Pharmacists' Role Within The Immunization Neighborhood

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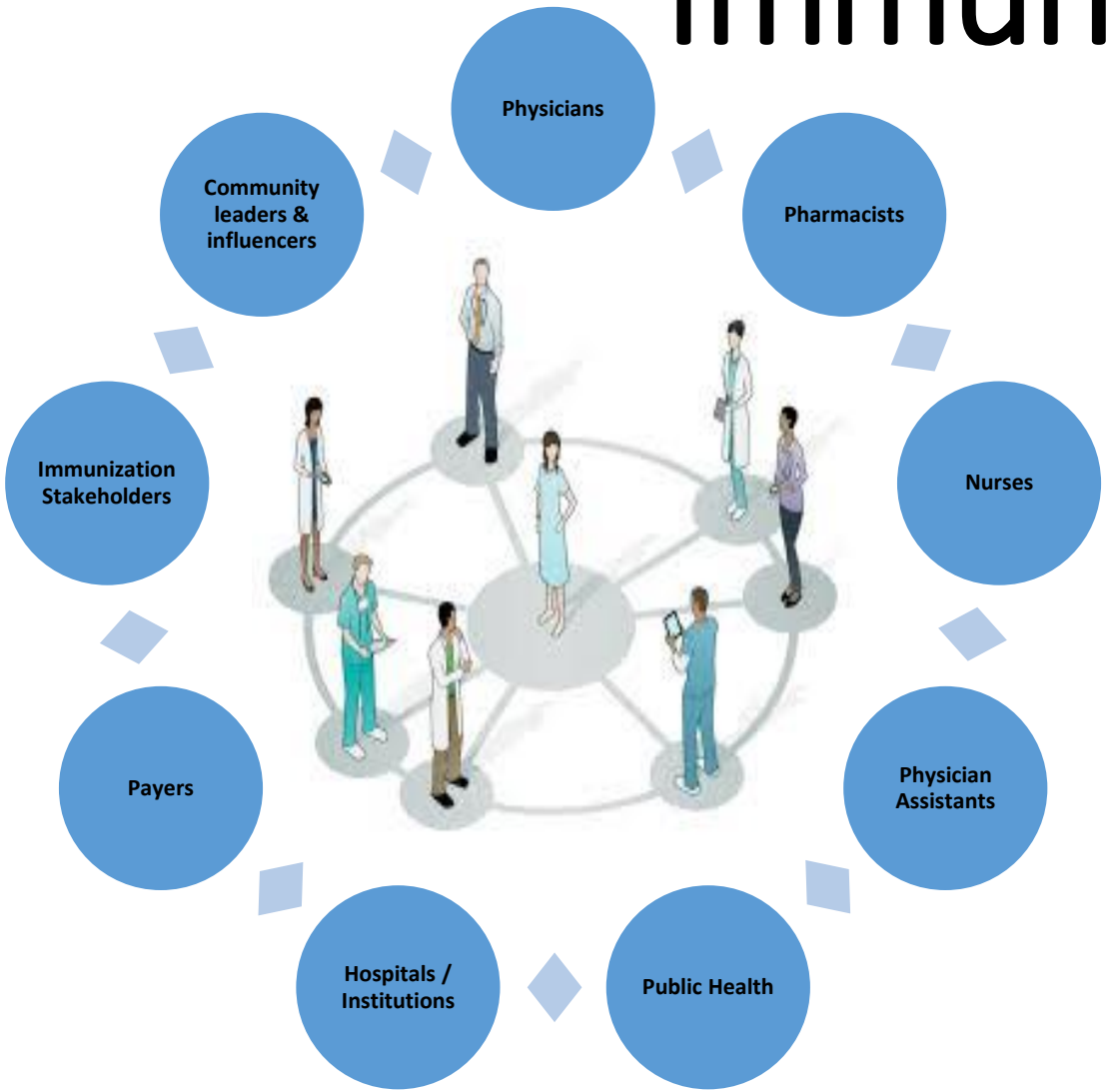
APhA, Chief Strategy Officer
February 16, 2018

Disclosure

- Mitchel Rothholz declares that his wife is an employee of Merck and that he is an employee of the American Pharmacists Association.

Immunization Neighborhood



Immunization Neighborhood

Collaboration, **C**oordination, and **C**ommunication among immunization stakeholders dedicated to meeting the immunization needs of the patient and protecting the community from vaccine-preventable diseases.

Coined by APhA in 2012

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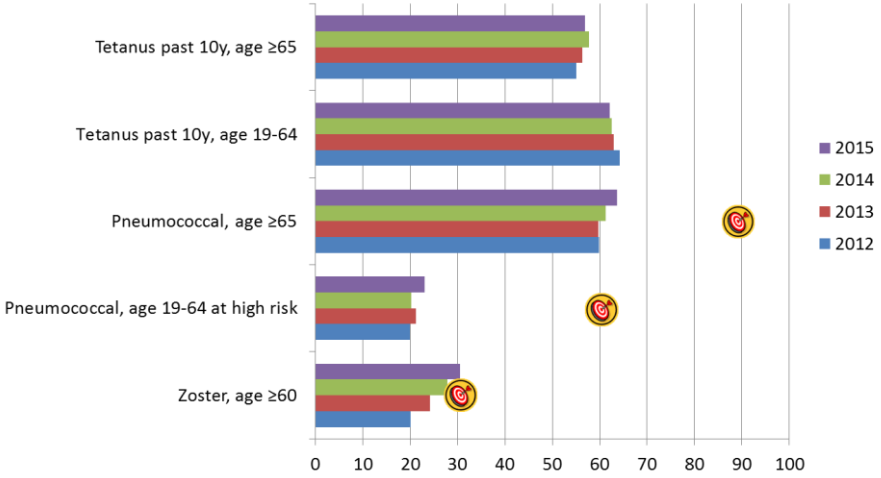
- **Patient and community centric**
- An entire community can invest in **assessing, administering, and/or referring** patients to receive appropriate vaccines.
- Supports the **sharing and exchanging** of immunization **data**

