



Making Prevention the Priority – How to Boost Adult Immunization Rates

Despite providers' and health agencies' efforts to advocate for the importance of vaccinating adults – especially those most vulnerable to infection – rates of adult immunization remain low, creating a substantial burden on the American health system.

Adult immunization is an uphill battle due to a number of reasons, including cultural misperception and socioeconomic barriers. However, healthcare organizations that make adult vaccination a strategic care priority can realize significant improvements in population health.

In 2015, the overwhelming cause of the economic burden of disease was attributable to poor vaccine adherence by U.S. adults, according to a 2016 study published in the journal *Health Affairs*. For the study, researchers analyzed health data compiled in various national databases on 14 different pathogens that can be inoculated by 1 of 10 available vaccines. In 2015, these pathogens generated an economic disease burden of \$8.95 billion. Eighty percent, or \$7.1 billion, of that burden was attributable adults who'd forgone immunization.

"Low rates of vaccine uptake lead to costs to individuals and society in terms of deaths and disabilities, which are avoidable, and they create economic losses from doctor visits, hospitalizations and lost income," wrote the study's authors. "These results not only indicate the potential economic benefit of increasing adult immunization uptake but also highlight the value of vaccines. Policies should focus on minimizing the negative externalities or spillover effects from the choice not to be vaccinated, while preserving patient autonomy."

Culturally ingrained

While pediatric immunization rates sit above 90 percent, largely because vaccinations are required by school systems, immunization rates among adults have stubbornly remained below goals set by national health agencies. Despite a myriad of health initiatives launched by organizations like the CDC to improve immunization rates among this population, progress has been largely slow-moving and incremental.

"We kind of get pediatric immunizations, it's almost ingrained in the culture, but that's not necessarily the case with the adults," says John Bulger, DO, CMO for population health at Danville, Pa.-based Geisinger Health System and CMO of the system's 500,000-member health plan. "I think one of the challenges is that even though there is a large burden of diseases we have vaccines for, most patients will still not get that disease [whether they're vaccinated or not], so they'll forgo a vaccine."

The substantial benefits and protections offered by adult immunization are often undercut by vaccines' varying rates of effectiveness. Pediatric immunizations like the polio vaccine and the mumps, measles and rubella vaccine offer protection from illness at rates approaching 100 percent. Adult vaccinations, like the flu vaccine, have much lower efficacy rates. The 2014 flu vaccine only reduced an individual's chances of infection by 19 percent. Such low rates can make it difficult to persuade adults and the elderly to partake.

For this reason, it is important for health professionals to openly laud the protections offered by adult immunization.

Pneumococcal disease – which can cause pneumonia, sepsis and meningitis – kills nearly 5,000 people in the U.S. every year, most of whom are adults older than 65 years of age, according to the National Foundation for Infectious Diseases. Studies have shown just one dose of the pneumococcal vaccine can protect 75 percent of older adults from invasive pneumococcal disease and 45 percent against pneumococcal pneumonia. While these protection rates don't match the efficacy of certain pediatric vaccines, the pneumococcal vaccine offers significant protection from life-threatening illness. Still, pneumococcal immunization rates among adults 65 years and older remain below HHS Healthy People 2020 goals.

Another factor inhibiting adult immunization is that many adult patients do not perceive immunization as essential to their wellness care regimen.

"There has been a long history of pediatricians incorporating vaccines into routine

well care," says Jerry Penso, MD, CMO and quality officer for American Medical Group Association and the president of AMGA Foundation. "In the adult world that hasn't been as much a routine for most adult patients as far as well care. Most adults only enter the health system when something is wrong. And we [providers] simply react to whatever the problem is."

Though engaging the older U.S. population in preventive care can be challenging, the current trajectory of America's healthcare system as driven by value-based models of care offer providers a unique moment in history to boost adult immunization rates to all-time highs.

Value-based care and adult immunizations

Under outcome-based care models, preventive care and timely medical interventions have an outsized effect on patient health outcomes. Adult immunization initiatives have the potential to make a substantial impact on care outcomes while remaining cost-effective for hospitals. With more and more health systems focusing on population health initiatives, adult immunization can play a valuable role in caring for vulnerable populations, such as adults older than 65 years of age or patients facing socioeconomic barriers to care.

"More and more health groups and health systems are looking into how to take care of a population of patients, recognizing that it's not only important to treat patients that are sick, but to keep them well," says Dr. Penso. Immunizations offer health systems a cost-effective treatment option that can reduce the instance of high-cost illness throughout a large patient population.

Low-income populations represent a key opportunity for adult immunization. According to the CDC, racial and ethnic disparities persist for the six most common adult vaccinations, with affluent, white adults having a higher likelihood of immunization than their low-income, non-white peers.

With lower vaccination rates, it's unsurprising that poorer neighborhoods are more likely to see disease and illness spread in cases where vaccines could have prohibited their contraction. The

rate of hospitalizations for influenza was double in neighborhoods with at least 20 percent of households below the federal poverty level compared to the rate among neighborhoods where less than 5 percent lived below the poverty line, according to a 2016 study in the CDC's *Morbidity and Mortality Weekly Report*.

