



A CALL TO ACTION:

Expand & Ensure Access to All Vaccines For Long- Term Care Residents

A White Paper

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INTRODUCTION

The COVID-19 pandemic underscored the critical importance of vaccinating¹ older adults and people with disabilities—particularly those who reside in long-term care² settings. Long-term care settings are—by nature—congregate care environments, which are more prone to infectious disease outbreaks.³ They are also home to individuals with declining immune systems and higher rates of chronic diseases and comorbidities that make them especially high-risk for complications from infectious diseases. It’s not that surprising then, that residents and staff of long-term care facilities have been disproportionately impacted by COVID-19 infection, morbidity, and mortality. Fortunately, with the approval of COVID-19 vaccines in December 2020, those who live and work in long-term care now have a first line of defense against coronavirus infection and mortality.

However, COVID-19 is not the only infectious disease that endangers the health and well-being of long-term care communities; with numerous existing and emerging pathogens posing threats to residents and employees of these congregate care settings. This makes policies and programs critical to ensure that these individuals have unencumbered access to all current and future vaccines recommended by the Centers for Disease Control and Prevention’s (CDC) Advisory Committee on Immunization Practices (ACIP). It is essential that we leverage the lessons learned to benefit public health generally, and particularly those most at-risk for infectious disease.

To that end, on January 27, 2023, the Alliance for Aging Research and the American Society of Consultant Pharmacists (ASCP) convened an invitation-only roundtable symposium with individuals representing national health professional societies, public health associations, long-term care providers, patient advocacy organizations, industry, and the federal government. The goal of the convening was to reflect on the federal response to the COVID-19 vaccination and identify

- 1 This paper uses the following CDC definitions: [Vaccination: The act of introducing a vaccine into the body to produce protection from a specific disease.](#) [Immunization: A process by which a person becomes protected against a disease through vaccination.](#)
- 2 For the purposes of this paper, long-term care settings include skilled nursing facilities and other congregate care settings (memory care, assisted living, etc.). Long-term care residents are defined as adults and people with disabilities that reside in these settings.
- 3 It is important to note that there are important distinctions between different long-term care and residential settings. For example, skilled nursing facilities have the “qualified personnel” and authorization to administer vaccines, while senior living (e.g., assisted living) communities do not have such authorization. As such, assisted living settings therefore typically also lack the personnel who are qualified to administer vaccines, requiring them to either bring in authorized individuals from the outside or transporting residents to get vaccinated.



lessons learned and best practices—what worked well, what didn't work, and what might work better in the future—making recommendations that can be acted upon by the federal government and other roundtable participants to help ensure that residents in long-term care settings are up-to-date on all CDC ACIP recommended vaccines.⁴

The roundtable symposium, titled, “Our Best Shot: A Roundtable on Expanding Vaccine Access For Long-Term Care Residents,” was intentionally held in advance of the imminent expiration of the federally-declared public health emergency (PHE) on May 11, 2023, to allow for identification of the PHE waivers and flexibilities that warrant extension or permanence. For example, public-private partnerships and other regulatory flexibilities allowed pharmacists in the U.S. to play an integral role in vaccinating the nation's long-term care population. Because of these temporary authorities, pharmacists became the most frequent administrators of vaccines in long-term care facilities when COVID-19 vaccines became available.⁵ Between December 2020 and April 2021, pharmacists and their teams administered approximately 8.1 million COVID-19 vaccine doses within long-term care facilities—a herculean effort that yielded lifesaving public health dividends.⁶

4 Centers for Disease Control and Prevention (CDC). Adult Immunization Schedule by Age-Adults 65 and Older. <https://www.cdc.gov/vaccines/schedules/hcp/index.html>. See also Appendix A.

5 Grabenstein, John D. “Essential services: Quantifying the contributions of America's pharmacists in COVID-19 clinical interventions.” *Journal of the American Pharmacists Association: JAPhA* vol. 62,6 (2022): 1929-1945.e1. doi:10.1016/j.japh.2022.08.010

6 Ibid.

The roundtable format offered significant opportunity to share lessons learned and identify policies and programs that are needed to sustain and expand access to all vaccines for residents of long-term care facilities. The program (see Appendix B for agenda) included three panel discussions and an open “town-hall” dialogue during which each attendee was asked to make recommendations for actions to be taken by the federal government, the provider community, and patient advocates. The remainder of this paper provides a summary of those conversations, without attribution, per the Chatham House Rules under which the convening was held. Please note that the following recommendations are a summary from event discussions and do not imply endorsement from any of the event attendees other than the Alliance and ASCP.

THE PROBLEM

It is estimated that there are nearly 1.6 million residents living in skilled nursing facilities; in addition millions of others live in other congregate care settings across senior living, including assisted living, independent living, and memory care.⁷ Outbreaks of endemic infections and other infectious diseases in long-term care settings can have devastating consequences.⁸ Because residents in long-term care facilities are more vulnerable to infection, vaccination is the best defense against morbidity, mortality, hospitalization, and transmission. According to the CDC, “substantial improvement in adult vaccination uptake is needed to reduce the burden of vaccine-preventable diseases.”⁹ While the long-term care population continues to outperform the general population in COVID-19 vaccination uptake, there are still significant coverage gaps for other ACIP-recommended vaccines among residents and staff. For example, people aged 65 years and older account for more than half of seasonal influenza-related deaths (70% to 85%) and hospitalizations (50% to 70%).¹⁰ Despite the unique risks

7 Centers for Disease Control and Prevention (CDC). Vital and Health Statistics. Post-Acute and Long-Term Care Providers and Services Users in the United States, 2017-2018. National Center for Health Statistics. May 2022. https://www.cdc.gov/nchs/data/series/sr_03/sr03-047.pdf

8 Green, Jay and Sacchetti, M. “Relatives watch as covid-19 tears through Seattle-area senior homes. It’s a very helpless feeling.” Washington Post. March 2020. <https://www.washingtonpost.com/nation/2020/03/12/coronavirus-seattle-nursing-homes/>

9 Centers for Disease Control and Prevention (CDC). Vaccination Coverage among Adults in the United States, National Health Interview Survey, 2019-2020. <https://www.cdc.gov/vaccines/imz-managers/coverage/adultvaxview/pubs-resources/vaccination-coverage-adults-2019-2020.html#:~:text=Substantial%20improvement%20in%20adult%20vaccination,high%2Dpriority%20public%20health%20issue.>

10 Centers for Disease Control and Prevention (CDC). Vaccination Coverage among Adults in the United States, National Health Interview Survey, 2019-2020. <https://www.cdc.gov/vaccines/imz-managers/coverage/adultvaxview/pubs-resources/vaccination-coverage-adults-2019-2020.html#:~:text=Substantial%20improvement%20in%20adult%20vaccination,high%2Dpriority%20public%20health%20issue.>

that flu poses to older adults—especially individuals in long-term care settings—
influenza vaccine coverage remains below U.S. public health goals and has
declined over the past several years.¹¹

Racial and ethnic disparities in immunization rates persist among older adults.
In particular, Black and Hispanic seniors receive ACIP-recommended vaccines
at lower rates than White seniors.¹² At the time of this report, 27.4% of Hispanic
adults and 34.6% of Black adults ages 65 and older had been vaccinated for
the 2022-2023 flu season compared to 50.1% of their White counterparts.¹³ In

- 11 Healthy People 2030. <https://health.gov/healthypeople/objectives-and-data/browse-objectives/vaccination/increase-proportion-people-who-get-flu-vaccine-every-year-iid-09/data>; CDC. Weekly Flu Vaccination Dashboard. <https://www.cdc.gov/flu/fluview/dashboard/vaccination-dashboard.html>
- 12 U.S. Department of Health and Human Services (HHS). National Adult Immunization Plan. <https://www.hhs.gov/sites/default/files/nvpo/national-adult-immunization-plan/naip.pdf>
- 13 DC. Weekly Flu Vaccination Dashboard. February 2023. <https://www.cdc.gov/flu/fluview/dashboard/vaccination-dashboard.html#:~:text=An%20estimated%201.1%20million%20more,M%20compared%20with%2040.02M>

MEDICARE COVERAGE AND PAYMENT FOR VACCINES

Medicare Part A	Medicare Part B	Medicare Part D
<p>If a patient in a long-term care setting, such as a skilled nursing facility, needs a vaccination (other than COVID-19, influenza, pneumococcal, or hepatitis B), the cost of the vaccine and administration comes out of the per diem that Medicare pays to the facility under the prospective payment system; this could serve as a disincentive to provide vaccination to residents since additional resources are not provided to cover the costs of vaccination.</p>	<p>Part B specifically covers COVID-19, influenza, and pneumococcal vaccines. Part B covers other vaccines under certain circumstances. For example, hepatitis B vaccines are covered if a beneficiary is at high-risk for hepatitis B infection or during pregnancy. Other vaccines are covered under Part B only if they are directly related to treatment of an injury or exposure (e.g., rabies, tetanus). Flu and pneumococcal vaccines are not subject to Medicare deductible or cost-sharing requirements, while other vaccines do involve out-of-pocket expenses for beneficiaries.</p>	<p>If a patient is in a long-term care setting beyond their 90-day stay covered by Part A, Part D starts covering vaccinations. Part D also provides vaccine coverage to seniors living in the community. There are no copayments or cost-sharing associated with the vaccines covered under Part D.</p>

addition, numerous published studies from the CDC and others demonstrate that a higher proportion of “near senior” adults aged 50–64 who were hospitalized and/or experienced severe outcomes due to COVID-19, flu, pneumonia, and RSV were Black, Hispanic, or American Indian/Alaska Native. Earlier—and higher—rates of asthma, congestive heart failure, or COPD in communities of color due to structural racism lead to greater risks associated with infectious disease onset and higher rates of hospitalization and severe outcomes, including death. These findings highlight the need to heed the still-raw lessons of COVID-19 and work together to collect and analyze data by race/ethnicity, as well as age, to better ensure vaccine equity in long-term care settings.