Healthy People 2020 Coverage and Goals

Vaccine	Age Stratification	Coverage Rate*	HP 2020 Goal**
Influenza	≥65 years	66.7%	70%
Influenza	≥18 years	43.6%	70%
Tdap	≥65 years	61.3%	90%
Tdap	≥19 years	20.1%	Not Set
Hepatitis A	≥19 years	9%	Not Set
Hepatitis B	≥19 years	24.5%	Not Set
Herpes Zoster	≥60 years	27.9%	30%
HPV	Females 19-26 years	40.2%	80%
HPV	Males 19-26 years	8.2%	80%

Adult Immunization Coverage Rates, National Health Interview Surveys, 2012–2015



: Healthy People 2020 target

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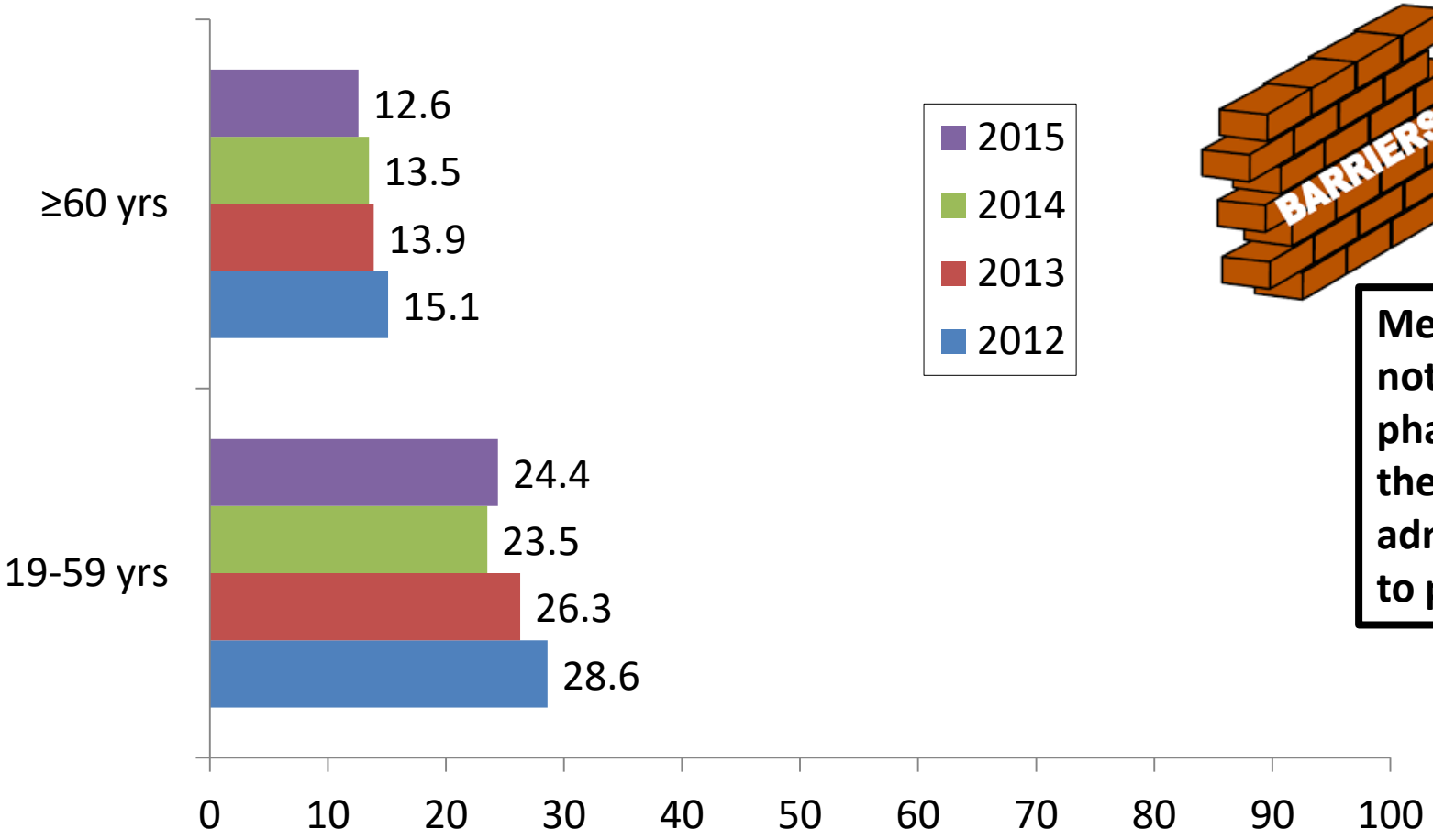
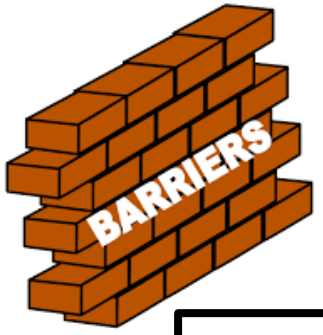
*Source: MMWR Surveill Summ 2016;65(No. SS-1):1–36. DOI: http://dx.doi.org/10.15585/mmwr.ss6501a1
**Healthy People 2020 Goals (presented where set by the United States Public Health Service)

