outlay.

Moreover, challenges with the purchase, storage, inventory costs, reporting requirements, administration, and management of adult vaccines are compounded for small and rural physician practices and those with a larger number of Medicaid patients.

For example, there is substantial price variation among physician practices with respect to vaccine purchasing. Such variations in price may be related to the size of the practice and the vaccine order, which can be especially challenging for small physician practices. A recent study by the American Medical Association found that 60.7% of physicians work in practices with 10 or fewer doctors.⁹

New technologies and program support are increasingly available to help address provider challenges with vaccine management, including vaccine ordering, storage and handling, vaccine rotation, and reporting. Sophisticated refrigeration systems can send alerts via text and email on product expiration, stock depletion, and temperature deviation.

Workflow challenges can also be problematic. Unlike with children's vaccines where pediatricians emphasize prevention and wellness and routinely address the immunization schedule required for school, adults receive care from multiple physicians including general internists, family practitioners, obstetricians, and gynecologists, as well as specialists. In caring for adults, physicians may be more likely to address a particular condition rather than focus on vaccines. Given their limited time with each patient, it may be difficult for physicians to know the patient's immunization history or have time to discuss or make recommendations about what vaccines they may need. The practice workflow could be redesigned such that appropriate staff can be

responsible for assessing a patient's vaccination status, providing counseling, and managing timely reporting to immunization registries.

Tools and **resources** are available from professional societies to help practices manage vaccines efficiently. The American College of Physicians (ACP) recently partnered with the CDC to improve physician performance across specific adult vaccine measures. The ACP provides tools that can be downloaded on physicians' smart phones and has also developed an online immunization **portal** and adult immunization guide to assist physicians with incorporating vaccines into their practices.¹⁰

In addition, the ACP is currently collaborating with partners to develop a guided survey to help physicians identify which vaccines they can purchase, and to develop tools on data sharing. The American Academy of Family Physicians (AAFP) has published **resources** to help providers incorporate efficient business practices for vaccine management.

Health insurance plans also use a variety of strategies and tools to help address physician barriers and maximize opportunities to vaccinate patients including:

- Assisting providers with claims submission processes to ensure timely and efficient payment;
- Enhancing provider and member access to determine and track member immunization status;
- Conducting mailings and telephone calls to members to serve as reminders for necessary vaccines; and
- Presenting providers with feedback on coverage rates and gaps in necessary vaccines.

Vaccine Reporting and Sharing

PERCEPTION: Greater use of electronic health records (EHRs) and immunization information systems (IIS) will drive increases in adult immunization rates.

REALITY: While health information technology is not a panacea, it can be a helpful tool for managing and sharing vaccine information among stakeholders. For example, EHRs can facilitate reminders to physicians about their patients' immunization needs and make it easier to document, report, and share vaccine information. EHRs used by physician practices and information technology tools used by payers can enable communication to consumers about gaps in care including vaccines. In addition, some consumers may use personal health records to keep track of their vaccines and other key health information. Challenges remain with the ability to electronically exchange information among disparate EHRs, varying state laws, and lack of standard protocols and data elements used by state immunization registries.

IIS are centralized databases of vaccination information operated by state and local public health agencies and are used to track immunizations. These systems have the ability to record patient immunizations and allow providers to look up a patient's immunization history at the point of care. At the population level, IIS can be used to identify health disparities and other gaps in care among specific populations. These databases can also provide reminders to families and consolidate patient vaccine records to improve timeliness and completion of recommended immunizations. IIS reminder and recall capabilities can be used to notify patients directly that they are due for an immunization now or on a future date so they can plan accordingly. Coordination among all the entities involved in an IIS reminder and recall process is important to use resources efficiently and reduce confusion among consumers.¹¹ Through IIS, information can also be made available to other physicians or institutions such as schools that may see the patient. If the use of IIS becomes standard practice throughout a community, it can offer physician practices and institutions historical data for immunization queries to help keep adult vaccinations up-to-date.

The use of immunization registries to increase adult immunizations must involve finding solutions to common IIS challenges such as:

- Improving the quality of vaccination records related to the completeness and accuracy of the data;
- Addressing variability among state laws with respect to data elements and data sharing; and
- Helping providers improve their technical capabilities and manage the costs of establishing a public health information system.¹²

Population-based, public health information systems like IIS can provide important additional information including trends in disease outbreaks or adverse reactions to vaccines and medications. The importance of such a system was showcased during the H1N1 influenza pandemic in 2009. HHS developed a pilot program, the Post-Licensure Rapid Immunization Safety Monitoring (PRISM) program, to quickly identify adverse events to the H1N1 influenza vaccine. Linking national health plan data with data from state and local IIS, the program generated vaccine safety data on three million people within the first two weeks of patients receiving the vaccine.¹³ Of the first 3 million people monitored in the PRISM program, more than 60% were identified through the immunization registry data alone.¹⁴

All 50 states, plus the District of Columbia and all U.S. territories, have at least one regional or local immunization registry. Therefore, standardization of data elements, interoperability with other population-based health systems, and provider participation are essential to their success.