While the Inflation Reduction Act of 2022 eliminated copayments and cost-sharing for all adult vaccines covered under Medicare Part D, there are still payment barriers due to cost-sharing for some vaccines covered under Part B as well as insufficient provider reimbursement. Currently, Medicare payment and coverage of vaccines varies widely depending on several factors, including: the type of vaccine; whether it is covered under Part B or Part D; the site of care where the beneficiary receives the vaccination; and who administers the vaccine. These coverage inconsistencies can undermine vaccine access and affordability for patients and impose administrative burdens on vaccine providers.

LEVERAGING LONG-TERM CARE PHARMACISTS TO EXPAND ACCESS AND UPTAKE FOR ALL ADULT-RECOMMENDED VACCINES FOR LONG-TERM CARE RESIDENTS

Starting in December 2020, pharmacists were on the front lines of the unprecedented national vaccination effort to “get shots in arms.” Pharmacists played an integral role in delivering COVID-19 vaccines to residents. While the Trump Administration signed a deal with two large retail pharmacies to deliver primary vaccines to vulnerable adults, long-term care pharmacists were essential for reaching rural, underserved, vulnerable, and hard-to-reach communities. In the first four months of the COVID-19 vaccination effort, pharmacies acquired, stored, handled, delivered, administered, and reported more than eight million

vaccines.¹⁴ The state of West Virginia developed its own plan, leveraging the existing relationship between long-term care pharmacies and facilities. The West Virginia effort completed primary vaccination of its nursing homes in 29 days while other states lagged behind at just 22 percent of allotted primary vaccines administered. In all, it is estimated that pharmacists administered more than 300 million doses of primary COVID-19 vaccine.^{15,16} In addition to the two large chain pharmacies, a group of LTC pharmacies also were deployed to cover the hard-to-reach places; eventually the LTC pharmacies took over the process, spearheaded by ASCP in collaboration with the CDC and group purchasing organizations.

As the pandemic moved from the mass vaccination phase to the maintenance phase, a little-known flexibility was given to pharmacies to contract with nursing homes for the “act of administration.” Recognizing that sending a pharmacist—sometimes hours away—to a secure nursing facility to administer a handful of vaccinations was inefficient and unnecessary considering the qualified personnel on staff in the long-term care facility, this particular flexibility became critical. Further, the strong, existing relationships of the long-term care pharmacies and their clients has led to multiple access points for resident and staff vaccinations, including:

- » Holding mass vaccination events using pharmacists and pharmacy staff.
- » Sending vaccines (sometimes as little as a single dose for one resident) to the long-term care facility for administration by that facility’s consultant pharmacist or a pharmacy hired third-party vaccinator.
- » Sending vaccines (sometimes a single dose) to the nursing home for nurse or third-party administration under a special contract with the long-term care pharmacy.

14 Grabenstein, John D. “Essential services: Quantifying the contributions of America’s pharmacists in COVID-19 clinical interventions.” *Journal of the American Pharmacists Association: JAPhA* vol. 62,6(2022): 1929-1945.e1. doi:10.1016/j.japh.2022.08.010.

15 Centers for Disease Control and Prevention (CDC). The Federal Retail Pharmacy Program for COVID-19 Vaccination. <https://www.cdc.gov/vaccines/covid-19/retail-pharmacy-program/index.html>

16 Authors note: While the aforementioned CDC data do not specify that the doses delivered are primary doses, given the timing of the initiative in the course of the pandemic and vaccination efforts, it is presumed that the doses delivered were primary vaccinations.



Although there were challenges access and delivery, in nearly every case, a closed loop system was established where the vaccine was easily accessed at the pharmacy, delivered and administered in a variety of ways under the pharmacy's control, and information was reported back to that pharmacy for submission to the state immunization information system (IIS) and reporting to federal databases.¹⁷ More than 1,800 pharmacies, including a significant number of long-term care pharmacies, were connected to the state IIS, instead of connecting the nation's 15,000 long-term care facilities. The "bridging" role that long-term care pharmacies played can be applied to other vaccines if the government takes advantage of the infrastructure that was established during the PHE.

The model of using a long-term care pharmacy as the foundation for vaccination of long-term care residents is incredibly flexible, and its nimbleness allows it to meet the needs of every resident at every long-term care facility. Long-term care pharmacies review a newly admitted patient's vaccine history and can discuss with the patient, caregivers, and/or the facility which vaccines the individual needs and subsequently provide the vaccines while documenting the administration. Preserving the closed loop system, which places the pharmacy as the responsible provider of vaccinations in collaboration with the long-term care settings, is ideal and not only enhances access and delivery, but also provides a mechanism that ensures documentation. This system must be maintained as it will allow for ongoing vaccination against COVID-19, as well as vaccination against influenza, pneumococcal disease, and all diseases that currently have – or will have – ACIP recommendations for adults.

17 Two potential ways to get data into the immunization information system from a long-term care facility: (1) from the electronic health record the facility has, or (2) from the pharmacy where the vaccine was administered. Information about both the patient and the vaccine are needed for an entry into the immunization information system. Unfortunately, due to the manner in which HHS designed the payment incentives for meaningful use and interoperability, many electronic medical records used in long-term care settings are not connected.

“Now we have a system in long-term care where the pharmacy has the vaccine. They can store it, handle it, deliver it to a nursing facility, and they have multiple ways to administer it. They can use their own personnel, like in a mass vaccination event, they could coordinate with their own personnel, or third-party personnel where they don’t have to rely on driving someone with the vaccine. That person can either be at the facility or meet them at the facility. And we can contract with the facility so that the personnel at the facility can administration of the vaccine. All that happens right now. And the nice part about that flow system is the pharmacy then takes that data back and reports it into the state [immunization information] system.

So, we have an environment currently that does that for COVID. We can apply that to influenza, to RSV, to pneumococcal, to any older adult vaccine going forward, but a lot of the flexibilities are going to expire when the emergency expires ... [we need] to make sure that we can hold on to that system ... Because it works and it’s a step forward for us if we can keep it from unraveling.”

– Roundtable Participant

Many residents of long-term care settings have difficulty moving or are not ambulatory, so on-campus vaccination efforts, including scheduled clinics offered by pharmacies, were indispensable in the delivery of the initial round and subsequent boosters of COVID-19 vaccines. By allowing pharmacists to administer COVID-19 vaccines, the government and the public reaped the immediate benefit of an efficient, timely, and effective deployment of trusted community-based clinicians. As a result, nearly 86% of long-term care residents nationwide have been vaccinated with the primary series of COVID-19 vaccines due to the hard work and innovation of long-term care facilities and long-term care pharmacies and the regulatory flexibilities granted during the PHE.

As shown by the keystone role long-term care pharmacists played during the PHE, long-term care pharmacies remain vital to all immunization efforts. This is true for all vaccines, not just those developed to fight COVID-19. We now have a responsibility to maintain and codify the systems that have been put in place as a result of the COVID-19 pandemic, and must allow them to work for influenza, pneumococcal disease, and shingles—as well as emerging vaccines. To that end, long-term care pharmacists should be formally incorporated and recognized in the nation’s medical and public health infrastructures through changes to public and private health plan payment policies, federal Medicare statute, and other public policy modifications.

BRINGING COVID-19 VACCINATION LESSONS LEARNED, INNOVATIONS, AND FLEXIBILITIES TO INFORM FUTURE LONG-TERM CARE VACCINATION EFFORTS

The success in COVID-19 vaccination and bivalent booster uptake within long-term care communities serves as an important case study for how to increase the uptake of other ACIP-recommended adult vaccines. While recognizing that bivalent booster rates among residents and staff are lower than the initial COVID-19 shots, booster rates are higher among long-term care residents and staff than the broader population. Each long-term care setting and senior living community is different and has different resources and regulations, so vaccination efforts should be tailored accordingly, and as such, flexibility to design initiatives to vaccinate residents is the key to success.