Adults with Diabetes Who Received ≥3 doses Hepatitis B Vaccine by Age, National Health Interview Surveys, 2012–2015





Medicare Part B does not recognize pharmacists as one of the providers who can administer Hep B vaccine to patients with Diabetes

Example: Impact of Vaccination – Influenza

- January 2018: Canadian study shows a six-fold increase in heart attacks shortly after people get the flu
- Acute respiratory illness or influenza-like illness increases acute MI risk 2x; 5x is those with history of MI
- Influenza vaccination effectiveness: Meta-analyses[1–2]
  - 29% (95%CI 9,44) against acute MI in persons with existing CVD
  - 36% (95%CI 14,53) against major cardiac events with existing CVD
- Vaccine effectiveness 29% in acute MI prevention
  - "On par or better than accepted preventive measures [as] statins (36%), anti-hypertensives (15–18%), and smoking cessation (26%)"
  - Influenza vaccination recommended as secondary prevention by American College of Cardiology and American Heart Association

1. Barnes M, et al. Acute myocardial infarction and influenza: a meta-analysis of case–control studies. Heart 2015;101:1738–1747
2. Udell JA, et al. Association between influenza vaccination and cardiovascular outcomes in high-risk patients: a meta-analysis. JAMA 2013;310:1711–20
3. Kwong JC, Schwartz KL, Campitelli MA, Chung H, Crowcroft NS, Karnauchow T, Katz K, Ko DT, McGeer AJ, McNally D, Richardson D, Rosella LC, Simor A, Smieja M, Zahariadis G, Gubbay JB. **Acute Myocardial Infarction after Laboratory-Confirmed Influenza Infection**. *New England Journal of Medicine*, 2018; DOI: 10.1056/NEJMoa1702090

Example: Impact of influenza on pregnant women[1]

- Up to 4X increased risk of hospitalization, especially in third trimester, and for those with co-morbid conditions*
- Up to 8X increased risk for influenza-associated complications, including death, particularly for those with co-morbid conditions**
- Increased risk for influenza-associated complications among postpartum women
- Risk highest during the first postpartum week

*** Chronic cardiac disease, chronic pulmonary disease, diabetes mellitus, chronic renal disease, malignancies, and immunosuppressive disorders**

**** Preexisting diabetes mellitus, pulmonary disease that included asthma, heart disease, renal disease, and anemia**

1. Rasmussen, S.A., et al. 2012. American Journal of Obstetrics & Gynecology; 207(3): S3 - S8.

Addressing our Nation's Opioid Crisis…

OPPORTUNITY

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It is estimated that approximately **1 in 3 people will develop Herpes Zoster (HZ, Shingles) during their lifetime, resulting in an estimated 1 million episodes in the United States annually.**[2]

Zoster vaccine reduces the risk of developing Shingles and PHN[1]

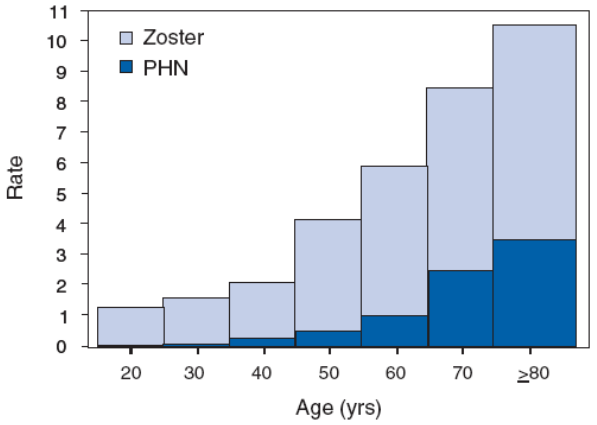
The ***risk for Post Herpetic Neuralgia in patients with zoster is 10%--18%.*** Postherpetic neuralgia is a debilitating complication of HZ. The risk of PHN after HZ increases with age.[3]

Consider

Zoster Vaccination

as one of the tools to reducing the need for opioid medication…

FIGURE 3. Rate* of zoster and postherpetic neuralgia (PHN)†, by age — United States



*Per 1,000 person-years.
†Defined as ≥30 days of pain.

