

## Lowering the Burden of Adult Disease, One Shot at a Time

**BECKER'S** HEALTHCARE



National Adult and Influenza Immunization Summit



Although adults shoulder the greatest burden of illness, hospitalizations, disability and death from vaccine-preventable diseases, attention to vaccination needs for U.S. adults has largely been overlooked.

The CDC recommends vaccinations throughout a person's lifetime. Since its creation in 1993, the U.S. Government's Vaccines for Children Program has contributed to high vaccine coverage levels by providing vaccines to underinsured, uninsured, Medicaid-insured and Alaska Native/American Indian children. School requirements for children's vaccinations also significantly contribute to high pediatric vaccination rates. The adult population lacks the same public health infrastructure and financial support as the pediatric population when it comes to immunizations.

This whitepaper discusses contributors to lagging U.S. adult immunizations and opportunities for advancing vaccination efforts. Industry experts discuss key challenges pushing adult vaccination programs to the wayside, such as data exchange complications and absence of provider priority, and recommend six action items healthcare systems can implement to overcome obstacles and Many adults have failed to receive recommended vaccinations for influenza, pneumococcal disease and tetanus, diphtheria and pertussis vaccines among others .

- Influenza: Every year, influenza infects between 5 percent and 20 percent of the U.S. population, according to the <u>CDC</u>. In 2016, the <u>CDC</u> reported people 50 years old or older who received the influenza vaccine decreased their hospitalization risk from influenza by 57 percent.
- Pneumococcal disease: Pneumococcal disease can cause pneumonia, meningitis, middle ear and sinus infections, and sepsis. Annually, about 900,000 U.S. adults contract pneumococcal pneumonia and between 5 percent and 7 percent will die, according to the CDC. Two vaccines pneumococcal polysaccharide vaccine (PPSV23) and a pneumococcal conjugate vaccine (PCV13) are available to protect against pneumococcal disease. One PPSV23 dose protects 75 percent of adults age 65 or older against invasive pneumococcal disease, and one PCV13 dose protects 50 percent to 85 percent of healthy adults against invasive pneumococcal disease, according to the CDC. Together, PCV13 and PPSV23 provide optimal protection for adults who are at high risk for pneumococcal disease.
- Tetanus, diphtheria and pertussis: The Tdap vaccine protects against tetanus, diphtheria and pertussis. Before the Tdap vaccine, the U.S. saw about 200,000 diphtheria cases, 200,000 pertussis cases and hundreds of tetanus cases annually. Following vaccination implementation, inclusive of childhood vaccination programs using the DTaP vaccine, tetanus and diphtheria cases fell by 99 percent and pertussis cases by 80 percent, according to the <u>CDC</u>.

To address the low rate of adult immunizations, experts from across the country gathered at the 2017 National Adult and Influenza Immunization Summit, held May 9 to May 11 in Atlanta, to discuss adult vaccination strategies, challenges and opportunities for improvement. The NAIIS encompasses more than 700 partners in public health; medical, nursing and pharmacist professional organizations; and the healthcare industry.

## 57% DECREASE

of hospitalization risk for people 50 years or older who received the influenza vaccine

### 50 - 85% OF HEALTHY ADULTS

are protected against invasive pneumococcal disease with one PCV13 dose

### 99% DECREASE

of the tetanus and diphtheria cases after the vaccination implementation of the DTaP vaccine



During a meeting before the summit's start, leaders of multiple healthcare systems convened for the first time to discuss challenges and opportunities in advancing adult immunizations in systems settings. L.J. Tan, PhD, chief strategy officer of the Immunization Action Coalition and co-chair of the National Adult Immunization Summit and National Influenza Vaccine Summit, led the pre-summit meeting. In that session, experts delivered six presentations covering a variety of key immunization topics, from healthcare system obstacles to quality measures and case studies. This was followed by a vigorous two-hour discussion of the challenges facing healthcare systems in delivering on the promise of adult vaccinations, and of some solutions that systems have already put into place to address them.

This whitepaper highlights the pressing adult immunization topics discussed at the pre-summit meeting.