Lessons learned from the use of IIS in the PRISM pilot during the 2009 H1N1 influenza pandemic along with progress being made to standardize most clinical registries can be leveraged to help address challenges related to IIS. The use of clinical registries as a decision support tool for health care professionals can help increase adult vaccination rates and address health disparities among different populations and geographic locations.

Potential Accelerators and Recommended Action Steps to Improve Adult Vaccine Rates

Facilitating Integrated, Team-Based Vaccine Care

Achieving integrated, team-based vaccine care requires collaboration across the ecosystem and in some cases may necessitate change management. For example, roles and responsibilities may need to be clarified so that someone on the team is responsible for checking the patient's vaccination record either through the EHR, immunization registry, or in consultation with the patient; someone is responsible for counseling the patient regarding recommended vaccines and their benefits; someone administers the vaccine or informs the patient where the vaccine is available; and someone closes the loop in terms of documenting patient records

and reporting to the immunization registry. Integrated, team-based vaccine care is characterized by:

- Multiple care sites and clinicians provide immunizations in locations and at times that are convenient for consumers;
- Shared responsibility among the entire team to ensure that patients are up-to-date on vaccines;
- Leveraging transitions of care to identify and address gaps in care including increasing vaccination rates;
- Tools and resources are available to assist with managing and administering vaccines efficiently; and
- Appropriate immunization information flows to state registries and from alternate care settings back to primary care providers.

Recommended Actions

- Increase efforts to expand access for all recommended immunizations to pharmacists, convenience care clinics, etc. Develop a template for states to use to encourage consistent and efficient approaches to improve access and patient education.
- Incorporate adult immunization screening and awareness into health plan enrollment processes (e.g., during health risk assessments, health fairs, biometric testing, etc.) as well as health plan wellness, case management, and disease management programs.
- Enhance workplace immunization opportunities beyond influenza vaccines. Consider annual work-site administration opportunities for employees, spouses, and dependents for all recommended vaccines.
- Encourage community partnerships with entities that serve diverse populations (e.g., churches, barber shops, salons, etc.) to raise awareness about the importance of vaccinations and how and where they can be accessed.
- Encourage telemedicine vendors to incorporate recommendations for adult and child vaccine issues into each patient interaction. Promote mobile solutions such as pop-up immunization centers.

Leveraging Health IT

Health IT can be leveraged in multiple ways to accelerate and improve adult vaccine rates. For example, electronic systems in physician practices, pharmacies, and other settings may be designed with clinical decision support systems that can trigger reminders or generate reports. These systems help create opportunities to encourage individual patients to get vaccinated or increase awareness of needed vaccines for targeted populations. Electronic records may make it easier to upload some medical orders (e.g., pneumovax, flu, and Tdap), which may help to improve immunization rates. Secure electronic messaging can be used to send reminders to patients about the vaccines they need and could include information on benefits and where the vaccines are available.

Technology solutions such as tools offered by Surescripts and other vendors enable vaccine information to flow among pharmacies, retail clinics, and physician practices,

and between EMRs and immunization registries in a manner that performs the behind the scenes mapping needed to accommodate many different formats required by the state immunization registries.

The emergence of mobile technologies can also help to overcome the fragmentation and challenges with immunization registries. Mobile, phone-based immunization registries allow individuals to accurately and rapidly communicate immunization history across jurisdictions. Patients can also record and retrieve information on vaccination encounters, receive updates on outbreaks of vaccine-preventable diseases in their area, and record adverse events through the use of innovative and emerging mobile technologies.¹⁵ Physicians and others who administer vaccines across all settings need to be able to both access state immunization registries and report information to them in a timely manner. This could help to fill in information gaps and make it easier and more efficient to ascertain an individual's vaccine status and inform care delivery.

