

Charting a Path to
Increase Immunization Rates
in the Post-Acute and
Long-Term Care Settings

A White Paper Developed by
The Gerontological Society of America
National Adult Vaccination Program



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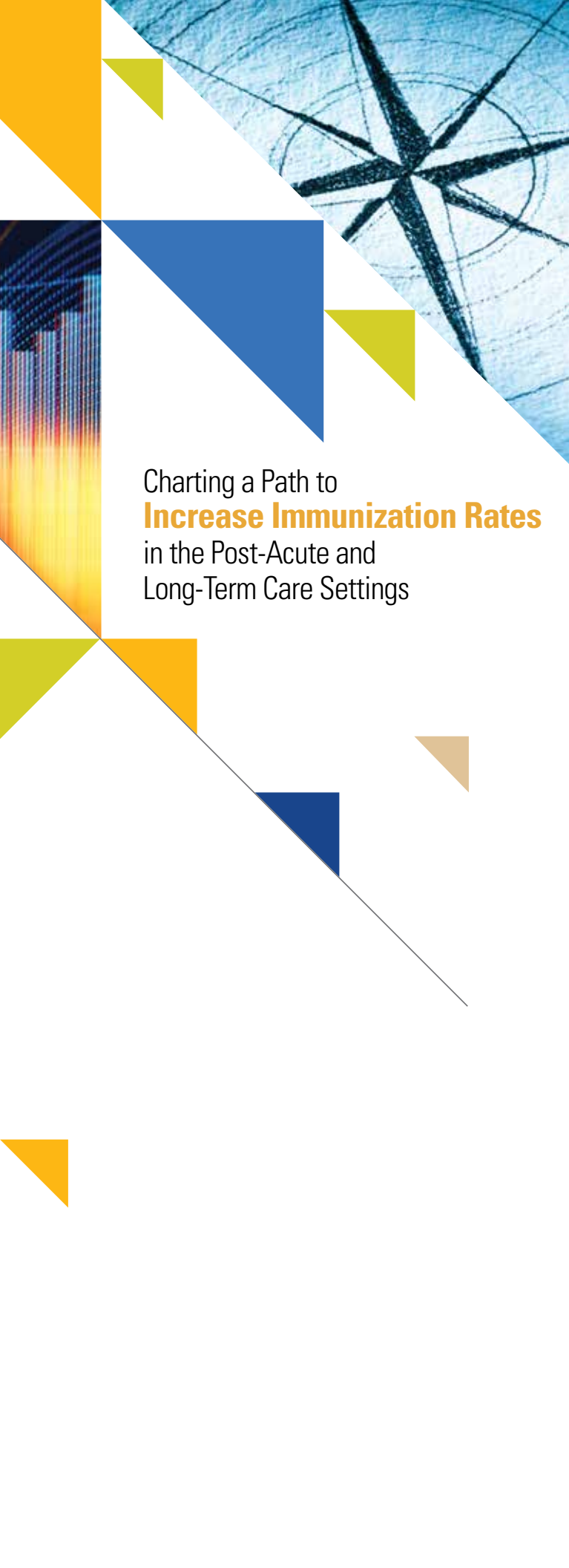
About The Gerontological Society of America and the National Adult Vaccination Program

The mission of The Gerontological Society of America (GSA) is to: (1) promote the conduct of multi- and interdisciplinary research in aging by expanding the quantity of gerontological research and by increasing its funding resources; (2) disseminate gerontological research knowledge to researchers, to practitioners, and to decision and opinion makers; and (3) promote, support, and advocate for aging education, and education and training in higher education.



In 2011, GSA created the National Adult Vaccination Program (NAVVP) with the purpose of affecting policy and improving adult immunization rates to achieve the Healthy People 2020 goals. The goals of NAVVP seek to:

- Diffuse evidence-based immunization information.
- Affect policy through partnership.
- Support GSA members making change in their practices to improve adult immunization rates.
- Drive sustainable solutions for gaps in knowledge and practice.



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Executive Summary

Vaccines are a critically important tool for reducing morbidity and mortality among older residents in long-term care settings, including skilled nursing care centers, assisted living communities, and post-acute care facilities. Influenza and pneumonia, which are typically combined in mortality analyses, are the eighth leading cause of deaths among Americans, and 90% of those fatalities occur in people aged 65 years or older.

In an effort to maximize immunization rates in the nation's long-term care settings, The Gerontological Society of America (GSA) convened a 1-day stakeholder meeting on May 2, 2018, in Washington, DC, focused on successes and needs in four areas of immunization practice for long-term care staff and residents:

1. Identifying organizational barriers to increased vaccine use in long-term care facilities.
2. Obtaining informed consent for vaccinations from residents and staff members.
3. Managing costs and optimizing billing for vaccines.
4. Maintaining high levels of motivation among vaccine champions.

With a greater medical focus on residents, skilled nursing care centers and post-acute care facilities have built-in support systems for vaccination programs that address the needs of the 4 million people they admit each year. Still, challenges keep even the most motivated facility leaders from getting staff and residents immunized. Infection control resources can be scarce compared with acute-care settings. Immunization registries lack sufficient continuity and specificity. Facilities' information technology infrastructures present challenges to capturing vaccination data.

Vaccine hesitancy among staff is another challenge. All the myths that people believe about influenza and other vaccines have to be addressed and overcome. On the positive side, particular attention is paid to immunizations in skilled nursing care centers through systems such as the federally mandated Minimum Data Set (including the health care personnel safety component that looks at staff vaccinations), long-term care surveys of vaccination practices for staff and residents, and the reports of quality improvement organizations.

In assisted living communities, vaccine programs cannot rely on medically trained immunization champions, and residents generally obtain care from the plethora of providers they had before admission. These factors make goals of universal vaccination more difficult to achieve, but no less important. As Americans enjoy added years of healthy living, the average age of the person in assisted living communities has increased; more than half are now 85 years of age or older. With this increased age, communities are seeing a rise in acuity levels, with some residents receiving peritoneal dialysis or intravenous therapies within the assisted living community.