Opioids are a part of the armament practitioners utilize to manage PHN pain. [1]

1. MMWR, June 2008, https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5705a1.htm

2. Harpaz R,, Ortega-Sanchez IR, Seward JF. Prevention of herpes zoster: recommendations of the Advisory Committee on Immunization Practices (ACIP) [published correction appears in *MMWR Recomm Rep.* 2008;57(28): 779] *MMWR Recomm Rep.* 2008;57(RR-5):1-30 [PubMed]

3.Yawn BP, Saddier P, Wollan P, St Sauver JL, Kurland MJ, Sy LS. A population-based study of the incidence and complication rates of herpes zoster before zoster vaccine introduction [published correction appears in *Mayo Clin Proc*. 2008;83(2):255] *Mayo Clin Proc.* 2007November;82(11):1341-1349 [PubMed]

Access Barrier – Vaccine Abandonment

- **<u>Study Highlights Coverage Policy Impact on Zoster Vaccine Abandonment</u>**
- Impact of patient out of pocket expense (co-pays) on patient abandonment of receiving zoster vaccination.
- Overall abandonment rate was 38.9%.
  - Patient out-of-pocket cost (OOP) remained the most significant predictor of abandonment,
    - Patients with OOP in the $15-$34 range (1.6 time higher) compared with those with OOP ≤$14.99, and at 5.53 times higher for those with OOP in the $105-$174.99 range.
    - The study supports the value of recognizing pharmacists as in-network providers and modifying coverage policy regarding patient out of pocket expense.
- To access the study go to: http://www.ajpb.com/journals/ajpb/2016/ajpb_julyaugust2016/factors-associated-with-zostavax-abandonment?p=1 American Journal of Pharmacy Benefits, August 2016 (***2016;8(4):-e0)***

2017-18 Influenza Season

- **Breaking records in cases of influenza and deaths**
  - **Pharmacists are playing active role in administering vaccines, patient evaluation / guidance, and providing anti-viral medication**

- **2017–2018 Recommendation:** ACIP recommends annual influenza vaccination for everyone 6 months and older, including pregnant women, with an injectable influenza vaccine. The recommendation not to use live attenuated influenza vaccine (LAIV) extended for the 2017–2018 season.
-
- **When to Vaccinate. CDC recommends vaccination by the end of October; however, try to avoid missed opportunities with patients whom you might see before then and continue to vaccinate your patients throughout the influenza season.**
-
- **Safe Vaccine Administration.** Proper administration is key to ensuring safe vaccination. Help prevent one vaccine administration error—bursitis of the shoulder—generally caused when vaccines are injected high on the shoulder and the needle enters a shoulder bursa. CDC video: https://www.cdc.gov/vaccines/hcp/admin/resource-library.html.
-
- **Vaccine Supply.** Manufacturers plan to produce approximately 151–166 million doses of influenza vaccine for the 2017–2018 flu season. Based on these projections, the supply of injectable flu vaccine should be sufficient.

Current Adult Immunization Environment

- Adults access medical care at multiple entry points
- There are many types of immunization providers and sites. (including, but not limited to, physicians – generalists and specialists, **pharmacists,** nurses, physician assistants, nurse practitioners, retail stores and clinics, community immunizers, worksites, public health departments, hospitals, travel clinics)
- **Many more adults have become aware of annual influenza vaccination, but fewer are aware of other recommended adult vaccines**

Current Adult Immunization Environment

- Many missed opportunities occur to assess patient vaccination needs
  - Patients open to vaccination when recommended by their provider.
- Differences in vaccines covered by **Medicare B versus D** creates challenges for some providers, but not others
- Vaccine providers are paid different rates by different payers. Not all providers vaccinate. Pay can differ based on in-network status
- Confusion regarding Affordable Care Act coverage

Current Adult Immunization Environment

- There is no federal "Vaccines for Adults" program
- Manufacturers offer Patient Assistance Programs
- Challenges remain with adult immunization documentation among providers
  - Immunization registries and EHRs vary across states and provider networks, respectively
- MACRA/MIPS provide opportunities to improve documentation and communication about vaccination among different providers
- All this is happening in the context of, and in support of, the NVAC recommendations to improve adult immunization

Fundamental Paradigm Shift in Adult IZ

- Adult immunization standards should be applied to all providers of care to adults, those who do and do not vaccinate
- New standards recognize the importance of the healthcare provider recommendation for patients to receive needed vaccines
- Highlights the current low vaccination rates among U.S. adults
- Reflects the changed environment within which adult vaccines are now given

Fundamental Paradigm Shift in Adult IZ

ALL providers of health care to adults are to:

1. ASSESS patient's status for all recommended vaccines at each clinical encounter;
2. Educate and counsel the patient on the recommended vaccines and strongly RECOMMEND needed vaccines; and,
3. VACCINATE at the same visit, OR for providers that do not stock the recommended vaccine, REFER the patient to a vaccinating provider.
4. DOCUMENT the receipt of vaccine by the patient

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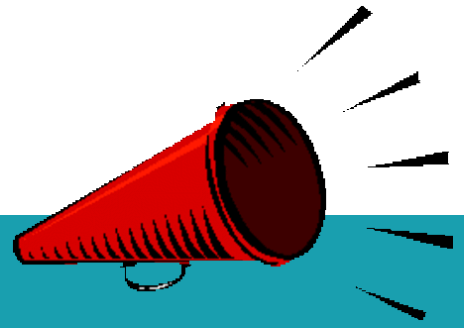

Even if you don't vaccinate, you still need to recommend vaccines to your patients

Challenge: Professionals and Patient Understanding.

Patient Survey: Are any of the following vaccines recommended for you as an adult?