Most market place health plans are required to offer coverage for various preventive health services – including immunizations – eliminating a vaccine cost barrier Americans previously experienced. Still, many adults don't take advantage of this opportunity partly because they themselves may not perceive its benefit.

"The value [for patients] is that, relatively speaking, immunizations have a very low cost based upon the value you receive," says Dr. Bulger. "The value lies in not experiencing the secondary complications related to illness like missing work or ending up in the hospital, which can be very costly. What you save by getting a vaccine is really very significant."

For this reason, it's important for providers to communicate the value of immunizations to patients and encourage them to comply with best-practice vaccination recommendations. Previous studies have shown clinician encouragement can significantly influence whether an adult patient decides to get a vaccine. One 2014 study of flu vaccination rates found adult immunization rates across ethnic groups could increase 50 percent or more if providers offered to administer flu shots more frequently, according to the *Journal of General Internal Medicine*.

How hospitals and health systems can boost adult immunization

Hospitals and health systems can take three steps to begin improving adult immunization rates in the communities they serve.

1. Population-level assessment. "The first thing to do is understand your own data and the population you're trying to serve," says Dr. Bulger. "If there's a gap between the number of patients and the number of people in your population who want to vaccinate, then you can ask what are the barriers to vaccines – is it cost, is it convenience – and take steps to address those barriers." This involves using health

data to measure incidence of illness within a certain population, as well as the distribution of illness within the region.

2. Get involved in trade associations. Dr. Bulger recommends hospitals and health systems join trade associations that provide resources and support designed to boost adult immunization rates. By participating in these peer groups, health systems can gain valuable insight into best practices, effective intervention strategies and thought leadership.

3. Leverage interdisciplinary partnerships. Forming teams of providers from across disciplines to champion and implement new care strategies is essential to ensure the success of any hospitalwide initiative. Increasing the rates of adult immunization is ultimately going to occur at the provider-patient interaction level. Teams comprised of physicians, nurses and pharmacists can help entrench new care approaches into the workplace culture.

Adult immunization strategy in action

AMGA is an example of an organization that has helped members make substantial improvements in adult immunization rates.

From February 2015 to April 2016, the AMGA conducted the Adult Immunization Best Practices Learning Collaborative. The 14-month pilot program was focused on improving rates of pneumococcal vaccines among patients 65 years of age and older per CDC guidelines. The initiative enrolled seven member organizations and used the Optum One population health analytics platform to enable providers to identify vaccine candidates and track immunization rates.

"The first thing that these groups all did was measure. They took an inventory and asked what is our flu vaccine rate both in our senior patient population and other high-risk patient groups," says Dr. Penso, who leads best practices learning collaboratives for more than 400 member groups in his role at AMGA. "Then they formed multidisciplinary teams – which could consist of pharmacists, physicians and nurses – to work together to change work flows to address the issue."

Changes at participating organizations included gearing EMR alerts to notify

providers of patients who may be due for vaccination. The overall strategy, according to Dr. Penso, was threefold:

- Measure
- Form care teams
- Redesign care

The pilot program successfully increased rates of compliance with CDC's pneumococcal vaccine guidelines across the collaborative organizations from 4 percent to 34 percent, collectively. This percentage increase is representative of approximately 190,000 additional patients vaccinated. Based upon the success of this pilot program, AMGA Foundation and Optum – with the support of Pfizer – launched an expanded collaborative effort this year.

"We're working with 40 of our groups right now," says Dr. Penso in reference to the expanded collaborative. "Hundreds of thousands of patients will benefit from this program."

Health systems and hospitals can also get involved with coalitions working to facilitate the sharing of best practices in regards to adult immunizations. From May 9-11, the Immunization Action Coalition hosted the National Adult and Influenza Immunization Summit in Atlanta. At the summit, experts gathered to discuss strategies and difficulties pertaining to the improvement of adult influenza vaccination in a rapidly changing health-care environment. [Note: *Becker's* will be publishing a whitepaper in the near future on the key discussions and takeaways from the event.] Additionally, the summit's website provides access to adult immunization resources, including information on how to properly code and bill for adult vaccinations.

A call to action

While adult immunization rates have been historically low, the emphasis on improving health value for patients is driving hospitals and health systems to find new ways to intervene. Low rates of adult immunization should no longer be accepted as the status quo. It's time for hospitals and health systems to take advantage of the resources available to improve vaccination rates among their adult patient populations. ■



National
Adult and
Influenza
Immunization
Summit

The Immunization Action Coalition (IAC), a 501(c)(3) non-profit organization, is the nation's premier source of child, teen, and adult immunization information for healthcare professionals and their patients. IAC works to increase immunization rates and prevent disease by creating and distributing educational materials for health professionals and the public that enhance the delivery of safe and effective immunization services.

The National Adult and Influenza Immunization Summit (NAIS) is a year round partnership which includes an annual meeting. The NAIS is dedicated to addressing and resolving adult and influenza immunization issues and improving the use of vaccines recommended by CDC's Advisory Committee on Immunization Practices. The NAIS consists of over 700 partners, representing more than 130 public and private organizations. For more information about NAIS please visit <https://www.izsummitpartners.org/>.