Obtaining consent for vaccines from residents or their legally authorized representatives presents yet another hurdle that must be cleared in long-term care. The requirement that all staff get vaccinated should be made clear during position interviews, and a renewable consent should be signed as part of the hiring and orientation process.

Because approximately half of the residents in skilled nursing care centers have some degree of dementia—possibly affecting their current or future ability to provide informed consent—facility admission is a preferred time for getting a lasting consent for seasonal influenza vaccinations and other vaccines requiring subsequent doses.

Consent should be obtained from short-stay residents in post-acute care units (or their legally authorized representatives) and seasonal influenza vaccinations and other vaccines administered as indicated. In assisted living facilities, flu vaccine drives and wellness days can provide the opportunity for residents to act on their intent to get vaccinated.

Billing for vaccines is not a natural part of the finance culture of long-term care, but it is easy and important to implement. The total cost of outbreaks should be calculated and conveyed to administrators and managers, including the high hourly rates of agency health professionals needed as substitutes when staff nurses and others become ill as well as the effects of adverse attention and media coverage.


A commitment to full vaccination of staff and residents is logical and achievable. Staff members are generally covered by health insurance provided by the facility, and vaccines can be billed through the facility or by contract firms that specialize in on-site vaccine administration and management. Staff members can also receive vouchers to use at pharmacies or other vaccination locations outside the facility. Billing for vaccine products and administration to residents can be implemented easily through either in-house roster billing or contract firms.

Once programs have been implemented, keeping administrators, managers, staff, residents, and families engaged is important. Application of behavioral techniques and related concepts can empower immunization champions and drive continued success and better health through vaccinations.

At the GSA meeting, participants discussed these ideas and identified their top five recommended focus areas for future consideration in long-term care:

1. Increase use of mandatory staff vaccination policies.
2. Make vaccination a condition of hire.
3. Implement mandatory resident vaccination policies across all long-term care settings.
4. Create financing tip sheets (e.g., roster billing, best practices, algorithms, calculator of outbreak costs).
5. Examine tools and resources for opportunities to weave immunizations into other priorities for post-acute and long-term care facilities.


Vaccine advocates can and should work together for positive change in long-term care as supportive members of the immunization neighborhood. Advocates should especially collaborate and share ideas because of their common interest in improving immunization rates based on the Healthy People 2020 goals.



Introduction

Across the lifespan, vaccines are a powerful force in helping to protect people against potentially devastating diseases and maintain health. Despite widespread recognition of the importance of immunization, significant opportunities remain to improve vaccination rates both in general and among many of the most vulnerable people in society.

One of the groups considered at risk by the U.S. Centers for Disease Control and Prevention comprises those residing in post-acute and long-term care facilities, which include residential communities of older adults, assisted living communities, skilled nursing care centers, and other types of living settings for older adults. As people age, the body's natural ability to fight infection declines through the process of immunosenescence, making them more susceptible to both developing an infectious disease and having more serious sequelae when that occurs.



While anti-infective agents are available for treatment of many bacterial and some viral infections, prevention is highly preferable. The need for exposure to anti-infective agents is lessened, minimizing development of resistance in microbial pathogens. Through preventive efforts such as immunization, older adults in post-acute and long-term care settings can decrease their risk of hospitalization and reduce exposure to other pathogens, invasive treatments, and disruptions that come with acute care.

When older adults are immunized as recommended by the Advisory Committee on Immunization Practices (ACIP), their risk of developing pneumococcal disease, herpes zoster (shingles), influenza, and other vaccine-preventable conditions is reduced. Additionally, vaccination of staff members in post-acute and long-term care settings is important in helping to prevent the transfer of pathogens between residents as well as to and from the staff members' homes.

Despite long-standing recommendations, immunization rates among both staff and residents of long-term care communities remain low. The most recent available data show that 63% of older adults in 2015–2016 received an influenza vaccine; 60% received pneumococcal vaccine in 2014–2015; and 28% were vaccinated against herpes zoster in 2014–2015.¹

Immunization rates are low despite various state requirements for vaccination in long-term care settings. Thirty-two jurisdictions currently require influenza vaccination of residents in post-acute and long-term care settings, 19 states require assessment of influenza vaccination status of health care workers in skilled nursing care centers, 20 states require long-term care facilities to offer the vaccine to health care workers, and 16 states require facilities to ensure that health care workers are vaccinated against influenza.^{2,3} Some states have requirements for skilled nursing care centers and other nursing homes, while not addressing assisted living and other residential care settings; and some have weak statutory language that mandates only “documentation” of vaccine status rather than requiring immunization of residents and/or staff members.

State laws also address exemptions to vaccine requirements for facility staff members. These fall into several categories: medical (22 states), religious (13 states), and philosophical (24 states). In 3 states, exempted staff members are required to wear surgical masks during patient care activities.³

In an effort to maximize immunization rates in the nation's long-term care settings, The Gerontological Society of America (GSA) convened a 1-day stakeholder meeting on May 2, 2018, in Washington, DC. Participants came prepared to look closely at what has worked and what is needed in four areas of immunization practice for both long-term care staff and residents:

1. Identifying organizational barriers to increased vaccine use in long-term care facilities.
2. Obtaining informed consent for vaccinations from residents and staff members.
3. Managing costs and optimizing billing for vaccines.
4. Maintaining high levels of motivation among vaccine champions.

The end result of the meeting was the development of a prioritized list of actionable items that can be used to inform future activities in this area.

Meeting Objectives and Definitions

Stakeholders participating in the meeting sought to:

- Raise awareness of the impact and severity of influenza and other vaccine-preventable diseases among older adults in long-term care settings.
- Elevate the urgency around the importance of improving immunization rates for influenza and other ACIP-recommended vaccinations for patients and health care personnel in long-term care settings.
- Explore common challenges and identify potential solutions for improving immunization rates among residents and health care personnel in long-term care settings.

During the meeting, speakers discussed the current state of influenza vaccination of residents and staff members and other immunization efforts in long-term care. Tables 1 through 3 present ideas developed during stakeholder brainstorming sessions.