COVID-era waivers and flexibilities were transformative to delivering COVID-19 vaccines and therapies (e.g., monoclonal antibody infusions and oral treatments). In particular, the PREP Act scope of practice flexibilities (e.g., pharmacist vaccination, testing, and treatment authorities) helped expand and maintain access to care throughout the PHE, particularly for rural, underserved, and long-term care communities.¹⁸ Once this flexibility sunsets, without Congressional or Executive Branch action, the nation could experience major backsliding in nationwide vaccination efforts—especially in 25 states where pharmacist-administered vaccines have not yet been made permanent.¹⁹

18 The PREP Act preempted any state legal requirement that prohibits qualified pharmacists, licensed or registered pharmacy interns, and qualified pharmacy technicians, acting under the supervision of a state-licensed pharmacist from ordering and administering designated vaccinations.

19 American Disease Prevention Coalition. <https://vaccinesshouldntwait.org/in-your-state/>



“All of these things that have taken a lot of blood, sweat, and tears to get us through the pandemic. I don’t want to see it all just evaporate.”

– Roundtable Participant

“About every six months [there are] calls to address low vaccination rates with lots of temporary fixes. In between, we don’t build the system. We know COVID is here to stay. We know other pandemics with influenza and other respiratory viruses may come and long-term care residents and staff will again be high risk. However, we continue not to build a system to accommodate rapid deployment, administration, and tracking of vaccine. I don’t hear anyone talking about next winter, so we will likely scramble next winter.”

– Roundtable Participant

Representatives from long-term care facilities have expressed serious concern that they typically do not have the infrastructure or resources to offer vaccines regularly to their residents and staff. For example, many congregate care settings have limited internal facility resources—human and fiscal—to support vaccination. Since the federal government assumed the responsibility for the payment and logistics of COVID-19 vaccination efforts, hundreds of thousands of individuals in these settings had access to affordable, convenient vaccination without the facilities where they live facing staffing, operational, or cost burdens associated with the effort. Additionally, many facilities cannot store vaccines onsite, and can only offer vaccinations at particular times when a pharmacy partner is available to visit.

Further, current Medicare coverage and reimbursement policy stymies access to vaccines in long-term care settings. Whether Medicare Part A, Part B, or Part D covers vaccination depends on where the beneficiary is receiving care, when the vaccine is administered during their stay in the long-term care facility, and which vaccines are being administered. This complex and irrational system creates barriers to vaccination and is an archaic artifact of a time when fewer vaccines were available. Moreover, post-PHE when COVID-19 vaccines are no longer free of charge, the uninsured population will be at particular risk; the gains achieved with respect to vaccine equity will likely be lost without specific funding and intentional plans and programs to ensure continued access.

We know that payment drives practice, and therefore, the federal government should prioritize vaccination for adults, particularly those in long-term care and other congregate settings. To that end, improving Medicare coverage and payment policies for vaccines would facilitate access and uptake of ACIP-recommended adult vaccines, which in-turn will reduce preventable infectious disease among the nation's most vulnerable.

STRENGTHENING COMMUNICATION, COORDINATION, AND COLLABORATION BETWEEN ALL LEVELS OF GOVERNMENT AND THE PROVIDER COMMUNITY TO IMPROVE VACCINE UPTAKE

The nation must harness the learnings of the pandemic to inform and support the federal response to future public health outbreaks. To that end, the White House and federal agencies should be seeking inputs, insights, and lived experiences from state and local partners, pharmacists, and on-the-ground, community-based providers to guide future preparedness efforts. Specifically, the federal government should develop a “pandemic playbook,” that is at-the-ready and shared with government and the private sectors in advance of the next outbreak since infrastructure cannot be built effectively during an emergency. As part of this readiness, the nation needs to repair public health trust, communication, and messaging. The public is aware of the bivalent booster but is opting not to get it. This low uptake is not because of lack of access or awareness but rather the lack of trust and/or lack of imperative (e.g., “I have natural immunity”).



The federal government is most effective when it offers collaboration rather than punishment or top-down edicts. To that end, it was critical that states and localities had the flexibility to design COVID-19 vaccination efforts that met their local needs, and that they received support from the federal government, but initiatives were not micro-managed or dictated out of Washington. The greatest successes in vaccinating residents of long-term care facilities were generated by trying new approaches, keeping the patient at the forefront, and facilitating collaboration between state government, state and local public health departments, long-term care pharmacies, and long-term care facilities. Ongoing communication, awareness, and education efforts from trusted sources, such as pharmacists, helped to debunk COVID-19 vaccination-related myths. However, all stakeholders noted the need to help improve the manner in which the scientific process is explained so the public can gain a better understanding and grow in confidence.

RSV vaccines for older adults may be available as soon as 2023, and we will face the opportunity and challenge of distributing this new vaccine to communities at-risk, including long-term care and other congregate care settings of older individuals. Thus, the ACIP will soon be considering a new vaccine for its recommendations. Therefore, it is imperative that the ACIP membership be diversified immediately to include representatives from long-term care and individuals who are experts in geriatric care. Currently, no member of the Committee can uniquely speak on behalf of the long-term care or older American communities. The long-term care perspective must be represented on the ACIP. The current overly strict interpretation of the Federal Advisory Committee Act (FACA)²⁰ conflict of interest (COI) provisions are unfairly punitive and exclusionary toward individuals who have expertise in immunizing older people, given that most individuals who work or have worked in the older adult vaccine arena have had a connection to the pharmaceutical industry and/or vaccine manufacturers. Further, ACIP must meet and vote on recommendations within a week or two of any FDA approval and publish their recommendations in the MMWR without delay.

Finally, the federal government can play a stronger role in the area of facilitating and resourcing interoperability of data and reporting systems of post-acute settings and immunization registries. Greater standardization, resources, improved data infrastructure, and breaking down of data silos are essential to facilitating information sharing about vaccinations. Knowing who has gaps in their vaccinations allows for providers to focus resources where they are needed most.

20 General Services Administration (GSA). The Federal Advisory Committee Act. <https://www.gsa.gov/policy-regulations/policy/federal-advisory-committee-management/legislation-and-regulations/the-federal-advisory-committee-act#:~:text=The%20Federal%20Advisory%20Committee%20Act%20became%20law%20in%201972%20and,%2C%20public%20involvement%2C%20and%20reporting>

RECOMMENDATION SUMMARIES

As the U.S. population ages, prioritizing vaccination in the long-term care community is of critical importance in defending against existing and emerging public health threats and ensuring that we—as a nation—are taking all the steps possible to help protect our most vulnerable from preventable infectious diseases. Vaccination remains among the most effective public health measures for reducing the morbidity and mortality from a growing number of infectious diseases. To that end, participants offered a number of policy and programmatic changes to boost vaccine uptake in long-term care settings. Please note that the following recommendations are a summary from event discussions and do not imply endorsement from any of the event attendees other than the Alliance and ASCP.



Vaccines are the most efficient way to prevent diseases ... we all know that ... and if you can get all your vaccines at one time ... why not make it easy to do that, since we are going to have the pharmacists coming in. Let's make it easy for them to deliver it to the population [long-term care residents] that needs it the most."

— Roundtable Participant

First, there was consensus that as a nation we must leverage both lessons learned and best practices from the COVID-19 vaccine roll-out to strengthen long-term care vaccination efforts, with particular emphasis on the value of the Public Readiness and Emergency Preparedness Act (PREP Act) flexibilities, interagency coordination, and authorities granted to pharmacists in the delivery of vaccines and treatments to patients across care settings. Further, all attendees agreed on the need to maintain the gains achieved in vaccine access through the strategic deployment of pharmacists in administering vaccines to long-term

care residents during the PHE. There was widespread consensus that post-PHE federal policies and programs should support, facilitate, and sustain the essential role of pharmacy in delivering the full range of adult vaccines to long-term care residents.

Second, roundtable participants and panelists make clear that more must be done to address the barriers to vaccination uptake and to improve vaccine confidence, including, but not limited to: addressing public and commercial insurance coverage and reimbursement issues; building and maintaining communication and trust with long-term care staff; recruiting and retaining a diverse health care workforce; finding trusted messengers/immunization champions that will resonate with older adults and long-term care employees; incorporating more long-term care and geriatric expertise into the ACIP; improving communication among and between federal, state, and local public health agencies, including between FDA and CDC; and tailoring messaging to each audience based on age and setting.

Third, the importance of collaboration and coordination was a theme throughout the day. Attendees noted that it is essential that all levels of government—along with the private sector—work together to break down silos, facilitate systems interoperability, and improve sharing of lessons learned.

It is clear that a multi-stakeholder effort is needed to preserve and leverage pandemic-era best practices and apply them toward the full complement of adult vaccines recommended by the CDC ACIP.

ROUNDTABLE RECOMMENDATIONS FOR FEDERAL GOVERNMENT ACTIONS

All

- » Recognize that vaccination and prevention of infectious disease are national security issues.
- » Analyze data and leverage best practices from the COVID-19 pandemic and apply learnings to maximize uptake of the full set of ACIP-recommended vaccines.