"There's no 'Vaccine for Adults' equivalent of Vaccines for Children," Carolyn Bridges, MD, FACP, CDC's Associate Director of Adult and Influenza Immunizations, Immunization Services Division, told the audience during the opening presentation, "U.S. Adult Immunization Program." Therefore, the industry

#### **LESSONS LEARNED**

During the pre-summit meeting, representatives from three health systems discussed how they handled adult immunization obstacles through a variety of creative initiatives. Here are recaps of their perspectives.

## How OU Physicians boosted adult influenza vaccinations by 249%

During the pre-summit presentation titled, "Improving Influenza Vaccine Delivery in a Multi-specialty Clinic," Dale W. Bratzler, DO, chief quality officer of Oklahoma City-based Oklahoma University Health Sciences Center's OU Physicians, explained how his team boosted adult influenza vaccinations.

The practice involved multiple interventions to increase adult influenza vaccinations:

- Standardized "risk factors" template in its EHR
- Freestanding influenza vaccine stations in adult, children's and cancer clincs
- Transparent feedback reports on screening and vaccination rates for providers and clinics

Following implementation of these practices, OU Physicians reported a 249 percent increase in influenza vaccine doses administered between the 2011 to 2012 and 2016 to 2017 influenza seasons.

## Why Denver Health leveraged a centralized vaccine reminder/recall for influenza, Tdap and PPSV23 vaccines

At Denver Health, Laura Hurley, MD, MPH, and colleagues investigated the impact of centralized vaccine reminder/recall using the Colorado Immunization Information System compared to the traditional method of adult vaccination for seasonal influenza, Tdap and PPSV23 vaccines.

Dr. Hurley outlined the study during a pre-summit presentation, "Centralized Vaccine Reminder/

Recall to Improve Adult Vaccination Rates at an Urban Safety Net Health System." The study involved 47,380 patients who had a primary care visit at Denver Health within the previous 18 months.

The study revealed:

- Ages 19 to 64 (not at high risk of pneumococcal disease) received reminders for seasonal influenza and Tdap
  - No difference between control and intervention groups for receipt of at least one vaccine
- Ages 19 to 64 (at high risk of pneumococcal disease) received reminders for seasonal influenza, Tdap and PPSV23
  - Receipt of at least one vaccine was greater for the intervention group compared to the control group
- Ages 65 or older received reminders for seasonal influenza, Tdap and PPSV23
  - Receipt of at least one vaccine was greater for the intervention group compared to the control group

"We were effective using this method in increasing influenza vaccination rates in seniors over a short period of time, without burdening the practices and at a very low cost," concluded Dr. Hurley. "I want to emphasize that data sharing elements were key here."

#### What happened after Henry Ford Health System leveraged the TransactRx process for Part D vaccinations

During the discussion, a director at Detroit-based Henry Ford Health System chimed in to share how the system honed in on Medicare Part D to address adult immunizations, which were low at the health system. must address adult immunization barriers and create standards for delivering vaccinations to this population.

#### WHAT'S HOLDING ADULTS BACK FROM IMMUNIZA-TIONS?

To aid proper administration of immunizations, the Advisory Committee for Immunization Practices approved the annual update to the <u>2017 Immunization</u>. <u>Schedule for Adults</u> — a recommended immunization schedule for adults aged 19 years and older in the United States — in October 2016. The schedule took effect Feb. 1, 2017, compiling ACIP recommendations on the use of 14 licensed vaccines for adults, including recommendations by age group and medical indications. The American College of Physicians, American Academy of Family Physicians, American College of Obstetricians and Gynecologists and American College of Nurse-Midwives all support the schedule.

Fortunately, a lack of interest among healthcare providers in administering vaccines is not the main obstacle. Rather, providers often don't have the education or time to administer appropriate vaccinations. Also, the Adult Immunization Schedule and vaccine recommendations are complex. Organizations often struggle to develop accurate reminders in EHRs.

"We know that providers support immunizations," clarified Dr. Bridges. "But they have competing priorities and, for adult providers, they have relatively little training on immunizations in comparison with pediatric providers."