The following definitions of communities and facilities reflect the terms in this white paper to convey participants' intent with respect to a wide variety of long-term care communities, congregate housing units, and other facilities in current use in the United States⁴⁻⁷:

- Skilled nursing care center (also called long-term care facility, nursing home, or convalescent care facility): Licensed facility that provides general nursing care to those who are chronically ill or unable to take care of daily living needs.
- Assisted living community (also called assisted living facility): Residential living arrangement that provides individualized personal care, assistance with activities of daily living, help with medications, and services such as laundry and housekeeping. Facilities may also provide health and medical care, but care is not as intensive as care offered at a skilled nursing care center. Types and sizes of facilities vary, ranging from small homes to large apartment-style complexes. Levels of care and services also vary. Assisted living communities allow people to remain relatively independent.
- Post-acute care: Recuperation and rehabilitation services after an acute care hospital stay; care can be provided through skilled nursing care centers, home health agencies, inpatient rehabilitation facilities, or long-term care hospitals.

The term "post-acute and long-term care" is used in this white paper to be inclusive of the various facilities and communities defined above. This white paper describes the ideas presented by speakers and developed by stakeholders at the May 2 meeting and lists prioritized actions as determined by participants.

Increasing Immunization Rates in Long-Term Care

Long-term care is an important part of the support systems serving an aging population in the United States. Through a wide variety of facilities offering a range of services, including assisted living, home care, and skilled nursing expertise, long-term care is literally lifesaving for many older people.

Having so many people living in close proximity combined with the complex web of staff, medical interventions, and comorbidities can create special health challenges. Fortu-

nately, two of the more common communicable conditions in long-term care, influenza and pneumonia, can be prevented by vaccination of residents and staff of long-term

care facilities. Moreover, the impact of these diseases is greatly reduced in immunized individuals. Further, vaccination against herpes zoster, which has been underused among older adults, can greatly reduce residents' chances of developing shingles and the painful complications this condition can produce.

Influenza, including resulting cases of pneumonia, is the eighth most common cause of death in the United States, and 90% of those deaths are among people aged 65 years or older.^{8,9} For long-term care residents, the risk of hospitalization for pneumonia is 30 times higher than the risk for older people living in the community.¹⁰ Vaccinating these residents is important in terms of both mortality and morbidity, particularly for protecting against functional decline.¹¹

Skilled nursing care centers, assisted living communities, and other long-term care facilities can be “a petri dish of goodness, with people spreading the good stuff and the not-so-good stuff,” Tiffany Tate, MHS, Executive Director of the Maryland Partnership for Prevention, said at the May 2 program. Vaccines are important tools for helping to prevent outbreaks of influenza in long-term care settings and contributing to the prevention of an array of other diseases in older adults.

Several challenges keep even the most motivated facility leaders from getting staff and residents immunized. Most long-term care administrative and medical personnel know how important it is to get everyone vaccinated, and they are interested in doing so. However, infection control resources—which are used to cover the costs of immunization programs in long-term care—can be scarce compared with acute-care settings. Some 4 million Americans are admitted to long-term care facilities each year,¹² and the vaccination records of each new resident need to be checked. Because use of immunization registries is generally low among providers of adult vaccines, they lack sufficient continuity and specificity for making sure incoming residents and new staff members are appropriately assessed for vaccination status. Additionally, the facilities' information technology infrastructures, while moving toward universal adoption of electronic health records, still present challenges to capturing vaccination data. Given the complexities of vaccination and the need to address outbreaks of infectious diseases as they occur, the limited resources available for infection control are quickly sapped.

Directors of nursing in skilled nursing care centers have many duties in addition to infection control; efforts to control infectious diseases can be complicated by high turnover among nursing personnel. In one study of staff influenza immunizations, the annual nursing staff turnover rates ranged from 25% to 141% at four long-term care facilities.¹³

Securing consent of skilled nursing care center residents or those in assisted living communities can also present barriers to vaccination. In both settings, residents may not be able to provide consent because of cognitive impairment, and guardians or family members must be contacted.

Vaccine hesitancy among staff is another challenge. All the myths that people believe about influenza and other vaccines have to be addressed and overcome. It is important to realize that health care workers are often good at educating patients but not at following their own advice.

On the positive side, particular attention is paid to immunizations in skilled nursing care centers through systems such as the federally mandated Minimum Data Set (including the health care personnel safety component that looks at staff vaccinations), long-term care surveys of vaccination practices for staff and residents, and the reports of quality improvement organizations.

Strategies can be implemented to optimize immunization rates in long-term care. The shift toward value-based care creates incentives for vaccinations that were not operative under volume-based reimbursement. Pay-for-performance provides similar incentives, and experiences in antimicrobial stewardship programs are important to apply to vaccination efforts. Standing orders need to be used to a greater degree in long-term care, and policies such as mandatory vaccinations on admission and for an annual influenza immunization have also been shown to raise rates.

“The risk of infectious diseases is really high in long-term care facilities,” Tate said in conclusion. “The vaccines can prevent disease and outbreaks, and there is a lot of opportunity for partnerships within long-term care facilities for those in population or public health. Such initiatives can make a difference for these patients and the staff serving them.”

Case Study: Vaccine Protection Through a “Circle of Protection”

Through her work with the Maryland Partnership for Prevention, Tate is involved in vaccination of both adults and children. One pilot project, Circle of Protection, linked the organization with two long-term care chains and their 25 centers and 27 clinics across the state.

Goals of the project were to educate administrators about vaccine-preventable diseases in long-term care and advantages of using the best available influenza vaccine product for each resident and staff member. The first step in the project was to navigate the politics of the nursing homes by identifying opinion leaders in each facility and working with them to reach the medical director and director of nursing. Through a colleague with a broad statewide network, Tate and her team contacted high-level managers in the two chains and made their pitch: “We bring the vaccine, we bring the nurses, we do the billing and are at risk if payment is denied (the vaccine recipient is never billed), and the facility just needs to obtain consent from residents and staff using electronic forms we supply.”

The two chains entered into memoranda of understanding agreeing to use of optimal influenza vaccines in residents and staff and to report vaccination coverage electronically. As Tate and her team met with medical directors and directors of nursing in each facility, they educated and corrected misinformation about which vaccines were best for long-term care residents and staff.