	Yes (%)	No (%)	Don't Know (%)
Influenza	71.8	15.1	13.0
Hepatitis A	14.3	42.4	43.3
Hepatitis B	20.1	39.9	40.0
Pneumococcal	26.4	34.9	38.7
Tdap	11.9	39.0	49.0

FallStyles (September-October, 2012).
http://www.cdc.gov/vaccines/acip/meetings/downloads/slides-feb-2013/03-Adult-Sheedy.pdf

NVAC Adult Immunization Standards

- **Assessing, Recommending, Administering, and/or Referring** patients to receive appropriate vaccines.
- Supports the **sharing and exchanging** of immunization **data** among providers
  - can be focused on populations (pediatric, adolescent and adult), and/or
  - preventable diseases (HPV, pertussis, etc.) to meet the needs of patients and the communities served
- All providers, caregivers and community advocates **have a role** with everyone focused on meeting the needs of the patient.
  - ***Advocate, Facilitate, Immunize***
- Patient **education, comfort level, trusted providers, and timely access** all can influence vaccine uptake and are areas that stakeholders can impact.

PROVIDER SELF-ASSESSMENT OF STRENGTH OF IMMUNIZATION RECOMMENDATIONS

American Pharmacists Association

Practice: _____	No or rarely	To some extent	Somewhat consistently	Consistently	Not applicable
Practice-site Focused					
Educational information / tools on immunizations provided to patients in waiting areas and other means of patient communications					
Provide immunization education tools / surveys at check-in for patients to review/complete while waiting					
Have immunization education messages in areas where the vaccine is administered (posters, brochures, video, etc.)					
Provide immunization messages thru electronic patient portals and/or appointment reminders					
Provide patient access to the immunization records					
Patient-Practitioner Interaction					
You and your staff clearly convey your strong vaccine recommendation ("I recommend you receive vaccine X because…," or "Vaccine X is recommended for you because…" vs saying "Vaccine X is an option if you want it.")					
SHARE the tailored reasons why the recommended vaccine is right for the patient given his or her age, health status, lifestyle, occupation, or other risk factors.					
HIGHTLIGHT positive experiences with vaccines (personal or in your practice), as appropriate, to reinforce the benefits and strengthen confidence in vaccination.					
Share your own immunization status with the patient (show how you walk the walk)					
ADDRESS patient questions and any concerns about the vaccine, including side effects, safety, and vaccine effectiveness in plain and understandable language					
REMIND patients that vaccines protect them and their loved ones from many common and serious diseases					

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Practice: _____	No or rarely	To some extent	Somewhat consistently	Consistently	Not applicable
EXPLAIN the potential costs of getting the disease, including serious health effects, time lost (such as missing work or family obligations), and financial costs.					
Utilize open-ended questions to assess the patient's understanding of the information provided and/or identify beliefs / concerns					
Offer to administer the vaccine at the visit in which you make the recommendation.					
If you don't stock the vaccine, ensure the patient has clear directions about which vaccine to get and where to get it.					
Encourage patients to carry immunization record cards/ access to electronic immunization records					
Immunization information and recommendation delivered in language and way patient can understand (language, culture, other)					
If referring patient to another provider to receive the vaccination you provide a referral order / communication to the patient and/or the provider and request to receive information back when the patient gets vaccinated.					
Patient Action					
Patients take action based on your recommendation (vaccinated by you or someone else)					
Frequency (count number of checked boxes in each column – Goal is to have a higher number in consistently column)					

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Frequency (count number of checked boxes in each column - Goal is to have a higher number in consistently column (75%)

You may also complete the self-assessment at https://fs3.formsite.com/apha/IZRecommendation/index.html