Recommended Actions

- Facilitate health plan access to IIS databases to validate gaps in immunization care. Since patients often change health plans or may receive vaccines at alternate care sites, it is difficult to assess immunization status via claims alone. Lack of connectivity to immunization databases can lead to false gaps causing added administrative burdens, including patient and physician dissatisfaction, especially when such gaps must be evaluated for quality concerns.
- Consider contractually requiring nonphysician providers of vaccinations such as pharmacists to submit data to state and local immunization registries and monitor compliance.
- Ensure that vaccine administrative data is sent to IIS. Adult immunization registries are not widely known or accessed by adult-oriented physicians. Therefore, use of IIS must be universal for all vaccine providers and should include accessing records prior to vaccination and reporting to IIS after vaccination.
- Leverage electronic prescribing systems to increase adult immunization rates. Have pharmacists document immunizations administered to prescribing physicians.

Raising Awareness with Health Care Professionals and Consumers

One of the four goals of the draft *National Adult Immunization Plan* is to increase community demand for adult immunizations. This entails raising awareness with physician practices and consumers and addressing disparities among adult immunizations. During the Roundtable, this topic was discussed extensively as an important gap to be addressed to improve adult immunization rates.

As previously noted, health disparities among adult immunizations have widened over the years. According to the CDC's Health Disparities and Inequalities Report, life expectancy and other key health outcomes vary greatly by race, sex, socioeconomic status, and geographic location.¹⁶ The group discussed challenges around health disparities and vaccine rates and agreed that the first step is having a mechanism in place for identifying and monitoring disparities and gaps in care. Use of a "trusted advisor" to deliver culturally and linguistically appropriate messages about vaccines would help to engage diverse groups; in some cases, the trusted advisor may not be the physician. Use of best practices from existing programs is also key to addressing health disparities. One such example is the CDC's Million Hearts campaign that seeks to enhance cardiovascular disease prevention activities across the public and private sectors and prevent 1 million heart attacks and strokes by 2017. This initiative has protocols for partnering with faith-based organizations and churches, as well as algorithms for providers to address health disparities. The CDC currently supports the **National Influenza Vaccination Disparities Partnership (NIVDP)**, which seeks to develop partnerships to promote collaboration across the public and private sectors to help reduce the impact of influenza among racially diverse groups.¹⁷

The CDC's **Immunization Billables Project** has awarded over \$30 million to more than 38 state

and local public health agencies to help develop an infrastructure to bill health insurance plans for vaccine services provided to insured patients. AHIP and its member plans have partnered with the CDC to provide technical assistance to public health agencies for fundamental contractual requirements, billing mechanisms, and best practices for contracting with health insurance plans for vaccine services, as well as providing resources on eligibility and coverage. CDC makes tools available to the public and provides access to an **online collaboration tool** that allows states to access billing resources and share success stories and lessons learned with other public health entities across the country.¹⁸

It is important to use all possible channels to make information available to providers about recommended adult vaccines, the importance of reporting to state registries, understanding how to use EHR and clinical decision support tools, ways to streamline workflow and make appropriate recommendations to patients, and the availability of tools that can support vaccine administration and management. Similarly, it is important to use all available channels to make information available to consumers about what vaccines they need, the benefits, and where they are conveniently offered.

Consumer outreach efforts should take into account the unique needs of certain populations such as pregnant women who may be particularly susceptible to illness yet new vaccines have not been tested in that population. It is also important to make targeted efforts to effectively reach racially and ethnically diverse populations so we can make progress in reducing disparities. Until recently, vaccines recommended for pregnant women were not labeled as such but were marked by pregnancy letter categories (A,B,C,D, and X) which were viewed as confusing and ineffective in communicating the risk and benefits of the vaccine during pregnancy and lactation. In December 2014, the FDA issued a new Pregnancy and Lactation Labeling Rule which requires changes to the content and format of information presented in prescription drug labeling. Effective June 30, 2015, new labels must include a pregnancy subsection; a

lactation subsection; and a section for females and males of reproductive potential. Labeling for prescription drugs approved on or after June 2001 will be phased in gradually. The new rule is intended to assist health care providers in assessing benefit versus risk and in subsequent counseling of pregnant women and nursing mothers who need to take medication. Labels must be updated as information becomes outdated.¹⁹

Roundtable participants discussed how attitudes, habits, and social influence impact whether people get the vaccines they need and how these influences should be considered in efforts to raise awareness and promote the need for vaccines. During the discussion of the importance of social influence, some participants thought social media could potentially be a worthwhile tactic to encourage people to get recommended vaccines.

The participants discussed media coverage of the recent measles outbreak and agreed that it was, at best,

a missed opportunity to raise awareness about vaccine safety and public health benefits and perhaps, at worst, it caused public fear and uncertainty. Measles was officially declared eliminated from the United States in 2000; however, four outbreaks occurred between 2014 and 2015 that led to more than 150 cases of measles reported between January 4, 2015 and April 2, 2015.