As the Circle of Protection project moved forward, many lessons were learned, including the following:

- Some directors of nursing thought their staff liked giving the vaccines to staff and residents themselves; however, the staff said they didn’t actually enjoy it and weren’t opposed to involvement of an outside service.
- Vaccine teams succeeded through accommodation. To catch night shift workers who left each morning at 7 AM meant having immunizers come in to offer vaccines at 6 AM.
- Vaccination of residents could begin mid-morning and continue for the rest of the day.
- Multiple clinics were needed in some facilities to offer vaccines at convenient times.
- Some staff members were troubled by the Maryland Partnership for Prevention billing their insurance; even when they were assured they would not be billed for copayments or the cost of the vaccine if payment was denied, some still declined the vaccine and indicated they would rather go see their own physician for the vaccine.
- Most facilities have not been billing for influenza vaccine or offering other recommended vaccines to residents or staff.
- Many facility staff members were not up-to-date on their vaccines.



Taking Ownership of Vaccinations and Addressing Organizational Barriers

When it comes to getting something done that benefits everyone, it's OK to push. Without a doubt, increasing vaccination rates in post-acute care settings fits that category, Margo Kunze, RN, CALA, told attendees at the May 2 stakeholder meeting. Kunze is on the board of the American Assisted Living Nurses Association and a consultant in assisted living.

Research indicates that vaccination policies and rates can affect prospective clients' view of a community. In the University of Michigan's National Poll on Healthy Aging, 73% of 2,007 adults aged 50 to 80 years believed that long-term care facilities should require influenza vaccination of all medical staff, 71% advocated nonmedical staff vaccination, 61% thought residents should be vaccinated, and 25% said visitors should be vaccinated. In addition, respondents said they would be less likely to choose a facility if they knew that only one-third of staff members were vaccinated.¹⁴

Leaders in these communities need to cultivate a culture where immunization is seen as an integral part of ensuring resident safety and delivering high-quality care. It's not just something staff are told—it's something they have to do. Different strategies and challenges affect immunization patterns among staff, skilled nursing care centers, and assisted living communities.

Staff

For staff, the emphasis on vaccinations should begin during the interview of prospective employees. Candidates can be asked for a vaccination history, and facilities' policies regarding seasonal influenza immunization should be made clear during the interview process. Given the turnover of staff in post-acute and long-term care facilities, influenza vaccine options—such as taking a voucher to an immunizing pharmacy or clinic—may be needed throughout the flu season.

Mass immunization efforts at the beginning of the flu season should make it convenient for everyone; multiple flu clinics should be held at different times of the day so that all staff and all residents have a convenient opportunity to be vaccinated. Staff can be provided vouchers to a local pharmacy or other provider if on-site vaccination is not offered.

Skilled Nursing Care Centers

Because residents in long-term care facilities are living in a communal setting, they need to understand the importance of being vaccinated against communicable diseases. Even in assisted living where residents have their own apartments, they are in the dining room and playing bingo together. In these integrated communities, residents and the three shifts of staff members are going to share germs along with everything else. The opportunities for diseases to spread are higher, and everyone in the community needs to be protected and share responsibility for reducing risks.

Mass immunization efforts at the beginning of the flu season are convenient for residents just as they are for staff. In facilities where resident ambulation is a challenge, a vaccination cart that moves from room to room is more convenient than administration at a central location.

Assisted Living Communities

While skilled nursing care centers have layers of administrator and medically trained staff members and layers of administration to create policies and care for residents, most assisted living communities do not have the same numbers of licensed nursing positions. It should be remembered that the residents in assisted living do not generally have complex medically unstable conditions requiring licensed nurses around the clock. In addition, while vaccinations can be mandated for residents of skilled nursing care centers through policies relevant for health care institutions, those choosing to live in assisted living communities generally are maintaining their relationships with their prior medical providers outside the residential setting. Skilled nursing care centers and other types of nursing homes are thus responsible for the medical care of residents; in assisted living, many residents maintain primary responsibility for their own medical care.

As Americans enjoy added years of healthy living, the average age of the person in assisted living communities has increased; more than half are now 85 years of age or older.¹⁵ With this increased age, communities are seeing a rise in acuity levels, with some residents receiving peritoneal dialysis or intravenous therapies within the assisted living community. The increased age and associated comorbidities put these individuals at increased risk of morbidity and mortality associated with influenza and pneumonia and demonstrate the need for vaccinations in these settings. Further, with increased management of chronic and acute health conditions of assisted living residents there are needs for changes in licensed nurse staffing and better systems of recordkeeping, documentation, and tracking in the communities—and these can be used in vaccination programs within assisted living communities.

Strategies

Vaccine advocates should work with the leadership of long-term care chains to obtain buy-in for immunization programs and help ensure effective communications about need, scope, and timing to those at the local level. Health professionals have different levels of involvement in assisted living communities (depending on state law and acuity level of residents), but they are important allies in immunization education campaigns targeting residents and their health care providers.

Strategies for overcoming challenges to immunization among staff and residents of post-acute and long-term care facilities are shown in Tables 1 through 3. Examples include fostering a culture in which influenza and pneumococcal immunizations are seen as an integral part of ensuring patient safety and delivering high-quality care, and getting buy-in from administrators and leaders in facilities, starting at the top of the organizational structure.

Consent for Vaccines in Post-Acute and Long-Term Care

Before long-term care facility residents and staff members can be vaccinated against influenza, pneumococcal disease, shingles, and other infectious diseases, consent must be obtained, Barbara Resnick, PhD, RN, CRNP, of the University of Maryland, told participants at the meeting. Beyond the staff and residents, educating and involving the family and other legally authorized representatives are critical to optimizing the vaccination rates in facilities. Everyone in a facility needs to know from their first point of contact that the philosophy of care for the community is that all residents and staff, unless a contraindication exists, must be vaccinated and that initial consent documents remain in force over time. In the process of obtaining informed consent, the staff member, resident, or the resident's legally authorized representative must understand the benefits and risks and make the final decision.