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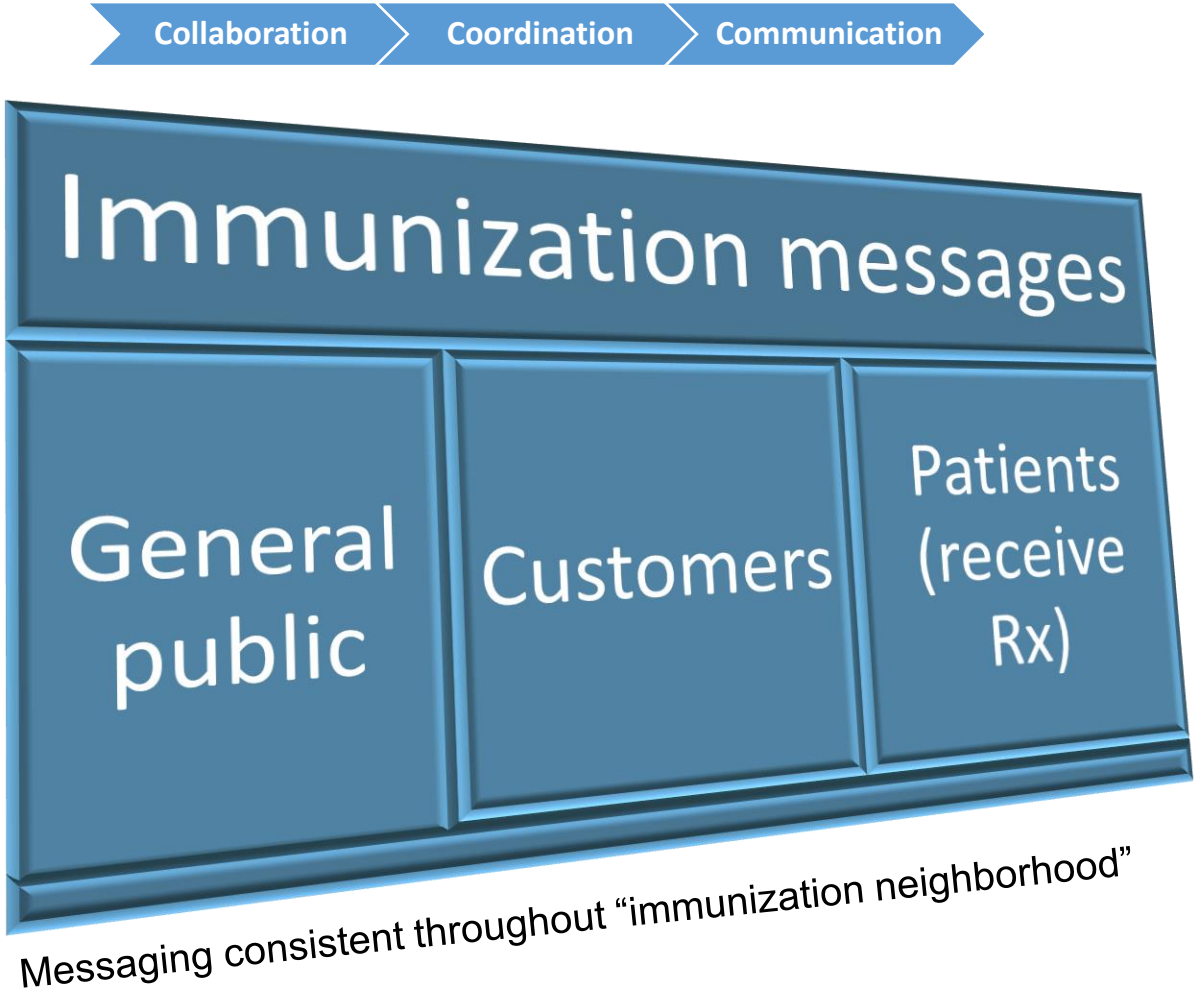
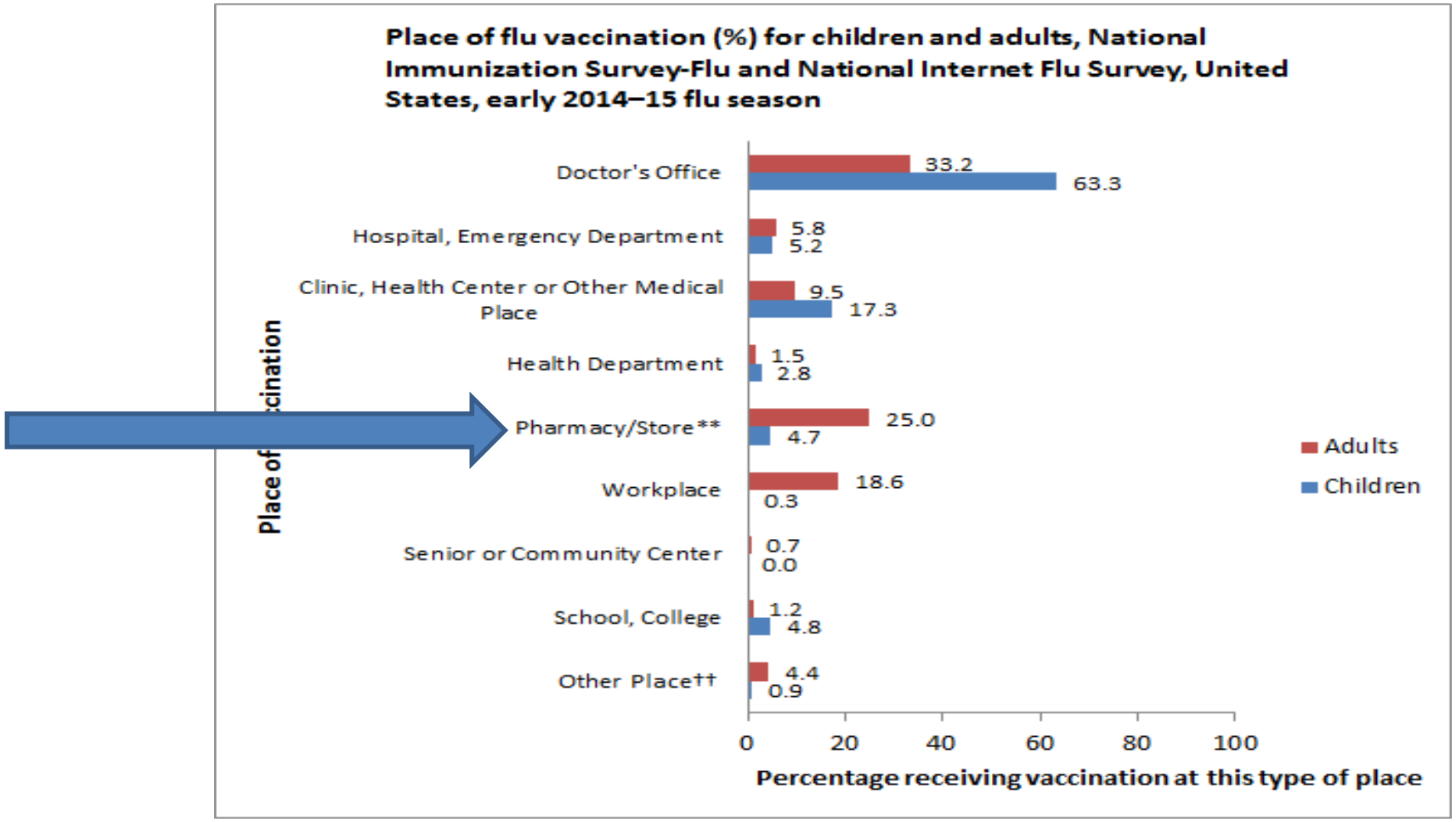
Targeting Opportunities