According to CDC surveillance data, more than 54% of the reported cases occurred in adults aged 20 years and older and over 80% of those cases occurred among persons who were unvaccinated or had an unknown vaccination status.²⁰ Every effort should be made to educate the public on this topic and to leverage credible, visible spokespeople such as the U.S. Surgeon General or other leaders and trusted organizations, such as the CDC, to encourage vaccination. This should include building targeted awareness and education programs to work toward reducing disparities.

Recommended Actions

- Publish patient and provider immunization resources and tools to clarify coverage of ACIP “A” and “B” recommended immunizations for children and adults, direct individuals to where vaccines may be obtained—including alternative locations—and explain exceptions to ACA first-dollar coverage rules (These tools are currently available at www.dol.gov).
- Test innovative communication methods such as social media messaging and web-based platforms to encourage people to get needed vaccines (e.g., online, text, Twitter, etc.). Consider stronger messaging regarding potential outcomes for those who are not immunized.

Measuring and Tracking Progress

Tracking progress on a regular basis was a major area of discussion among participants during the Roundtable. Consideration must be given to what metrics will be used and if the same metrics will be used by both federal agencies and the private sector. There was consensus among the participants that system-wide goals and metrics would be more valuable than tracking at the individual level. It was suggested that metrics related to reducing disparities should be incorporated into the plan. Some participants thought it would be helpful to consider measuring simultaneous vaccines—multiple vaccines provided to an individual during a single visit. There was discussion supporting the idea that if physician practices shared vaccination rates among providers in comparison with peers and best practices, it might result in improvements.

Many health plans use the National Healthcare Effectiveness Data and Information Set (HEDIS) of the National Committee for Quality Assurance (NCQA) to measure clinical performance and patient experience and track health plan performance. Currently, HEDIS has three adult immunization measures, which are measured through its Consumer Assessment of Healthcare Providers and Systems survey (CAHPS). HEDIS immunization measures for 2015 include:

- Flu vaccinations for adults ages 18 to 64 (HEDIS 2015);
- Annual flu vaccine measure (CMS measure C04); and
- Pneumonia vaccine measure (CMS measure DMC09).

Obtaining reliable estimates of flu vaccination rates using administrative data can be challenging. Adults often receive their immunizations in settings other than physician offices, which may not get captured in health plan administrative data or be reported to the primary care physician. Survey-based approaches such as CAHPS for assessing rates for flu immunization may yield additional information, but are subject to self-report bias. Where adult immunization measures do not exist, we recommend working with measure developers to

construct evidence-based measures and develop data capture methods from reliable data sources, including from employer sites, pharmacies, and retail clinics.

Recommended Action

- Document and distribute best practices for increasing immunization rates and metrics in aggregate for the percent of members who are up-to-date on vaccinations. Additional work will be needed to reach agreement on an approach to measuring and reporting on progress.

Conclusion

Challenges to improving adult immunization rates are multifaceted; however there is widespread agreement on the importance of overcoming those challenges. Taking advantage of tools and resources that are already available can improve adult vaccination rates. Facilitating an integrated, team-based approach where immunizations can be provided at multiple sites by multiple providers in conveniently accessible locations, can improve the availability of adult immunizations. Leveraging health information technology to improve documentation, and reporting and sharing immunization information among health care providers, pharmacies, retail clinics, and public health agencies, will enhance efficiencies and access to more complete immunization information. This in turn will enable more effective tracking and assessment of adult vaccinations to help identify gaps and address health disparities. Multiple communication channels, including social media, should be used for targeted awareness building campaigns to educate providers, consumers, and the media about the safety and efficacy of adult vaccines.