Staff

As detailed in Table 1, post-acute, assisted living, and long-term care facilities should have in place a comprehensive vaccination policy that applies to everyone in the facility on a regular basis, including employees, contractors

(e.g., consultant pharmacists), and others (e.g., health professions students and residents). The expectation for providers to be fully vaccinated should be covered by written policies, and renewable consent should be obtained during hiring and orientation processes.

Table 1. Ideas Generated by Stakeholders for Increasing Vaccinations of Staff of Post-Acute, Assisted Living, and Long-Term Care

Brainstorming Topics	General Strategies	Manager/Leadership Strategies	Needed Support Tools and Potential Partners
Engaging leaders to take ownership and address barriers	<ul style="list-style-type: none"> • Make mandatory vaccination policies clear during hiring process. • Vaccinate within 48 hours of hiring. • Use differing communications methods. • Use staff/peers as educators and get buy-in from those not initially supportive. • Make vaccines free, mandatory, and easy to get (on-site administration during multiple shifts, days of week). 	<ul style="list-style-type: none"> • Emphasize cost–benefit figures for staff with health insurance and consider the costs of an outbreak (costs of temporary/agency workers to replace sick employees). • Consider impact on facility quality measures and reputation in community, increased acuity of care when residents are ill, cost of preventive and treatment medications, and loss of revenue when residents are transferred to acute or rehabilitative care. 	<ul style="list-style-type: none"> • Harness immunization coalition groups. • Leverage other federal accountability efforts (e.g., infection prevention). • Engage public health staff to educate staff at local level. • Use increased vaccination rates to improve profile of facility (“flip the script” on those opposed to vaccines). • Encourage staff to bring family members to Vaccinate Your Staff days at local health departments.
Getting to “go” through informed consent policies	<ul style="list-style-type: none"> • As part of a comprehensive process for employees, contractors, and others (e.g., health professions students and residents), obtain renewable informed consent during the hiring/ orientation process. 	<ul style="list-style-type: none"> • Develop webinars for staff given by subject matter experts. • Leverage CDC/CMS/federal leaders (similar to federal efforts to reduce use of anti-psychotics in long-term care). • Use existing educational materials or develop new ones. 	<ul style="list-style-type: none"> • Use electronic/online consent forms (as used in schools). • Tailor to individual facilities (smaller ones might not have money to go electronic). • Leverage white papers and other materials available from national trade associations.*
Addressing cost and billing concerns	<ul style="list-style-type: none"> • Enforce existing quality metrics for health care workers. • Offer vaccinations with no or minimal out-of-pocket costs. • Look into 317 funds for uninsured or underinsured staff. 	<ul style="list-style-type: none"> • Streamline billing—no reason not to bill when staff are insured. • Alleviate the burden on own nurses by using an agency to vaccinate all staff. • Evaluate cost-effectiveness for large staff-insured entities to purchase vaccines and administer on their own. 	<ul style="list-style-type: none"> • Use checklist of best practices for vaccination clinics that are held at satellite, off-site, or temporary locations—developed by the NAIIS Influenza Working Group. • Partner with large health systems that get a lot of resident transfers. • Partners: manufacturers, public health, immunizers, and volume-purchasing groups.
Staying motivated: education, incentives, and measurement	<ul style="list-style-type: none"> • Provide vaccination incentives such as gift cards, time off, raffles, competition between units or floors. • Provide paid time off so employees don’t come to work when sick. • Conduct surveys to understand staff motivations. • Address myths—emphasize “don’t take the disease home.” • Have a visual for campaign success (e.g., something like the thermometer used in fundraising). 	<ul style="list-style-type: none"> • Track and emphasize ROI using transparent data, dashboard, or other visual means. • Promote culture of investing in staff so that they feel more ownership. • Show that management cares about staff and their families. • Continue educational and motivational efforts. • Address the high turnover of staff that creates ongoing need for vaccinations. • Support mandates for staff vaccinations and reporting of staff or residential cases and vaccination coverage levels to state immunization information systems. 	<ul style="list-style-type: none"> • Link vaccination coverage to the payroll database. • Create a calculator or detailed case study of impact of epidemics on staff (e.g., illness, absence, increased workload), costs of care (e.g., dining isolation, housekeeping, laundry, communication with families), and costs of medications needed for prevention or treatment of illness. • Partners: pharmacies, vaccine manufacturers, trade organizations, department of health, CDC, CMS, immunization coalitions, and professional organizations.

* National groups include AMDA—The Society for Post-Acute and Long-Term Care Medicine, Immunization Action Coalition, and National Foundation for Infectious Diseases. Mass immunizer groups such as Passport Health, Maxim Healthcare Services, and Visiting Nurse Association also have consent documents and procedures.

Abbreviations used: CDC, Centers for Disease Control and Prevention; CMS, Centers for Medicare and Medicaid Services; NAIIS, National Adult and Influenza Immunization Summit; ROI, return on investment.

Health professionals in the facility are important champions for vaccines. The recommendation of a trusted health professional is the strongest predictor of people getting vaccinated.¹⁶ Educational and motivational sessions should be provided to facility staff members, especially those in the health professions, with the goal of making everyone an immunization champion.

Skilled Nursing Care Centers

In skilled nursing care centers and other types of nursing homes, vaccinations of residents can be required on admission. Because approximately half of the residents in these centers have some degree of dementia—possibly affecting their ability to provide informed consent, or which might later worsen to the point that they can no longer do so—facility admission is a preferred time for getting a lasting consent for seasonal influenza vaccinations and other vaccines requiring subsequent doses. Influenza vaccinations should also be included on standing orders at admission so that these are provided annually to residents.

When obtaining informed consent, residents can demonstrate their ability to provide their own consent for vaccinations by showing they understand what is about to happen, what specific procedure will be performed, and what is expected of them. Beyond the patient, educating and involving the family and other legally authorized representatives are critical to optimizing the vaccination rates in facilities. The resident and the family need to know from the point of admission that a facility expects all residents and staff, with rare exception, to be vaccinated and that initial consent documents are in force throughout a stay, regardless of the length of stay.

Facilities with rehabilitation units and those with post-acute care units serving primarily short-stay patients have a different set of challenges. Immunization status and consent status are sometimes difficult to determine and admissions are more frequent. Rather than spend a lot of time looking for the information, consent should be obtained from short-stay residents or legally authorized representatives and seasonal influenza vaccinations and other vaccines should be administered as indicated or re-administered if appropriate documentation is not available.