Place of flu vaccination among children and adults, early 2014-15 flu season, National Immunization Survey and National Internet Flu Survey

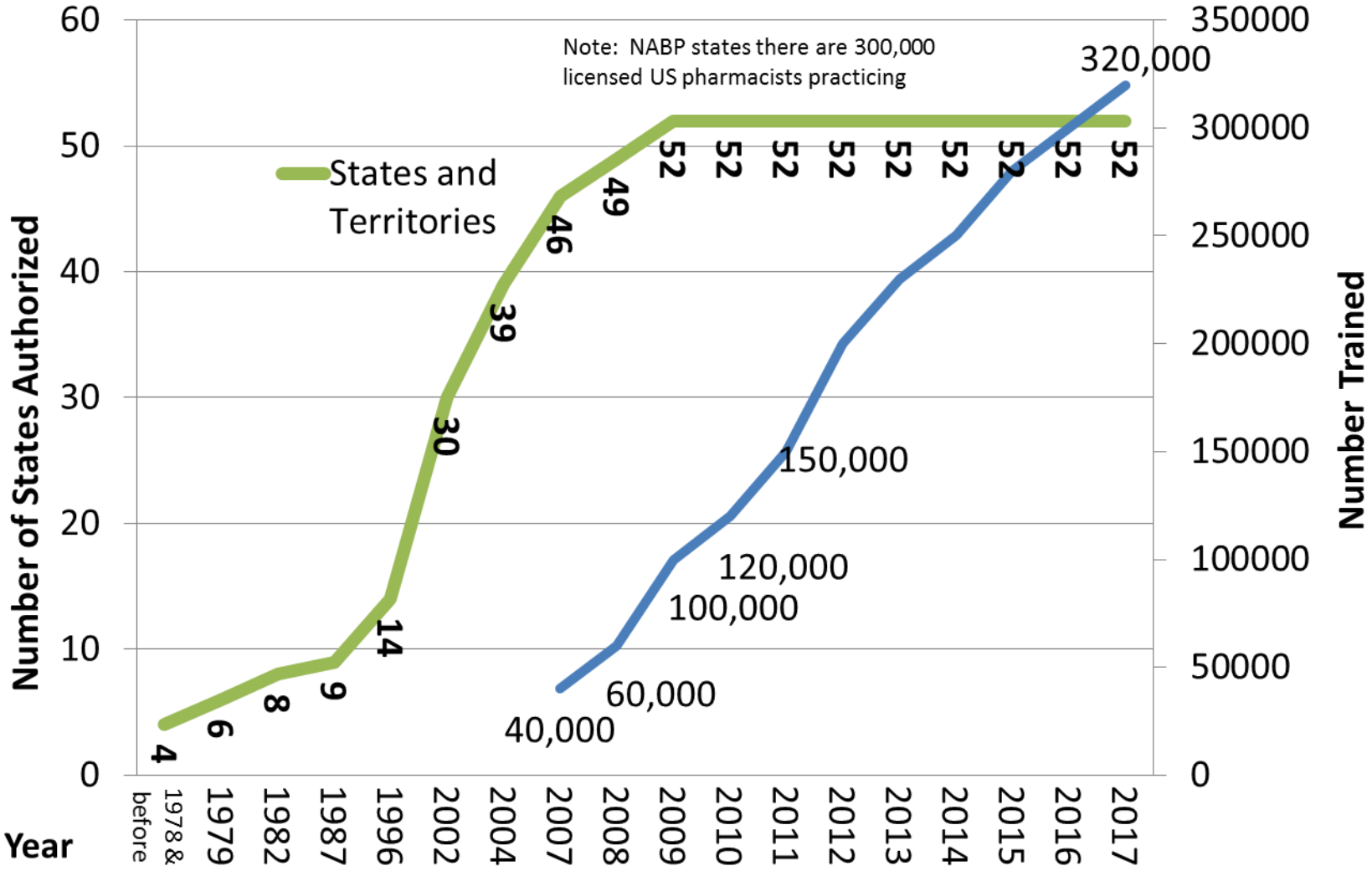


** Pharmacy/Store includes pharmacy or drugstore and local supermarket or grocery store.
†† Other place includes military-related place, other school such as trade school, home, and other unspecified non-medical place.
Available at: http://www.cdc.gov/flu/fluvaxview/nifs-estimates-nov2014.htm

1996 (Twenty-two years ago…)

- Developed certificate training program
  - Across the lifespan
  - Recognized pharmacist roles: educator, facilitator, administer of vaccines (1996 APhA HOD)
  - Guided by recognized standards, guidance and recommendations
    - Support pharmacist role on immunization team (2012: immunization neighborhood)
  - National faculty, Train-the-trainer model – Licensing opportunities
- Engrain importance of immunizations early in student pharmacist career
  - Carry with them into practice
- Not just a training program
  - Organization strategic commitment

Number of States Authorizing Pharmacists to Administer Influenza Vaccine & Number of Pharmacists Trained to Administer Vaccines



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Updated December 2017

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Student engagement in communities