Dr. Bridges outlined the following challenges associated with adult immunization protocols:

• **Misaligned financial incentives.** Provider pay is becoming increasingly tied to the quality of care delivered through initiatives like the Merit-based Incentive Payment System. But healthcare systems HFHS implemented the TransactRx process to bring Part D vaccinations into 37 clinics. Before implementing the TransactRx pilot, the Zostavax immunization rate in the clinic was 5.8 percent between December 2013 and July 2014. After the pilot between August 2014 and December 2015, the Zostavax immunization rate in the clinic jumped to 12.3 percent.

#### 6 STEPS TO SUPPORT ADULT VAC-CINATION AWARENESS AND COV-ERAGE

- Develop adult vaccination protocols, inclusive of quality measures, so organizations can meet expectations and the industry can address payment barriers.
- 2. Track internal performance for adult vaccinations, gathering data to drive motivation and improvement. Consider initiating standing orders for vaccines.
- Gather and release transparent and bidirectional data that all organizations can access. Create EHR best practice alerts for vaccinations.
- Strengthen support for primary care physicians to achieve adult vaccination rate benchmarks. When necessary, place initiative in nurses' hands.
- 5. Tie adult vaccination protocols to incentives for care teams.
- 6. Alter the marketing around adult immunizations to position less as a choice and more as a necessity.

lack many financial incentives to prioritize the implementation of vaccinations, with only two of the 14 recommended vaccines for adults tied to quality measures. Providers are keeping a pulse on reimbursement as well as their patients' costs.

- Vaccination tracking challenges. Few adult providers use immunization registries for adults: 92 percent of children have one or more vaccines in the registry compared to only 39 percent of adults.
- Payer complications. The top barriers reported by physicians to stocking and administering vaccines for their adult patients are financially driven, and "lack of adequate reimbursement for vaccine purchase" is the most commonly perceived obstacle among providers, according to a 2014 study published in *Annals of Internal Medicine*. In addition, adults' Medicaid coverage for vaccines varies substantially from state to state, while Medicare Part B enrollees receive coverage for influenza, pneumococcal, Td for wound management and hepatitis B vaccines for those at medically high risk. Although Part D plans cover all additional vaccines with copayments, providers often run into barriers when billing Part D and many patients may have very high out of pocket costs.
- Adults receive care at a variety of places. Unlike children who receive the majority of their care at their medical home, either family physician or pediatrician's office, adult patients receive medical care and vaccines at many different locations so providers must figure out which vaccines their patients have already received and which ones they still need.

#### **BRIDGING THE GAP WITH DATA AND IMMUNIZATION MEASURES**

Standardization is missing in America's health infrastructure to inform, educate and motivate adults to receive immunizations. During the pre-summit meeting's question and answer portion participants agreed promoting bidirectional data exchange and establishing benchmarking measures are two steps in the right direction.

#### Accessible and transparent data

Equipped with the appropriate data, organizations can spot gaps in adults' care and mirror the models already in place and effective with

92 percent of children have one or more vaccines in an immunization registry versus 39

percent of adults

Standardization is missing in America's health infrastructure to inform, educate and motivate adults to receive immunizations.



pediatric patients. Too few organizations can do this, however. A lack of bidirectional data exchange presents a significant problem. More cooperation across EHR vendors is needed to establish systematic reporting of patient data to immunization registries. Due to different codes used by EHR vendors, too few organizations have the appropriate forms of clinical decision support for EHR risk-based recommendations.

The CDC is aware of the varying data exchange standards from state to state and the difficulty of bidirectional data exchange, and is currently trying to improve immunization information system (IIS) registries in each state and strengthen those that are not as mature as others.

The American Immunization Registry Association is helping states evaluate their IIS systems to assess their progress toward meeting IIS standards.

#### Immunization measures

Composite measures are bundles of individual quality measures, designed to offer a broader perspective of the vaccination success at a facility as opposed to focusing on an individual vaccine. A composite measure program is intended to foster a systematic approach for all vaccines. Many organizations are tasked with



meeting multiple individual measures, however, so they struggle to launch broad-based immunization quality improvement programs, said Amy Groom, CDC public health advisor for the Indian Health Service. By standardizing one immunization measure as a bundle at the national level — such as bundling Td/Tdap, pneumococcal, zoster and influenza vaccines — individual organizations can unpack the metric to focus on individual vaccines at the local level.