- » Ensure interoperability and access to IIS systems for all settings, especially long-term care to prevent data loss during transitions of care.
- » Provide resources to support the integration of patient electronic health records (EHR), state databases, and immunization reporting systems.
- » Transfer learnings from COVID-19 into a pandemic playbook preparedness kit that high-level government officials have access to in order to ensure readiness for the next public health outbreak and the growing U.S. older adult population. Create, improve, and regularly review the pandemic preparedness playbook.
- » Improve interagency coordination and communication to improve the collective response to public health outbreaks.
- » Develop actionable federal, state, and local plans to represent and include long-term care and long-term care pharmacies when pandemic and emergency response strategies are being developed.
- » Maintain an open line of communication with stakeholders to promote information sharing and problem-solving.
- » Develop programs and provide resources to ensure access to vaccines for the uninsured population so that gains made in vaccine equity are not lost and existing health disparities do not worsen.
- » Honor, elevate, and celebrate the integral role that pharmacists played in delivering a supermajority of the nation's COVID-19 vaccinations, including, but not limited to, residents and staff of long-term care settings. Pharmacists are the first and most accessible health care provider for many patient communities. Nine in 10 Americans live within five miles of a pharmacy, and patients visit their community pharmacist approximately twice as frequently as they visit primary care physicians.
- » Rebuild trust in science for current and future vaccines and improve the overarching public health crisis communication strategy to ensure compatibility with public health, government researchers, and scientists' goals to devise and deliver effective messaging when information is limited, obsolete, or changing rapidly.

White House

- » Understand and address the adverse consequences of the PHE expiration on pharmacists' ability to provide vaccines.
- » Liaise with non-federal partners to promote dialogue and cooperation around public health responses and serve as convener when appropriate.
- » Continue to emphasize the importance of vaccination for COVID-19, influenza, and other infectious diseases.
- » Honor and celebrate the life-saving work of long-term care pharmacists and long-term care workers by inviting them to an event at the White House to thank them for helping put 300 million doses of COVID-19 vaccines in arms from December 2020 through February 2023, including administering 8 million doses on-site at long-term care facilities between December 2020 and April 2021.
- » Direct the CDC to review the ACIP charter and/or membership materials, and revise them if needed, to ensure more adequate representation of adult and geriatric immunization expertise in vaccine guidance.

HHS

- » Make permanent the Public Readiness and Emergency Preparedness Act (PREP Act) flexibilities granted to pharmacists during the COVID-19 pandemic to ensure licensed pharmacists and pharmacy personnel can continue to order and administer all ACIP-recommended vaccines.
- » Preserve, where possible, flexibilities, waivers and enforcement discretions that have facilitated pharmacist administration, reporting and billing for vaccines.

CDC

- » Ensure that the long-term care and geriatric clinical and research perspective (with expertise on adult vaccination) are represented by at least 1/3 of the ACIP committee members
Develop an older adult platform for the ACIP, like what exists for children and adolescents.
- » Take steps to streamline and standardize immunization information systems (IIS) to promote local and state vaccine

program information sharing. Work to have all the state systems use the same standard set of fields and information: first name, last name, date of birth, vaccine lot number, expiration, etc. so that the systems can become interoperable and share data. Consider ways to identify if a patient is a long-term care resident.

- » Work with the FDA to improve and shorten the timeline from FDA approval of a new vaccine to publication in the MMWR and ACIP recommendations.
- » Provide grants and other incentives to stimulate innovation around vaccine uptake and provide opportunities and forums for innovation sharing.

CMS

- » Address unevenness in Medicare coverage of vaccines by covering 100% of the costs (both the vaccine itself and its administration) associated with all ACIP-recommended vaccines for all beneficiaries, irrespective of setting in which the beneficiary receives the vaccination. As part of this effort, ensure that vaccine administrative payments are adequate to cover the costs.
- » Offer incentives, like bonus payments, for at-home vaccine administration.
- » Make pharmacists and pharmacy technicians eligible vaccinators who can roster bill to Medicare Part B and maintain exceptions for COVID-19, influenza, Hepatitis B, and pneumococcal vaccines.
- » Ensure long-term care facilities have necessary resources to comply with new regulations and that requirements are evidence-based and outcomes-focused. As part of this effort, ensure that skilled nursing facilities receive a payment outside of the prospective payment system per diem to support the purchase of vaccines and their administration.

FDA

- » Modify the restrictions around Emergency Use Authorization (EUA) that prevent industry from answering questions from pharmacists and other clinicians and allow industry during a PHE to deploy a field force to answer questions about vaccines under EUA.

- » Improve timely communication with CDC whenever a vaccine for the adult population is approved.
- » Provide clearer and more consistent communication with the public when a vaccine or therapy is approved in order to help manage expectations about when it might actually become available. Make it clear that FDA approval is not authorization for coverage or access for patients.

Congress

- » Extend provider status to pharmacists by amending the Social Security Act to include pharmacists on the list of recognized health care providers for Medicare beneficiaries.
- » Enact the Long-term Care Pharmacy Definition Act.
- » Ask the Government Accountability Office (GAO) to review the ACIP's membership processes, paying particular attention to how ACIP may reject nominees due to their interpretation of Conflict of Interest (COI) rules and thereby limit critical expertise on the committee.
- » Direct the CDC to develop clear and publicly available guidance on ACIP COI like the FDA has issued.
- » Reform Congressional Budget Office (CBO) scoring processes for legislation that involves spending associated with preventive care and services, such as vaccination.
- » Incorporate lessons learned from the COVID-19 pandemic into the Pandemic All Hazards Preparedness Act reauthorization.

ROUNDTABLE RECOMMENDATIONS FOR LONG-TERM CARE PROVIDERS

- » Increase EHR interoperability and standardization.
- » Improve the in-take process to better identify and assess which patients have vaccination gaps and enhance the consent process to facilitate patients receiving vaccines in a timely fashion.
- » Integrate vaccination efforts into standard operation procedures (SOP), especially during admission or other transitions of care.

- » Address staff vaccine hesitancy by listening and offering opportunities for feedback regarding vaccine requirements and recommendations.
- » Ensure that all employees (e.g., housekeeping, food service, janitorial) not just clinical staff, are engaged in educational and awareness efforts to prevent and reduce infectious disease in long-term care residents.
- » Prioritize recruitment and retention of a diverse health care workforce to advance health equity because when clinicians, providers, and caregivers reflect their community the level of trust increases.
- » Build resilience and engage in preparedness when it is not an emergency.
- » Provide a forum to share best practices, including regular training and table-top exercises that involve long-term care settings with their contracted pharmacy.
- » Develop partnerships with hospitals and health systems to improve patient hand-offs and uninterrupted education and conversations regarding needed vaccines.

ROUNDTABLE RECOMMENDATIONS FOR VACCINE MANUFACTURES/ INDUSTRY

- » Involve stakeholders in the vaccine distribution process to ensure all communities are represented in vaccine delivery plans.
- » Continue to be transparent with stakeholders about products and pricing, but also serve as an in-kind resource, such as providing information and technical assistance.
- » Create vaccination uptake campaigns that target individual vaccine-preventable diseases rather than launching mass seasonal campaigns that address multiple disease.
- » Develop specific data collection and educational efforts tailored to long-term care settings.



ROUNDTABLE RECOMMENDATIONS FOR THIRD-PARTY STAKEHOLDERS (CLINICIAN ASSOCIATIONS, PATIENT ADVOCACY GROUPS, ETC.)

- » Think outside the box to find the right trusted messengers to combat misinformation and hesitancy and help build vaccine confidence with various audiences.
- » Tailor messaging to ensure communications are clear, comprehensive, and community-centered.
- » Aggregate resources to educate and empower vaccine champions and leaders.
- » Help address and respond to the pervasive level of racism felt by staff in nursing homes.
- » Participate in federal opportunities to lend knowledge and expertise, such as Technical Expert Panels (TEPs) to help inform CMS decision-making regarding long-term care settings and vaccination and crafting responses to requests for information from the public sector.
- » Help strengthen communication between long-term care settings and stakeholders to help patients, families, industry, and other stakeholders better understand how long-term care settings function.
- » Encourage patients and caregivers to engage with their providers to help evaluate which vaccines are right for them to support shared decision-making.

CONCLUSION

Even though the PHE may be coming to an end, we cannot ignore the reality that we will always be faced with existing and emerging infectious diseases, including the rise of both influenza and RSV, as well as the threat of new pandemics. Vaccination remains our nation's best defense against illness, hospitalization, transmission, and death. We must act now to ensure that the public health crisis of the past three years and the lessons we have learned can be converted into a proactive playbook for public health, prevention, preparedness, and care. Specifically, COVID-19 had a devastating impact on the residents and employees of long-term care facilities and their deaths should not have been in vain. Acting on the recommendations outlined in this white paper will put us on a path to ensuring that the nation's most vulnerable and at-risk—older individuals, immunocompromised people, and residents of long-term care facilities and other congregate care settings—can have easier, regular access to the vaccines recommended by the CDC. The stakeholders involved in this convening—led by the Alliance for Aging Research and the American Society of Consultant Pharmacists—stand ready to work with partners in government, industry, the provider community, and others to ensure that all adults—particularly those in long-term care—have access to the vaccines they need and deserve.