Assisted Living Communities

While most residents in assisted living communities maintain their own set of health care providers and responsibility for their own health care, facilities can still do much to encourage vaccination of residents and regular visitors to the facilities. Making vaccines a regular and integrated part of the fabric of assisted living and other long-term care facilities helps safeguard the health of everyone in the community. Managers and facility leaders—including administrators—should be the first in line to get their influenza vaccination to set an example for other staff members in the facility.

As listed in Table 2, assess vaccination status and needs during the admissions process, and begin reinforcing the idea that residents have a responsibility to others in the community to stay vaccinated. Flu vaccine drives and wellness days—perhaps including local celebrities or well-known people who can advocate for vaccines—provide the opportunity for assisted living community residents to act on their intent to get vaccinated.

Stakeholders at the meeting addressed these and other ideas in breakout sessions that focused on informed consent issues and processes, and then they reconvened to share thoughts. Suggested strategies from the literature for addressing or easing the process of consent include the following:

- Make consent part of the standard admission process.
- Use a standard form to record all vaccine-related information for each resident.
- Implement standing orders.

Table 2. Ideas Generated by Stakeholders for Increasing Vaccinations of Residents of Assisted Living Communities

Brainstorming Topics	General Strategies	Manager/Leadership Strategies	Needed Support Tools and Potential Partners
Engaging leaders to take ownership and address barriers	<ul style="list-style-type: none"> Document vaccinations on admission. Take advantage of platforms such as the Welcome to Medicare Preventative Visit and Medicare Annual Wellness Visit to talk about wellness and preventive care. Emphasize protecting those in their families (e.g., Tdap when seeing new grandchildren). Integrate vaccinations into contacts with health care system, including pharmacies. 	<ul style="list-style-type: none"> Get buy-in from the top; it is the key to success. Market the “wellness” of facilities; it is a great approach. Emphasize that the healthier the residents, the easier it will be for staff to take care of them. Help people maintain their lifestyles, functionality, and independence. 	<ul style="list-style-type: none"> Develop/use apps/registries to better access when and which vaccines have been administered. Partners: pharmacies and community organizations.
Getting to “go” through informed consent policies	<ul style="list-style-type: none"> Host flu vaccine drives and wellness days. Include in residential agreement—“my public health responsibility to others”/“good neighbor.” 	<ul style="list-style-type: none"> Authorize use of “make us better than others” score card/report card. Benchmark across others. Enlist a celebrity or local personality to serve as model for others. Leverage staff “favorites” in discussions with residents. 	<ul style="list-style-type: none"> Harmonize what staff and residents are asked to do. Enhance facility policy to be greater than regulatory requirement. Conduct more research on informed consent practices (e.g., history, reasons it is used for vaccines).
Addressing cost and billing concerns	<ul style="list-style-type: none"> Use roster billing when vaccinations are administered on site. Bill third parties; contract for services. Follow CDC Billables Project (VaxCare)—health departments billed patients’ insurance. 	<ul style="list-style-type: none"> Consider productivity loss cost. Assess revenue/ROI; don’t leave money on the table. Use roster billing—it’s pretty simple: “Here are the codes. Use them.” Investigate how to become a roster biller—eligibility. 	<ul style="list-style-type: none"> Educate facility staff on billing processes and procedures.
Staying motivated: education, incentives, and measurement	<ul style="list-style-type: none"> Combine messaging with the intervention (e.g., reminder calls, peer influence). Emphasize getting residents fully vaccinated—not just influenza. 	<ul style="list-style-type: none"> Piggyback on broader issues, such as infection control or antimicrobial resistance. Package immunizations with broader preventive care efforts. Happy resident = happy facility = ROI. 	<ul style="list-style-type: none"> Tag coworkers/colleagues to actively participate. Broadcast public service announcements on vaccinations for better health that are consistent across media and provider groups. Share best practices (ICAMP). Partners: public/private partnerships; engage infection control, antibiotic stewardship, and infection control prevention.

Abbreviations used: CDC, Centers for Disease Control and Prevention; ICAMP, Immunization Champions, Advocates, and Mentors Program; ROI, return on investment; Tdap, tetanus–diphtheria–pertussis vaccine.

Financing: Addressing Cost and Billing Concerns

Influenza vaccination is an effective method for protecting the long-term care community from the detrimental effects of the disease. Nationally, the Centers for Disease Control and Prevention estimates that 40,127 deaths were averted through influenza immunization in the nine seasons from 2005–2006 to 2013–2014. The data show that 89% of these averted deaths were in people aged 65 years or older, and another 10% were among working-age adults.¹⁷

Since that study, advances in vaccine technology have produced even more efficacious products. High-dose influenza vaccine is one example of a product that is more effective in older adults than standard-dose formulations, and the extra cost per dose is insignificant compared with the product's added effectiveness and the high cost of just one influenza case in either residents or staff.

When discussions turn to immunization efforts, many long-term care facilities base decisions on vaccine product and administration costs and they do not bill health insurers for vaccine administration to residents and staff.

Staff

Billing for influenza and other vaccinations for staff takes some effort, but is very feasible. The solution can be achieved in-house or through contract firms that specialize in vaccine administration and management.

In some long-term care facilities, managers may elect to provide vaccines to residents and staff directly. A number of factors should be considered in this case. Check to see whether vaccines are available for staff members through public health programs; some programs provide the product, and many will also administer the vaccines. Having a relationship with public health programs can also be beneficial during product shortages because their supplies are more likely to be prioritized. When the facility is administering vaccines, managers must be sure to consider the cost of syringes, administration time, and disposal of medical waste along with the cost of staff time, either overtime for existing staff or agency staff for administration or coverage of shifts. In short, the facility needs to have a complete analysis of the cost.

Another option is engaging a provider of mass immunization services who will administer immunizations to staff and residents as well as take care of the billing. This can work particularly well for facilities that wish to offer the

two pneumococcal vaccines (which are covered under Medicare Part B) and shingles vaccines (covered under Part D) at the same time as influenza vaccine. Other than management planning and staff organization of vaccine clinics, such arrangements are generally budget neutral for the facility.