The Healthcare Effectiveness Data and Information Set, which is used by 90 percent of private health plans, includes three immunization-related measures:

- Influenza vaccinations for adults ages 18 to 64
- Influenza vaccinations for adults ages 65 and older
- Pneumococcal vaccinations status for older adults

Organizations may turn to HEDIS measures to outline their own adult immunization programs, providing a base for benchmarking progress.

Dale W. Bratzler, DO, chief quality officer of Oklahoma City-based Oklahoma University Health Sciences Center's OU Physicians, said he has experienced hesitancy from payers to discuss HEDIS' measures when he meets with payers on behalf of OU Physicians, however. "I think the other challenge is there are so many other measures that people are requiring," added Dr. Bratzler.

## OVERCOMING BARRIERS: WHAT IMMUNIZATION SUCCESS LOOKS LIKE AT 3 HEALTH SYSTEMS

Three health systems have found success with creative adult immunization initiatives.

#### **OU Physicians**

Oklahoma City-based Oklahoma University Health Sciences Center's OU Physicians implemented multiple interventions to increase adult influenza vaccinations, including a standardized "risk factors" template in its EHR for physicians to use for decision support during flu season. Additionally, the system built free-standing influenza vaccine stations in its adult, children's and cancer clinics to bring the point of care to a convenient location for patients. OU Physicians leveraged transparent feedback reports on screening and vaccination rates for providers and clinics, identifying lapses or "missed opportunity" care.

Between the 2011 to 2012 and 2016 to 2017 influenza seasons, the number of influenza vaccine doses administered jumped 249 percent at the practice. In terms of vaccination setting, 526 adults received the flu vaccine at a free-standing clinic during the 2016 to 2017 flu season, compared to 333 adults during the 2013 to 2014 flu season.

OU Physicians faced multiple obstacles in implementing adult vaccination programs, however, including discrepant "declination" rates between clinics; competing priorities among staff; and budget increases to stock additional vaccines.

#### **Denver Health**

Denver Health researchers implemented a centralized vaccine reminder/recall using the Colorado Immunization Information System to see its impact versus the traditional method of adult

### 249% INCREASE

of number of influenza vaccine doses administered at the practice after OU Physicians' implementation of creative adult immunization initiatives between the 2011 to 2012 and 2016 to 2017 influenza season



vaccination for seasonal influenza, Tdap and PPSV23 vaccines. CIIS, like other immunization information systems, is a confidential, population-based computerized database that records immunization doses administered by providers.

To examine the effectiveness of centralized vaccine reminder/recall, researchers organized a study involving 47,380 patients who had a primary care visit at Denver Health within the previous 18 months. Between September 2015 and April 2016, adults in the centralized reminder/recall group received three reminder/recalls about one month apart to receive vaccinations. Reminder/recalls consisted of two autodial calls and a postcard with the following message: "We believe that you may be due for a Tdap, pneumococcal or influenza vaccine. Please call the clinic to schedule an appointment to discuss you vaccine needs."

Researchers reported the following:

- Ages 19 to 64 (not at high risk of pneumococcal disease) received reminders for seasonal influenza and Tdap
  - No difference between control and intervention groups for receipt of at least one vaccine
- Ages 19 to 64 (at high risk of pneumococcal disease) received reminders for seasonal influenza, Tdap and PPSV23
  - Receipt of at least one vaccine was greater for the intervention group compared to the control group
- Ages 65 or older received reminders for seasonal influenza, Tdap and PPSV23

• Receipt of at least one vaccine was greater for the intervention group compared to the control group

The cost per person for immunization reminder/recall start-up and implementation was \$0.85 and cost per any shot was \$3.39.

#### Henry Ford Health System

Detroit-based Henry Ford Health System implemented the TransactRx process to bring Part D vaccinations into 37 clinics. TransactRx technology allows providers to leverage the Part D Vaccine Manager to submit Medicare Part D claims electronically.

Specifically, HFHS collaborated with TransactRx and Epic to bill for Part D vaccinations and document them in patient records. Clinic personnel underwent continuous education to ensure standardization of the vaccination process and understanding of payer coverage guidelines.