“We’ve seen how pharmacy has stepped up to meet needs ... We know pharmacists have provided over half of the COVID-19 vaccine in the U.S. ... engaging pharmacists has really worked over the past few years and so [we] really need to preserve these efforts ... both from a federal perspective as well as to payers. We just really need to ensure that payment policy is adequate to sustain these efforts to sustain this accessibility to providers that are existing in the community today ... We all have to optimize the role and the ways that we [pharmacists] contribute to that [health care] team and pharmacy is here to help.”

– Roundtable Participant

OUR BEST SHOT ROUNDTABLE JANUARY 2023

PARTICIPANT LIST

THOMAS ACCIANI, PhD, Vaccines Policy Director, GSK

JESSICA BAGGETT, MPH, Senior Advisor, Public Health Response, Association of State and Territorial Health Officials (ASTHO)

MATTHEW BOBO, Senior Director of Immunization and Maternal, Child and Adolescent Health, National Association of County and City Health Officials (NACCHO)

KRISTA CAPEHART, PharmD, MS, BCACP, FAPhA, Director of Professional & Regulatory Affairs, West Virginia Board of Pharmacy

KATHLEEN CAMERON, BPharm, MPH, Senior Director, Center for Healthy Aging, National Council on Aging (NCOA)

SEAN CHRISTIANSEN, Senior Policy Advisor, Office on COVID-19 Response, The White House

LINDSAY CLARKE, JD, Senior Vice President of Health Education and Advocacy, Alliance for Aging Research

ARNOLD CLAYMAN, PD, FASCP, Vice President of Pharmacy Practice & Government Affairs, American Society of Consultant Pharmacists (ASCP)

AMY EFANTIS, Alliance for Aging Research Board Member and Vice President/Head of Government Affairs & Public Policy, GSK

SUSAN FARRALL, MPH, Public Health Advisor to National Vaccine Program, Office of the Assistant Secretary for Health (OASH), U.S. Department of Health & Human Services (HHS)

JANINE FINCK-BOYLE, MBA/HCA, LNHA, Vice President of Health Services Policy and Regulatory Affairs, LeadingAge

LISA FOSTER, Adult Vaccine Access Coalition (AVAC) Co-Manager and Partner, NVG LLC

SAMANTHA GOTTSTEIN, Senior Policy Analyst, Venable LLP

PHYLLIS GREENBERGER, MSW, Senior Vice President, HealthyWomen

ESME GREWAL, Vice President, Government Relations, PharMerica

T.J. GRIFFIN, RPh, Chief Pharmacy Officer, PharMerica

CHRISTINE HANSON, Director, Corporate Affairs, Pfizer Inc.

WILL HARRIS, Senior Advisor, Office of the Administrator, Centers for Medicare & Medicaid Services (CMS)

AMINAH JONES, PharmD, Graduate Student, Peter Lamy Center on Drug Therapy and Aging, University of Maryland School of Pharmacy

LAURIE LABUDA, Executive Vice President, Reservoir Communication Group

ADINA LASSER, Public Policy Manager, Alliance for Aging Research

JAMES LEWIS, Director of Policy and Advocacy, American Society of Consultant Pharmacists (ASCP)

PETER MARKS, MD, PhD, Director, Center for Biologics Evaluation and Research (CBER), Food and Drug Administration (FDA)

JANET MCULSKY, MBA, President, McUlisky Health Force

ANNA MEYER, PharmD, Clinical Pharmacy Supervisor,
Avera Long-Term Care Pharmacy

SARAH MEYER, MD, MPH, Chief Medical Officer, Immunization Services Division,
Centers for Disease Control and Prevention (CDC)

BRI MORRIS, PharmD, Senior Director, Education and Long-Term Care,
National Community Pharmacists Association (NCPA)

MEAGHAN FREITER MURPHY, PharmD, Senior Manager, Pharmacy Practice,
American Pharmacists Association (APhA)

MARTHA NOLAN, JD, Senior Policy Advisor, HealthyWomen

DIANA OISON, Senior Director, Strategic Communications,
National Foundation for Infectious Diseases (NFID)

ILISA HALPERN PAUL, MPP, Senior Policy Advisor,
Venable LLP

SUE PESCHIN, MHS, President and CEO,
Alliance for Aging Research

MITCHEL ROTHHOLZ, Consultant,
Three-C Consulting, LLC

PAMELA SCHWEITZER, PharmD, BCACP, EMHA, RADM (ret.),
Former Assistant Surgeon General and Chief Pharmacist Officer,
U.S. Public Health Service (USPHS) Commissioned Corps

JOHN SCHULTE, Vice President of Quality Improvement, Argentum

ELIZABETH SOBCZYK, MSW, MPH, Project Director of the CDC Cooperative
Agreement to Improve Immunization Rates in Post-Acute and Long-Term Care, AMDA

ASHLEY SZOFER, Senior Manager, Alliance Development,
Johnson & Johnson Services, Inc.

LITJEN TAN, MS, PhD, Chief Strategy Officer, Immunize.org

AVRA THOMAS, PharmD, MS, BCGP, FASCP, Senior Director of Pharmacy Practice,
American Society of Consultant Pharmacists (ASCP)

AMY WALKER, Director, U.S. Policy & Advocacy, CSL Seqirus

KATHERINE WATERS, Director of Immunization,
National Association of County and City Health Officials (NACCHO)

CARMEN WITSKEN, PharmD, Executive Fellow in Association Leadership and Management,
American Society of Consultant Pharmacists (ASCP)

CHAD WORZ, PharmD, BCGP, FASCP, Executive Director and Chief Executive Officer,
American Society of Consultant Pharmacists (ASCP)

JING WU, PharmD, MPH, Director, Pharmacy Data Strategy and Innovation,
American Society of Consultant Pharmacists (ASCP)

BRANDON YOUNG, PhD, Medical Science Liaison,
CSL Seqirus

OUR BEST SHOT:

A ROUNDTABLE ON EXPANDING VACCINE ACCESS FOR LONG-TERM CARE RESIDENTS

WHEN?

JANUARY 27, 2023
8:00 AM – 4:00 PM EST

WHERE?

VENABLE LLP
600 MASSACHUSETTS AVENUE NW
WASHINGTON, DC 20001

AGENDA

WELCOME

- | | |
|--------------|--|
| 8:00-8:30 AM | Breakfast and Registration |
| 8:30-8:40 AM | Welcome and Opening Remarks
Sue Peschin, President and CEO, Alliance for Aging Research
Ilisa Halpern Paul, Senior Policy Advisor, Venable LLP |
| 8:40-9:00 AM | Group Introductions
All Participants |
| 9:00-9:30 AM | Current Landscape on Vaccine Access in Long-term Care Settings
Chad Worz, Executive Director and Chief Executive Officer,
American Society of Consultant Pharmacists (ASCP) |

PANELS

9:30-10:45 AM

Panel 1: Lessons Learned from the Federal Response to COVID-19 Vaccination in Long-Term Care Settings

Moderator

- » Ilisa Halpern Paul, Senior Policy Advisor, Venable LLP

Panelists

- » Krista Capehart, Director of Professional & Regulatory Affairs, West Virginia Board of Pharmacy
- » TJ Griffin, Chief Pharmacy Officer, PharMerica
- » Anna Meyer, Clinical Pharmacy Supervisor, Avera Long-Term Care Pharmacy
- » Pam Schweitzer, Former Assistant Surgeon General and Chief Pharmacist Officer, United States Public Health Service (USPHS)

10:45-11:00 AM

Break

11:00 AM-12:15 PM

Panel 2: Next Steps to Ensure Long-Term Care Settings Receive All CDC Recommended Vaccines

Moderator

- » Ilisa Halpern Paul, Senior Policy Advisor, Venable LLP

Panelists

- » Janine Finck-Boyle, Vice President of Health Services Policy and Regulatory Affairs, LeadingAge
- » John Schulte, Vice President of Quality Improvement, Argentum
- » Elizabeth Sobczyk, Project Director of the CDC Cooperative Agreement, AMDA

12:15-1:00 PM

Lunch Break

1:00-2:15 PM

Panel 3: Building Federal Policy Supports for Delivering Existing and Emerging Vaccines to Long-Term Care Settings

Moderator

- » Ilisa Halpern Paul, Senior Policy Advisor, Venable LLP

Panelists

- » Sean Christiansen, Senior Policy Advisor, Office on COVID-19 Response, The White House
- » Will Harris, Senior Advisor, Office of the Administrator, Centers for Medicare & Medicaid Services (CMS)

- » Dr. Peter Marks, Director, Center for Biologics Evaluation and Research (CBER), Food and Drug Administration (FDA)
- » Dr. Sarah Meyer, Chief Medical Officer, Immunization Services Division, Centers for Disease Control and Prevention (CDC)
- » Pam Schweitzer, Former Assistant Surgeon General and Chief Pharmacist Officer, United States Public Health Service (USPHS)

2:15-2:30 PM

Break

NEXT STEPS

2:30-3:15 PM

Town Hall Discussion

Moderator

- » Ilisa Halpern Paul, Senior Policy Advisor, Venable LLP

3:15-3:45 PM

Advocacy and Policy Recommendations

Sue Peschin, President and CEO, Alliance for Aging Research
 Chad Worz, Executive Director and Chief Executive Officer, ASCP
 Ilisa Halpern Paul, Senior Policy Advisor, Venable LLP

3:45-4:00 PM

Closing Remarks

Sue Peschin, President and CEO, Alliance for Aging Research
 Ilisa Halpern Paul, Senior Policy Advisor, Venable LLP

MANY THANKS TO OUR MEETING SPONSORS:

CSL Seqirus
Genentech, Inc.
GlaxoSmithKline
Janssen Pharmaceuticals, Inc.
Pfizer, Inc.