Appendix A

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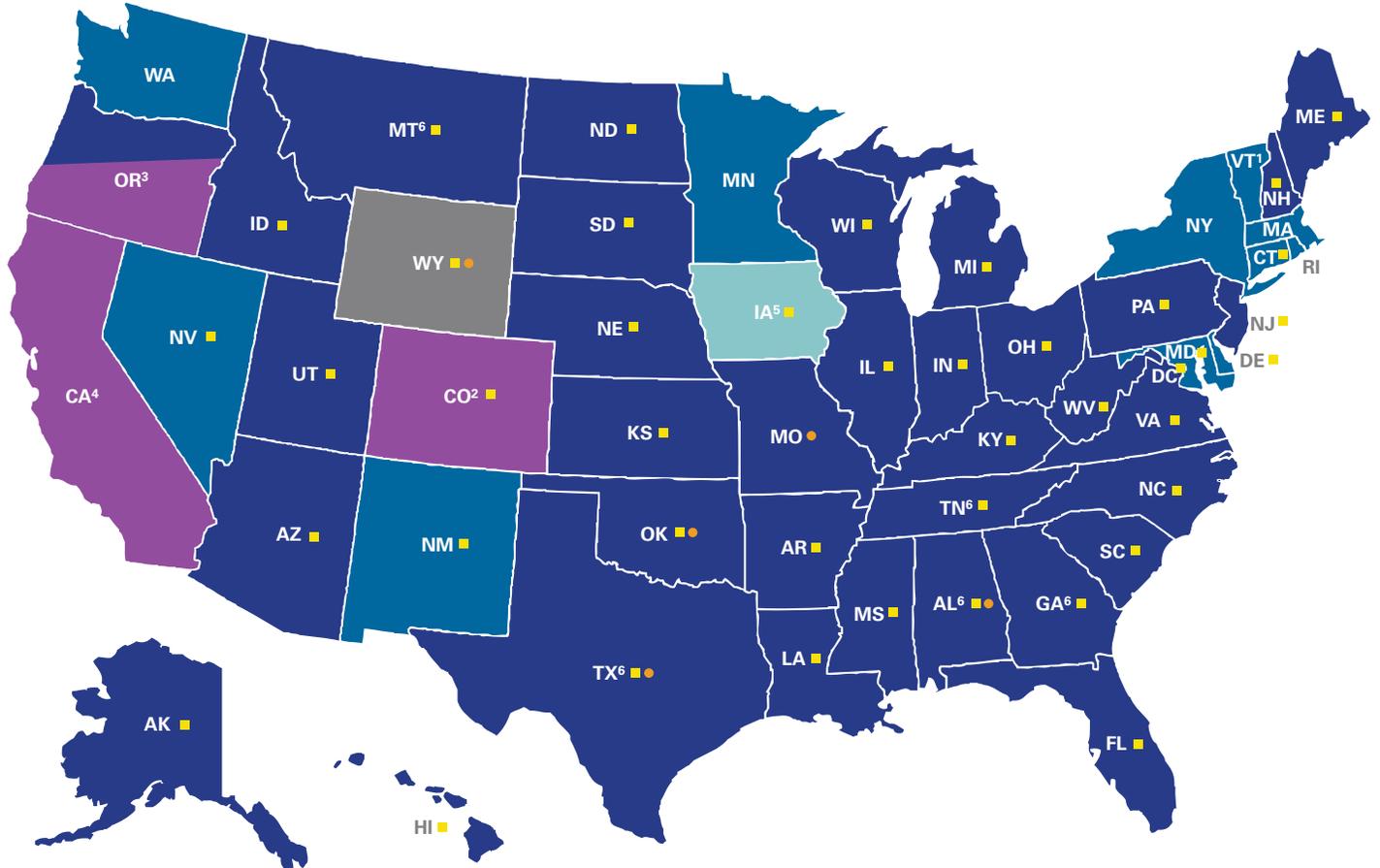
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Appendix B

State Responses to Administration Policy on Individual and Small-Group Coverage Extensions



- Granting individual and small group three-year extensions (35)
- Granting individual and small group two-year extensions (1)
- Granting individual and small group one-year extensions (3)
- Not granting individual and small group extensions (11 + DC)
- Undecided / Unclear (1)
- Early renewal state — prior to the Administration's policy on coverage extensions, plans were permitted to offer extensions into 2014
- Direct enforcement state — CMS, rather than the state, is enforcing the ACA's market reforms

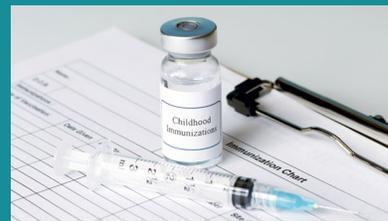
1. Vermont previously authorized a coverage extension for individual and small group plans through March 31, 2014.
2. Colorado allowed plans to be extended through December 31, 2015.
3. Oregon allowed **individual plans** to be extended through December 31, 2015. Oregon is allowing for three year extensions of **small group** plans.
4. California allowed **only small group plans** to be extended through December 31, 2015. Individual plans must come into compliance with the ACA's 2014 market reforms under state law.
5. The guidance issued in Iowa appears to allow for two year extensions of plans that do not comply with the ACA's 2014 market reforms, in accordance with the CMS March 5, 2014 guidance on extended transitional policies.
6. Alabama, Georgia, Montana, Tennessee and Texas did not issue notices on the three year extensions but gave flexibility to carriers to extend policies as allowed under the ACA.

End Notes

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