Before implementing the TransactRx pilot, the Zostavax immunization rate in the clinic was 5.8 percent between December 2013 and July 2014. After the pilot between August 2014 and December 2015, the Zostavax immunization rate in the clinic jumped to 12.3 percent.

#### **ACTIONS TO TAKE TODAY**

Summit participants emphasized the following areas of improvement for adult immunization protocols. Leaders should deploy SMART tactics when approaching these action items, tailoring each to a unique system to be specific, measurable, achievable, relevant and time bound.

- 1. **Establish adult vaccination standards.** To jumpstart change, the industry must develop a requirement, such as through insurance mandates or quality measures, said the director of quality improvement at a Houston clinic. Implementing adult vaccination protocols will require the industry to address provider payment barriers, such as common coding and billing errors.
- 2. Assess performance. Dedicate efforts to adult immunizations after assessing your hospital or health system's performance for various vaccines. It is important to gather data and understand if certain vaccinations are underperforming. Then leverage that data to drive motivation for improvement. Repeated feedback about progress is essential. Some systems may face difficulties when trying to add another task to physicians' already

Leaders should deploy SMART tactics when approaching these action items, tailoring each to a unique system to be specific, measurable, achievable, relevant and time bound by:

1) Establishing adult vaccination protocols

2) Assessing performance

3) Releasing transparent and bidirectional data

4) Educating providers and selecting a champion

5) Linking protocols to money

6) Changing marketing



overwhelmed schedules. Leaders at a southern health system entered a dialogue with physicians to see how they could boost immunization rates without burdening physicians. The system decided to make five vaccines a standing order, so nurses could give the initiative the attention it deserved.

- 3. **Release transparent and bidirectional data.** Gather and report data all organizations can leverage. Set up EHR best practice alerts for vaccinations. Although leaders noted they customized their EMR Epic, others argued the customization steps were too burdensome. A director of quality improvement at a southwest health system said they created their own data sets to achieve bidirectional data exchange, wiping out SNOMED, a suite of standardized terminology for clinical documentation and reporting. Through the LEAN process, which seeks to boost value and efficiency with fewer resources, a southern health system discovered a disconnect between care sites retrieving information. In response, the health system formed a dedicated team to fix the data breaks occurring when transferring data. The director of guality improvement noted the health system often experienced data breaks when patients received immunizations from outside facilities, which either put in information differently or delayed inputting information.
- 4. Educate providers and select a champion. Relying on specialists to take part in the immunization process is unreasonable, most summit participants admitted, because specialists don't have the time to view vaccinations as a priority. Pass the baton to

primary care physicians, but also place more initiative in nurses' hands. Streamline standing orders and ensure buy-in all the way to the executive level. Ultimately, when a provider recommends a patient receive a vaccination that interaction becomes the greatest predictor of vaccination.

- 5. Link protocols to money. Giving providers some skin in the game proves critical to success. Leverage transparent reporting of providers' vaccination rates, as it creates a competitive edge for providers to meet or surpass their peers.
- 6. Change marketing. Shift the dialogue of adult immunizations from a choice to a necessity. Stop asking patients at their appointments, "Do you want your flu shot today?" Instead tell them, "I urge you to get your flu shot today." Additionally, immunization champions will need to brainstorm innovative communication strategies to reach the upper ranks of their systems. Pepper the dialogue with "value" language, emphasizing that prevention is one nonintensive way to jumpstart population health, especially when it requires only a product administration opposed to a change in patient behavior. A health system can test its ability to meet various value components patient experience, chronic illness management and cost effectiveness by implementing an adult immunization initiative.

Adult immunizations are still short of HHS' <u>Healthy People 2020</u> targets, launched in 2010 for health promotion and disease prevention. Only 39 percent of the adult population 18 years or older receive influenza vaccinations, well below the 70 percent goal. Similarly, only 20 percent of high-risk adults aged 19 to 64 have received pneumococcal vaccinations, short of the 60 percent target.

It is time for the industry to leverage the resources to connect disparate data and technology to lower the burden of disease — one shot at a time.

It is time for the industry to leverage the resources to connect disparate data and technology to lower the burden of disease — one shot at a time.

# **BECKER'S** HEALTHCARE