APPENDIX A

Table 1 Recommended Adult Immunization Schedule by Age Group, United States, 2023

Vaccine	19–26 years	27–49 years	50–64 years	≥65 years
COVID-19	2- or 3- dose primary series and booster (See Notes)			
Influenza inactivated (IV4) or Influenza recombinant (RIV4) ^{or}	1 dose annually			
Influenza live, attenuated (LAIV4)	1 dose annually			
Tetanus, diphtheria, pertussis (Tdap or Td)	1 dose Tdap each pregnancy; 1 dose Td/Tdap for wound management (see notes)			
	1 dose Tdap, then Td or Tdap booster every 10 years			
Measles, mumps, rubella (MMR)	1 or 2 doses depending on indication (if born in 1957 or later)			For healthcare personnel, see notes
Varicella (VAR)	2 doses (if born in 1980 or later)		2 doses	
Zoster recombinant (RZV)	2 doses for immunocompromising conditions (see notes)		2 doses	
Human papillomavirus (HPV)	2 or 3 doses depending on age at initial vaccination or condition	27 through 45 years		
Pneumococcal (PCV15, PCV20, PPSV23)	1 dose PCV15 followed by PPSV23 OR 1 dose PCV20 (see notes)			See Notes
Hepatitis A (HepA)	2, 3, or 4 doses depending on vaccine			
Hepatitis B (HepB)	2, 3, or 4 doses depending on vaccine or condition			
Meningococcal A, C, W, Y (MenACWY)	1 or 2 doses depending on indication, see notes for booster recommendations			
Meningococcal B (MenB)	2 or 3 doses depending on vaccine and indication, see notes for booster recommendations			
	19 through 23 years			
Haemophilus influenzae type b (Hib)	1 or 3 doses depending on indication			

 Recommended vaccination for adults who meet age requirement, lack documentation of vaccination, or lack evidence of past infection
 No recommendation/Not applicable
 Recommended vaccination based on shared clinical decision-making
 Recommended vaccination for adults with an additional risk factor or another indication

APPENDIX A

Notes Recommended Adult Immunization Schedule for ages 19 years or older, United States, 2023

For vaccine recommendations for persons 18 years of age or younger, see the Recommended Child and Adolescent Immunization Schedule.

COVID-19 vaccination

Routine vaccination

- **Primary series:** 2-dose series at 0, 4-8 weeks (Moderna) or 2-dose series at 0, 3-8 weeks (Novavax, Pfizer-BioNTech)
- **Booster dose:** see www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html

Special situations

Persons who are moderately or severely immunocompromised

- **Primary series**
 - 3-dose series at 0, 4, 8 weeks (Moderna) or 3-dose series at 0, 3, 7 weeks (Pfizer-BioNTech)
 - 2-dose series at 0, 3 weeks (Novavax)
- **Booster dose:** see www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html
- **Pre-exposure prophylaxis (e.g., monoclonal antibodies)** may be considered to complement COVID-19 vaccination. See [www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html](http://www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html#immunocompromised)

For Janssen COVID-19 Vaccine recipients see COVID-19 schedule at www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html.

Note: Current COVID-19 schedule available at www.cdc.gov/vaccines/covid-19/downloads/COVID-19-immunization-schedule-ages-6months-older.pdf. For more information on Emergency Use Authorization (EUA) indications for COVID-19 vaccines, please visit www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-vaccines

Haemophilus influenzae type b vaccination

Special situations

- **Anatomical or functional asplenia (including sickle cell disease):** 1 dose if previously did not receive Hib; if elective splenectomy, 1 dose preferably at least 14 days before splenectomy
- **Hematopoietic stem cell transplant (HSCT):** 3-dose series 4 weeks apart starting 6–12 months after successful transplant, regardless of Hib vaccination history

Hepatitis A vaccination

Routine vaccination

- **Not at risk but want protection from hepatitis A** (identification of risk factor not required): 2-dose series HepA (Havrix 6–12 months apart or Vaqta 6–18 months apart [minimum interval: 6 months]) or 3-dose series HepA-HepB (Twinrix at 0, 1, 6 months [minimum intervals: dose 1 to dose 2: 4 weeks / dose 2 to dose 3: 5 months])

Special situations

- **At risk for hepatitis A virus infection:** 2-dose series HepA or 3-dose series HepA-HepB as above
 - **Chronic liver disease** (e.g., persons with hepatitis B, hepatitis C, cirrhosis, fatty liver disease, alcoholic liver disease, autoimmune hepatitis, alanine aminotransferase [ALT] or aspartate aminotransferase [AST] level greater than twice the upper limit of normal)
 - **HIV infection**
 - **Men who have sex with men**
 - **Injection or noninjection drug use**
 - **Persons experiencing homelessness**
 - **Work with hepatitis A virus** in research laboratory or with nonhuman primates with hepatitis A virus infection

Travel in countries with high or intermediate endemic hepatitis A (HepA-HepB [Twinrix])

may be administered on an accelerated schedule of 3 doses at 0, 7, and 21–30 days, followed by a booster dose at 12 months)

- **Close, personal contact with international adoptee** (e.g., household or regular babysitting) in first 60 days after arrival from country with high or intermediate endemic hepatitis A (administer dose 1 as soon as adoption is planned, at least 2 weeks before adoptee's arrival)

• **Pregnancy** if at risk for infection or severe outcome from infection during pregnancy

• **Settings for exposure**, including health care settings targeting services to injection or noninjection drug users or group homes and nonresidential day care facilities for developmentally disabled persons (individual risk factor screening not required)

Hepatitis B vaccination

Routine vaccination

- **Age 19 through 59 years: complete a 2- or 3- or 4-dose series**
 - 2-dose series only applies when 2 doses of HepB-B* are used at least 4 weeks apart
 - 3-dose series Engerix-B, PreHevbrion*, or Recombivax HB at 0, 1, 6 months [minimum intervals: dose 1 to dose 2: 4 weeks / dose 2 to dose 3: 8 weeks / dose 1 to dose 3: 16 weeks]
 - 3-dose series HepA-HepB (Twinrix at 0, 1, 6 months [minimum intervals: dose 1 to dose 2: 4 weeks / dose 2 to dose 3: 5 months])
 - 4-dose series HepA-HepB (Twinrix) accelerated schedule of 3 doses at 0, 7, and 21–30 days, followed by a booster dose at 12 months

***Note:** HepB-B and PreHevbrion are not recommended in pregnancy due to lack of safety data in pregnant persons.

APPENDIX A

Notes Recommended Adult Immunization Schedule, United States, 2023

- **Age 60 years or older with** known risk factors for hepatitis B virus infection **should** complete a HepB vaccine series.
- **Age 60 years or older without** known risk factors for hepatitis B virus infection **may** complete a HepB vaccine series.
- **Risk factors for hepatitis B virus infection include:**
 - **Chronic liver disease** (e.g., persons with hepatitis C, cirrhosis, fatty liver disease, alcoholic liver disease, autoimmune hepatitis, alanine aminotransferase [ALT] or aspartate aminotransferase [AST] level greater than twice upper limit of normal)
 - **HIV infection**
 - **Sexual exposure risk** (e.g., sex partners of hepatitis B surface antigen [HBsAg]-positive persons; sexually active persons not in mutually monogamous relationships; persons seeking evaluation or treatment for a sexually transmitted infection; men who have sex with men)
 - **Current or recent injection drug use**
 - **Percutaneous or mucosal risk for exposure to blood** (e.g., household contacts of HBsAg-positive persons; residents and staff of facilities for developmentally disabled persons; health care and public safety personnel with reasonably anticipated risk for exposure to blood or blood-contaminated body fluids; persons on maintenance dialysis, including in-center or home hemodialysis and peritoneal dialysis, and persons who are predialysis; patients with diabetes)
 - **Incarceration**
 - **Travel in countries with high or intermediate endemic hepatitis B**