When working with vaccine provider companies, consider these suggestions to ensure success and maximize impact of the effort:

- Negotiate contracts so that vaccines are provided and administered with no direct costs to the facility; providers will often agree to vaccinate staff members at no cost to get the contract for the entire facility.
- Arrange for clinics on multiple days and at varying times so that all work shifts and days of the week are covered (staff members should not have to come in on their days off).
- Consider having vaccine clinics for staff members one day and residents another day.
- Designate a facility leader and a managerial leader for each shift (often the director of nursing, assisted living director of nursing, or wellness director).
- Ensure that the provider service will do all Medicare and other third-party billing and accept checks from residents.
- Determine whether the provider service will remove medical waste, such as vials and syringes, from the facility for disposal.

Staff illnesses contribute to facility costs. If large numbers of staff are not vaccinated and become ill, facilities must provide replacements. The current U.S. cost of a certified nursing assistant with agency margins is \$35 per hour—

Table 3. Ideas Generated by Stakeholders for Increasing Vaccinations of Residents of Skilled Nursing Care Centers

Brainstorming Topics	General Strategies	Manager/Leadership Strategies	Needed Support Tools and Potential Partners
Engaging leaders to take ownership and address barriers	<ul style="list-style-type: none"> • Mandate vaccinations of health care workers. • Shape regulatory implementation of CMS nursing facility requirements for participation (i.e., mega-rule). 	<ul style="list-style-type: none"> • Illustrate impact of flu on fall risk, frequency, post-recovery. • Require posting of immunization data and facility illness rates (including staffing impact). • Use MDS reporting. • Mandate reporting of outbreaks. 	<ul style="list-style-type: none"> • Target quality measures. • Work with pharmacists and use their resources. • Work with community organizations to lift message. • Partners: AARP, Area Agencies on Aging, and faith-based groups.
Getting to “go” through informed consent policies	<ul style="list-style-type: none"> • Establish a national partnership with CMS to address immunizations (similar to federal efforts to reduce use of antipsychotics in long-term care). • Default should be opt-out of immunizations. • Obtain a general consent for care rather than separate consents. • Include vaccines in standing orders. 	<ul style="list-style-type: none"> • Implement a national consent project to help facilities adopt universal consent at admission. 	<ul style="list-style-type: none"> • Draw upon materials that specify which vaccinations residents need.
Addressing cost and billing concerns	<ul style="list-style-type: none"> • Be proactive. • Build relationship between nursing department and finance department. • Create a process checklist. • Simplify criteria around roster billing. • Use roster billing first and then fill in other insurance coverage. 	<ul style="list-style-type: none"> • Enroll employees in flu-coding webinars focused on skilled nursing care centers and nursing homes. • Assess policy on vaccine shortages—prioritize health care professionals over residents? 	<ul style="list-style-type: none"> • Map out the process. • Train staff on billing—develop a billing checklist of what needs to happen so that staff can strengthen the admission process to get the right billing information, understand from a billing perspective how to send in those claims, and identify the CPT codes. • Use coding fact sheets and modules available from CDC and some manufacturers.
Staying motivated: education, incentives, and measurement	<ul style="list-style-type: none"> • Make it fun for staff—build engagement by providing vaccination during social activities (e.g., bingo, ice cream socials). • Use gamification, quizzes, puzzles to increase awareness. • Use social media to communicate with families. • Have facility champion communicate, perhaps through a Facebook Live event. • Station constituent newsletters/TV monitors in common areas: “It’s flu season.” • Find an “influencer” among residents and ask him/her to be informal champion to other residents. 	<ul style="list-style-type: none"> • Use MDS data to show current status/progress. 	<ul style="list-style-type: none"> • Tag coworkers/colleagues to actively participate. • Broadcast public service announcements on vaccinations for better health that are consistent across media and provider groups. • Share best practices (ICAMP). • Partners: public/private partnerships; engage infection control, antibiotic stewardship, and infection control prevention.

Abbreviations used: CDC, Centers for Disease Control and Prevention; CMS, Centers for Medicare and Medicaid Services; CPT, Current Procedural Terminology; ICAMP, Immunization Champions, Advocates, and Mentors Program; MDS, Minimum Data Set.

which is paid on top of the sick leave for the employee at an average of \$85.52 per 8-hour shift. Should an employee not return after the illness, the average cost of replacing a certified nursing assistant is currently \$3,500, including advertising, training, orientation, and overtime for existing staff while hiring replacements.¹⁸

Skilled Nursing Care Centers and Assisted Living Communities

Decisions regarding the particular type of flu vaccine to administer should be based on what will be most effective for the residents and staff in terms of beneficial outcomes. Cost–benefit is critical to consider as the impact of disease has its own financial implications.

Influenza or pneumonia outbreaks in a skilled nursing care center or assisted living community will result in significant costs to facilities that will outweigh the cost of the vaccines and their administration. For facilities that use less efficacious vaccines because they cost less, the total

cost of these outbreaks can outweigh any savings from lower product costs. Local health departments may close homes or restrict new admissions, and accountable care organizations and patient safety organizations may review patient care and safety. Adverse media coverage could follow. Residents may need to be transferred to acute care settings, and some may die or be transferred to other facilities for rehabilitation or higher levels of care caused by decreased functionality and loss of activities of daily living. Further, the cost of caregiving for acutely ill residents can also impact the facility in the form of residents needing to receive meals in their rooms rather than dining facilities, increased medication doses, and increased direct nursing care. In a value-based payment environment, reimbursement rates to skilled nursing care centers may be lowered by payers concerned about patient care, and decreases in quality ratings can affect future payment amounts.

Additional recommendations for addressing cost and billing challenges are provided in Tables 1 through 3.

Staying Motivated: Education, Incentives, and Measurement

Keeping leadership, staff, and residents in long-term care motivated and excited about the importance of and need for sound, ongoing vaccination strategies is a challenge. Limited research has explored techniques for achieving this goal, but a number of research studies and helpful social and psychological constructs give important insights.