Special situations

- **Patients on dialysis:** complete a 3- or 4-dose series
 - 3-dose series Recombivax HB at 0, 1, 6 months (note: use Dialysis Formulation 1 mL = 40 mcg)
 - 4-dose series Engerix-B at 0, 1, 2, and 6 months (note: use 2 mL dose instead of the normal adult dose of 1 mL)

Human papillomavirus vaccination

Routine vaccination

- **HPV vaccination recommended for all persons through age 26 years:** 2- or 3-dose series depending on age at initial vaccination or condition:
 - **Age 15 years or older at initial vaccination:** 3-dose series at 0, 1–2 months, 6 months (minimum intervals: dose 1 to dose 2: 4 weeks / dose 2 to dose 3: 12 weeks / dose 1 to dose 3: 5 months; repeat dose if administered too soon)
 - **Age 9–14 years at initial vaccination and received 1 dose or 2 doses less than 5 months apart:** 1 additional dose
 - **Age 9–14 years at initial vaccination and received 2 doses at least 5 months apart:** HPV vaccination series complete, no additional dose needed
- **Interrupted schedules:** If vaccination schedule is interrupted, the series does not need to be restarted
- **No additional dose recommended when any HPV vaccine series has been completed using the recommended dosing intervals.**

Shared clinical decision-making

- **Some adults age 27–45 years:** Based on shared clinical decision-making, 2- or 3-dose series as above

Special situations

- **Age ranges recommended above for routine and catch-up vaccination or shared clinical decision-making also apply in special situations**
 - **Immunocompromising conditions, including HIV infection:** 3-dose series, even for those who initiate vaccination at age 9 through 14 years.
 - **Pregnancy:** Pregnancy testing is not needed before vaccination; HPV vaccination is not recommended until after pregnancy; no intervention needed if inadvertently vaccinated while pregnant

Influenza vaccination

Routine vaccination

- **Age 19 years or older:** 1 dose any influenza vaccine appropriate for age and health status annually.
- **Age 65 years or older:** Any one of quadrivalent high-dose inactivated influenza vaccine (HD-IIV4), quadrivalent recombinant influenza vaccine (RIV4), or quadrivalent adjuvanted inactivated influenza vaccine (aIIV4) is preferred. If none of these three vaccines is available, then any other age-appropriate influenza vaccine should be used.
- For the 2022–2023 season, see www.cdc.gov/mmwr/volumes/71/rr/rr7101a1.htm
- For the 2023–2024 season, see the 2023–2024 ACIP influenza vaccine recommendations.

Special situations

- **Egg allergy, hives only:** any influenza vaccine appropriate for age and health status annually
- **Egg allergy—any symptom other than hives** (e.g., angioedema, respiratory distress or required epinephrine or another emergency medical intervention): Any influenza vaccine appropriate for age and health status may be administered. If using egg-based IIV4 or LAIV4, administer in medical setting under supervision of health care provider who can recognize and manage severe allergic reactions.
- **Close contacts (e.g., caregivers, healthcare workers) of severely immunosuppressed persons who require a protected environment:** these persons should not receive LAIV4. If LAIV4 is given, they should avoid contact with/caring for such immunosuppressed persons for 7 days after vaccination.
- **Severe allergic reaction (e.g., anaphylaxis) to a vaccine component or a previous dose of any influenza vaccine:** see Appendix listing contraindications and precautions

APPENDIX A

Notes Recommended Adult Immunization Schedule, United States, 2023

- **History of Guillain-Barré syndrome within 6 weeks after previous dose of influenza vaccine:** Generally, should not be vaccinated unless vaccination benefits outweigh risks for those at higher risk for severe complications from influenza

Measles, mumps, and rubella vaccination

Routine vaccination

- **No evidence of immunity to measles, mumps, or rubella:** 1 dose
 - **Evidence of immunity:** Born before 1957 (health care personnel, see below), documentation of receipt of MMR vaccine, laboratory evidence of immunity or disease (diagnosis of disease without laboratory confirmation is not evidence of immunity)

Special situations

- **Pregnancy with no evidence of immunity to rubella:** MMR contraindicated during pregnancy; after pregnancy (before discharge from health care facility), 1 dose
- **Nonpregnant persons of childbearing age with no evidence of immunity to rubella:** 1 dose
- **HIV infection with CD4 percentages $\geq 15\%$ and CD4 count ≥ 200 cells/mm³ for at least 6 months and no evidence of immunity to measles, mumps, or rubella:** 2-dose series at least 4 weeks apart; MMR contraindicated for HIV infection with CD4 percentage $< 15\%$ or CD4 count < 200 cells/mm³
- **Severe immunocompromising conditions:** MMR contraindicated
- **Students in postsecondary educational institutions, international travelers, and household or close, personal contacts of immunocompromised persons with no evidence of immunity to measles, mumps, or rubella:** 2-dose series at least 4 weeks apart if previously did not receive any doses of MMR or 1 dose if previously received 1 dose MMR

- **In mumps outbreak settings,** for information about additional doses of MMR (including 3rd dose of MMR), see www.cdc.gov/mmwr/volumes/67/wr/mm6701a7.htm

Health care personnel:

- **Born before 1957 with no evidence of immunity to measles, mumps, or rubella:** Consider 2-dose series at least 4 weeks apart for protection against measles or mumps or 1 dose for protection against rubella
- **Born in 1957 or later with no evidence of immunity to measles, mumps, or rubella:** 2-dose series at least 4 weeks apart for protection against measles or mumps or at least 1 dose for protection against rubella

Meningococcal vaccination

Special situations for MenACWY

- **Anatomical or functional asplenia (including sickle cell disease), HIV infection, persistent complement component deficiency, complement inhibitor (e.g., eculizumab, ravulizumab) use, or microbiologists routinely exposed to *Neisseria meningitidis*:** 1 dose MenACWY (Menactra, Menveo, or MenQuadfi) at least 8 weeks apart and revaccinate every 5 years if risk remains
- **Travel in countries with hyperendemic or epidemic meningococcal disease, or microbiologists routinely exposed to *Neisseria meningitidis*:** 1 dose MenACWY (Menactra, Menveo, or MenQuadfi) and revaccinate every 5 years if risk remains
- **First-year college students who live in residential housing (if not previously vaccinated at age 16 years or older) or military recruits:** 1 dose MenACWY (Menactra, Menveo, or MenQuadfi)
- **For MenACWY booster dose recommendations** for groups listed under “Special situations” and in an outbreak setting (e.g., in community or organizational settings and among men who have sex with men) and additional meningococcal vaccination information, see www.cdc.gov/mmwr/volumes/69/rr/rr6909a1.htm

Shared clinical decision-making for MenB

- **Adolescents and young adults age 16–23 years (age 16–18 years preferred) not at increased risk for meningococcal disease:** Based on shared clinical decision-making, 2-dose series MenB-4C (Bexsero) at least 1 month apart or 2-dose series MenB-FHbp (Trumenba) at 0, 6 months (if dose 2 was administered less than 6 months after dose 1, administer dose 3 at least 4 months after dose 2); MenB-4C and MenB-FHbp are not interchangeable (use same product for all doses in series)

Special situations for MenB

- **Anatomical or functional asplenia (including sickle cell disease), persistent complement component deficiency, complement inhibitor (e.g., eculizumab, ravulizumab) use, or microbiologists routinely exposed to *Neisseria meningitidis*:** 2-dose primary series MenB-4C (Bexsero) at least 1 month apart or 3-dose primary series MenB-FHbp (Trumenba) at 0, 1–2, 6 months (if dose 2 was administered at least 6 months after dose 1, dose 3 not needed; if dose 3 is administered earlier than 4 months after dose 2, a fourth dose should be administered at least 4 months after dose 3); MenB-4C and MenB-FHbp are not interchangeable (use same product for all doses in series); 1 dose MenB booster 1 year after primary series and revaccinate every 2–3 years if risk remains
 - **Pregnancy:** Delay MenB until after pregnancy unless at increased risk and vaccination benefits outweigh potential risks
 - **For MenB booster dose recommendations** for groups listed under “Special situations” and in an outbreak setting (e.g., in community or organizational settings and among men who have sex with men) and additional meningococcal vaccination information, see www.cdc.gov/mmwr/volumes/69/rr/rr6909a1.htm
- Note:** MenB vaccines may be administered simultaneously with MenACWY vaccines if indicated, but at a different anatomic site, if feasible.

APPENDIX A

Notes Recommended Adult Immunization Schedule, United States, 2023

Pneumococcal vaccination

Routine vaccination

• Age 65 years or older who have:

- **Not previously received a dose of PCV13, PCV15, or PCV20 or whose previous vaccination history is unknown:** 1 dose PCV15 OR 1 dose PCV20. If PCV15 is used, this should be followed by a dose of PPSV23 given at least 1 year after the PCV15 dose. A minimum interval of 8 weeks between PCV15 and PPSV23 can be considered for adults with an immunocompromising condition,* cochlear implant, or cerebrospinal fluid leak to minimize the risk of invasive pneumococcal disease caused by serotypes unique to PPSV23 in these vulnerable groups.
- **Previously received only PCV7:** follow the recommendation above.
- **Previously received only PCV13:** 1 dose PCV20 at least 1 year after the PCV13 dose OR complete the recommended PPSV23 series as described here www.cdc.gov/vaccines/vpd/pneumo/downloads/pneumo-vaccine-timing.pdf.
- **Previously received only PPSV23:** 1 dose PCV15 OR 1 dose PCV20 at least 1 year after the PPSV23 dose. If PCV15 is used, it need not be followed by another dose of PPSV23.
- **Previously received both PCV13 and PPSV23 but NO PPSV23 was received at age 65 years or older:** 1 dose PCV20 at least 5 years after their last pneumococcal vaccine dose OR complete the recommended PPSV23 series as described here www.cdc.gov/vaccines/vpd/pneumo/downloads/pneumo-vaccine-timing.pdf.
- **Previously received both PCV13 and PPSV23, AND PPSV23 was received at age 65 years or older:** Based on shared clinical decision-making, 1 dose of PCV20 at least 5 years after the last pneumococcal vaccine dose.

• For guidance on determining which pneumococcal vaccines a patient needs and when, please refer to the mobile app which can be downloaded here: www.cdc.gov/vaccines/vpd/pneumo/hcp/pneumoapp.html

Special situations

- **Age 19–64 years with certain underlying medical conditions or other risk factors** who have**
 - **Not previously received a PCV13, PCV15, or PCV20 or whose previous vaccination history is unknown:** 1 dose PCV15 OR 1 dose PCV20. If PCV15 is used, this should be followed by a dose of PPSV23 given at least 1 year after the PCV15 dose. A minimum interval of 8 weeks between PCV15 and PPSV23 can be considered for adults with an immunocompromising condition,* cochlear implant, or cerebrospinal fluid leak
 - **Previously received only PCV7:** follow the recommendation above.
 - **Previously received only PCV13:** 1 dose PCV20 at least 1 year after the PCV13 dose OR complete the recommended PPSV23 series as described here www.cdc.gov/vaccines/vpd/pneumo/downloads/pneumo-vaccine-timing.pdf.
 - **Previously received only PPSV23:** 1 dose PCV15 OR 1 dose PCV20 at least 1 year after the PPSV23 dose. If PCV15 is used, it need not be followed by another dose of PPSV23.
 - **Previously received both PCV13 and PPSV23 but have not completed the recommended series:** 1 dose PCV20 at least 5 years after their last pneumococcal vaccine dose OR complete the recommended PPSV23 series as described here www.cdc.gov/vaccines/vpd/pneumo/downloads/pneumo-vaccine-timing.pdf.
- For guidance on determining which pneumococcal vaccines a patient needs and when, please refer to the mobile app which can be downloaded here: www.cdc.gov/vaccines/vpd/pneumo/hcp/pneumoapp.html

***Note:** Immunocompromising conditions include chronic renal failure, nephrotic syndrome, immunodeficiency, iatrogenic immunosuppression, generalized malignancy, human immunodeficiency virus, Hodgkin disease, leukemia, lymphoma, multiple myeloma, solid organ transplants, congenital or acquired asplenia, sickle cell disease, or other hemoglobinopathies.

****Note:** Underlying medical conditions or other risk factors include alcoholism, chronic heart/liver/lung disease, chronic renal failure, cigarette smoking, cochlear implant, congenital or acquired asplenia, CSF leak, diabetes mellitus, generalized malignancy, HIV, Hodgkin disease, immunodeficiency, iatrogenic immunosuppression, leukemia, lymphoma, multiple myeloma, nephrotic syndrome, solid organ transplants, or sickle cell disease or other hemoglobinopathies.

Polio vaccination

Routine vaccination

Routine poliovirus vaccination of adults residing in the United States is not necessary.

Special situations

• Adults at increased risk of exposure to poliovirus with:

- No evidence of a complete polio vaccination series (i.e., at least 3 doses): administer remaining doses (1, 2, or 3 doses) to complete a 3-dose series
- Evidence of completed polio vaccination series (i.e., at least 3 doses): may administer one lifetime IPV booster

For detailed information, see: www.cdc.gov/vaccines/vpd/polio/hcp/recommendations.html

APPENDIX A

Notes Recommended Adult Immunization Schedule, United States, 2023

Tetanus, diphtheria, and pertussis vaccination

Routine vaccination

- **Previously did not receive Tdap at or after age 11 years:** 1 dose Tdap, then Td or Tdap every 10 years

Special situations

- **Previously did not receive primary vaccination series for tetanus, diphtheria, or pertussis:** 1 dose Tdap followed by 1 dose Td or Tdap at least 4 weeks later, and a third dose of Td or Tdap 6–12 months later (Tdap can be substituted for any Td dose, but preferred as first dose), Td or Tdap every 10 years thereafter
- **Pregnancy:** 1 dose Tdap during each pregnancy, preferably in early part of gestational weeks 27–36
- **Wound management:** Persons with 3 or more doses of tetanus-toxoid-containing vaccine: For clean and minor wounds, administer Tdap or Td if more than 10 years since last dose of tetanus-toxoid-containing vaccine; for all other wounds, administer Tdap or Td if more than 5 years since last dose of tetanus-toxoid-containing vaccine. Tdap is preferred for persons who have not previously received Tdap or whose Tdap history is unknown. If a tetanus-toxoid-containing vaccine is indicated for a pregnant woman, use Tdap. For detailed information, see www.cdc.gov/mmwr/volumes/69/wr/mm6903a5.htm

Varicella vaccination

Routine vaccination

- **No evidence of immunity to varicella:** 2-dose series 4–8 weeks apart if previously did not receive varicella-containing vaccine (VAR or MMRV [measles-mumps-rubella-varicella vaccine] for children); if previously received 1 dose varicella-containing vaccine, 1 dose at least 4 weeks after first dose
- **Evidence of immunity:** U.S.-born before 1980 (except for pregnant persons and health care personnel [see below]), documentation of 2 doses varicella-containing vaccine at least 4 weeks apart, diagnosis or verification of history of varicella or herpes zoster by a health care provider, laboratory evidence of immunity or disease

Special situations

- **Pregnancy with no evidence of immunity to varicella:** VAR contraindicated during pregnancy; after pregnancy (before discharge from health care facility), 1 dose if previously received 1 dose varicella-containing vaccine or dose 1 of 2-dose series (dose 2: 4–8 weeks later) if previously did not receive any varicella-containing vaccine, regardless of whether U.S.-born before 1980
- **Health care personnel with no evidence of immunity to varicella:** 1 dose if previously received 1 dose varicella-containing vaccine; 2-dose series 4–8 weeks apart if previously did not receive any varicella-containing vaccine, regardless of whether U.S.-born before 1980
- **HIV infection with CD4 percentages $\geq 15\%$ and CD4 count ≥ 200 cells/mm³ with no evidence of immunity:** Vaccination may be considered (2 doses 3 months apart); VAR contraindicated for HIV infection with CD4 percentage $< 15\%$ or CD4 count < 200 cells/mm³
- **Severe immunocompromising conditions:** VAR contraindicated

Zoster vaccination

Routine vaccination

- **Age 50 years or older*:** 2-dose series recombinant zoster vaccine (RZV, Shingrix) 2–6 months apart (minimum interval: 4 weeks; repeat dose if administered too soon), regardless of previous herpes zoster or history of zoster vaccine live (ZVL, Zostavax) vaccination.

***Note:** Serologic evidence of prior varicella is not necessary for zoster vaccination. However, if serologic evidence of varicella susceptibility becomes available, providers should follow ACIP guidelines for varicella vaccination first. RZV is not indicated for the prevention of varicella, and there are limited data on the use of RZV in persons without a history of varicella or varicella vaccination.

Special situations

- **Pregnancy:** There is currently no ACIP recommendation for RZV use in pregnancy. Consider delaying RZV until after pregnancy.
- **Immunocompromising conditions (including persons with HIV regardless of CD4 count)**:** 2-dose series recombinant zoster vaccine (RZV, Shingrix) 2–6 months apart (minimum interval: 4 weeks; repeat dose if administered too soon). For detailed information, see www.cdc.gov/shingles/vaccination/immunocompromised-adults.html
- **Note:** If there is no documented history of varicella, varicella vaccination, or herpes zoster, providers should refer to the clinical considerations for use of RZV in immunocompromised adults aged ≥ 19 years and the ACIP varicella vaccine recommendations for further guidance: www.cdc.gov/mmwr/volumes/71/wr/mm7103a2.htm

CONTACT US

info@agingresearch.org
202.293.2856