Perhaps the biggest gap is between findings from research and their implementation in real-world settings. Challenges and barriers that stymie implementation include participants' lack of belief in the intervention; lack of motivation, training, and education of staff members; insufficient attention and support by administration; inadequate staffing levels and high turnover, workloads, and costs; and incongruence between interventions and the philosophy of care.¹⁹⁻²¹

A five-step implementation process is useful for changing people's behaviors initially and motivating them over time:

1. Educating staff and residents with a focus on teaching benefits of the intervention and de-implementing negativities.
2. Evaluating and establishing appropriate resources.
3. Establishing a vaccine plan for the year.
4. Mentoring and motivating staff and residents to comply with the plan.
5. Monitoring results that show the benefits of the plan such as reduction in staff sick days during flu season, fewer days of restricted admissions or access, and decrease in cases of influenza and pneumonia compared with prior years.

Resources

Suggested Immunization Resources for Long-Term Care

- **AMDA—The Society for Post-Acute and Long-Term Care Medicine**
Pneumococcal Vaccination Guidance
<https://paltc.org/publications/pneumococcal-vaccination-guidance>
- **Centers for Disease Control and Prevention**
Barriers and Strategies to Improving Influenza Vaccination Among Health Care Personnel
<https://www.cdc.gov/flu/toolkit/long-term-care/strategies.html>
Billables Project
<https://www.cdc.gov/vaccines/programs/billables-project/index.html>
Contacts for Immunization Information Systems Records
<https://www.cdc.gov/vaccines/programs/iis/contacts-locate-records.html#state>
Menu of State Long-Term Care Facility Influenza Vaccination Laws
<https://www.cdc.gov/phlp/publications/topic/menus/itcinfluenza/index.html>
- **Centers for Medicare and Medicaid Services**
Mass Immunizers and Roster Billing
https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/Mass_Immunize_Roster_Bill_fact_sheet_ICN907275.pdf
- **Immunization Action Coalition**
Standing Orders for Administering Vaccines
<http://www.immunize.org/standing-orders/>
- **National Adult and Influenza Immunization Summit**
Checklist of Best Practices for Vaccination Clinics Held at Satellite, Temporary, or Off-Site Locations
<https://www.izsummitpartners.org/naiis-workgroups/influenza-workgroup/off-site-clinic-resources/>
- **Sample Guidances for Developing Mandatory Staff Influenza Vaccination Policy**
Colorado Hospital Association
http://www.immunize.org/honor-roll/cha_guidance_mandatory_influenza_policy_hcp.pdf
Indian Health Service
https://www.ihs.gov/telebehavioral/includes/themes/newihstheme/display_objects/documents/slides/influenza/fluupdate1016.pdf

For education to work, more participatory approaches are needed; traditional educational approaches have not been shown to be effective in changing behaviors and improving clinical outcomes.²² The “evidence integration triangle” is an active, community-based engagement technique that can bring evidence and facility stakeholders together. When the community examines evidence on an intervention within the context of developing an implementation framework, learning is rapid and the time to adoption of the innovation is reduced.²³

Concepts inherent in the social–ecological model and social cognitive theory are also useful in the implementation and maintenance phases of vaccine programs. Issues to be addressed and questions that arise in vaccination programs fit nicely into the social–ecological model and can be recognized and addressed as such:

- Intrapersonal factors—“What’s in it for me?”
- Interpersonal factors—“What is everyone else doing?”
- Environment—“Is the program making it easy to get vaccinated? Are we incentivizing staff support and education, and are we recognizing those doing exceptional work?”
- Policy—“Are vaccines required under state law or facility policy?”

Social cognitive theory is used to increase individuals’ self-efficacy and thus increase their initiation of and persistence with activities. When people believe they can initiate and complete a course of action (self-efficacy) and that the action will have positive outcomes (outcome expectations), social cognitive theory predicts greater likelihood of behavioral change. Four mechanisms are operative under this theory: successful performance of the activity, verbal encouragement, observation of peers and like individuals performing the activity, and elimination of unpleasant physiologic and affective states associated with the activity. For motivating health care workers, it is especially important that they can see other staff members getting vaccinated. Identifying and intervening with naysayers who are spreading myths or recalling patients who had reactions to vaccine are important actions in keeping staff members motivated to achieve success in vaccination programs.

Applying these concepts in a post-acute, assisted living, or other long-term care facility means identifying and empowering one or more immunization champions and organizing advocates into an immunization stakeholders group.

Stakeholders at the meeting discussed ways of keeping long-term care facility leadership, staff, and residents engaged and excited about immunization efforts. Suggested strategies for implementing programs and staying motivated include:

- Collecting uniform data on vaccination coverage.
- Enhancing education about vaccine safety and efficacy.
- Using incentive and recognition programs.

Tables 1 through 3 list main concepts developed during group discussions at the meeting. Resources mentioned during the group discussions are listed in the sidebar.

A Call to Action

Twelve actions were recommended by the stakeholders at the meeting as next steps to advance immunization efforts in long-term care facilities. Based on the support received for each action, these five areas of focus were prioritized for future consideration by vaccine advocates in GSA and partnering organizations:

1. Increase use of mandatory staff vaccination policies.
2. Make vaccination a condition of hire.
3. Implement mandatory resident vaccination policies across all long-term care settings.
4. Create financing tip sheets (e.g., roster billing, best practices, algorithms, calculator of outbreak costs).
5. Examine tools and resources for opportunities to weave immunizations into other priorities for post-acute and long-term care facilities.

The other recommended actionable items included:

- Increase use of renewable consent documents.
- Publish resident vaccination rates on facility websites.
- Compile and share state law best practices.
- Create sample score cards/dashboards/standing orders for facilities.
- Work with legal consultants to clarify the why and how of consent.
- Develop tips on staff incentives and processes (e.g., visual performance gauge, survey) and how to combine educational messages with strategy.
- Develop infomercials for staff and residents—use consistent messaging for all.

Vaccine advocates can and should work together for positive change in long-term care as supportive members of the immunization neighborhood. Advocates should especially collaborate and share ideas because of their common interest in improving immunization rates based on the Healthy People 2020 goals.



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