OPERATION IMMUNIZATION
APhA ACADEMY OF STUDENT PHARMACISTS

- Launched in 1997
- National competition (national winner, 8 regional winners)
- **More than 1 million individuals have been immunized**
- The 2015-2016 campaign had the following results:
  - 92 chapters participated / 11,487 student pharmacists participated
  - 1,035 faculty participated / 1,945 pharmacy practitioners participated
  - 111,277 patients immunized
  - 211,283 patients received Health & Wellness/Clinical Services
  - **3,253,576 patients reached through public relations initiatives**

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Education and training

- Nationally recognized 20-hour certificate training program and continuing education programs (www.pharmacist.com/education)
  - high percentage of learners (43%) self-reported a change in performance following the program; 79% indicated that the number of immunizations delivered in their practice has increased following the program. (1)
- Immunization education integrated into student pharmacist curricula
- APhA provides a biweekly immunizing pharmacist listserve and an e-community for immunizing pharmacists
- APhA provides a webinar after each ACIP meeting to update pharmacists on changes in recommendations
- Website, periodicals, publications

(1) *CE Meas.* 2010;4:4-9. doi:10.1532/CEM08.09115

Pharmacy-based Immunization Certificate Training Program

- **Three components to the certificate training program:** (www.pharmacist.com/education)
  - 12 hour (1.2 CEU) self-study modules with case studies and assessment exam
  - 8.0 hour (0.80 CEU) live seminar with final exam
  - Hands-on assessment of intramuscular and subcutaneous injection technique
  - CPR/BCLS certification, as well as OSHA training expected
  - Program updated as recommendations change; faculty expected to subscribe to APhA resources and maintain competency

Self Study	Live Program
Module 1. Pharmacists, Vaccines, and Public Health Module 2. Overview of Immunology and Vaccine Development Module 3. Vaccine-Preventable Diseases Module 4. Patient Care Considerations for Immunizing Pharmacists Module 5. Operating a Pharmacy-Based Immunization Program	The training seminar reinforces and expands on the self-study program and addresses areas such as immunization needs, legal and regulatory issues, and injection-technique training. Participants will be expected to practice giving intramuscular and subcutaneous injections on each other.

Program available for licensing by international partners

Accreditation Council for Pharmacy Education

- **Public Health**
  - Exploration of population health management strategies, national and community-based public health programs, and **implementation of activities that advance public health and wellness**, as well as provide an avenue through which students **earn certificates in immunization delivery** and other public health-focused skills.

EXAMPLE Performance competencies:

- Participate in activities that promote health and wellness and the use of preventive care measures
- **Promote to patients the importance of health, wellness, disease prevention (e.g., immunizations**, tobacco cessation), and management of their diseases and medication therapies to optimize outcomes
- **Provide preventative health services (e.g., immunizations**, tobacco cessation counseling)
- Public Health: Promote to patients the importance of health, wellness, disease prevention, and management of their diseases and medication therapies to optimize outcomes

Clinical Application of Public Health Policy:

Discuss the pharmacist's role in education and intervention in public health initiatives applicable to pharmacy practice

Collect, interpret, and make recommendations based on the results of health and wellness screenings and diagnostic tests

Describe the role of a pharmacist in emergency management

Immunization:

- **Be trained to administer immunizations (preferably early in curriculum to allow for practice and utilization during the professional program)**
- **Describe the Vaccine Information Statement (VIS), the Vaccine Adverse Events Reporting System (VAERS), and state vaccine registries**

Driver for Moving Beyond Traditional Flu Vaccination

http://www.cbsnews.com/news/flu-patch-as-effective-as-flu-sh | Finance - Joe Janela | Flu vaccine patch seems as ...

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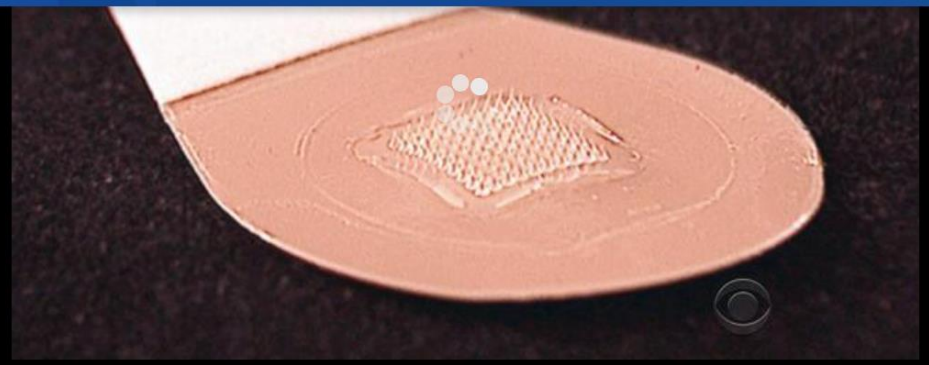

CBS This Morning

Who's to blame in Charlottesville?

CBS This Morning

Trump draws fire on Charlottesville

By ROBERT PREIDT / HEALTHDAY / *June 28, 2017, 9:14 AM*

Flu vaccine patch seems as effective as flu shot

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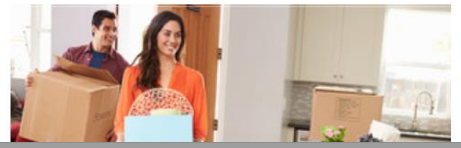
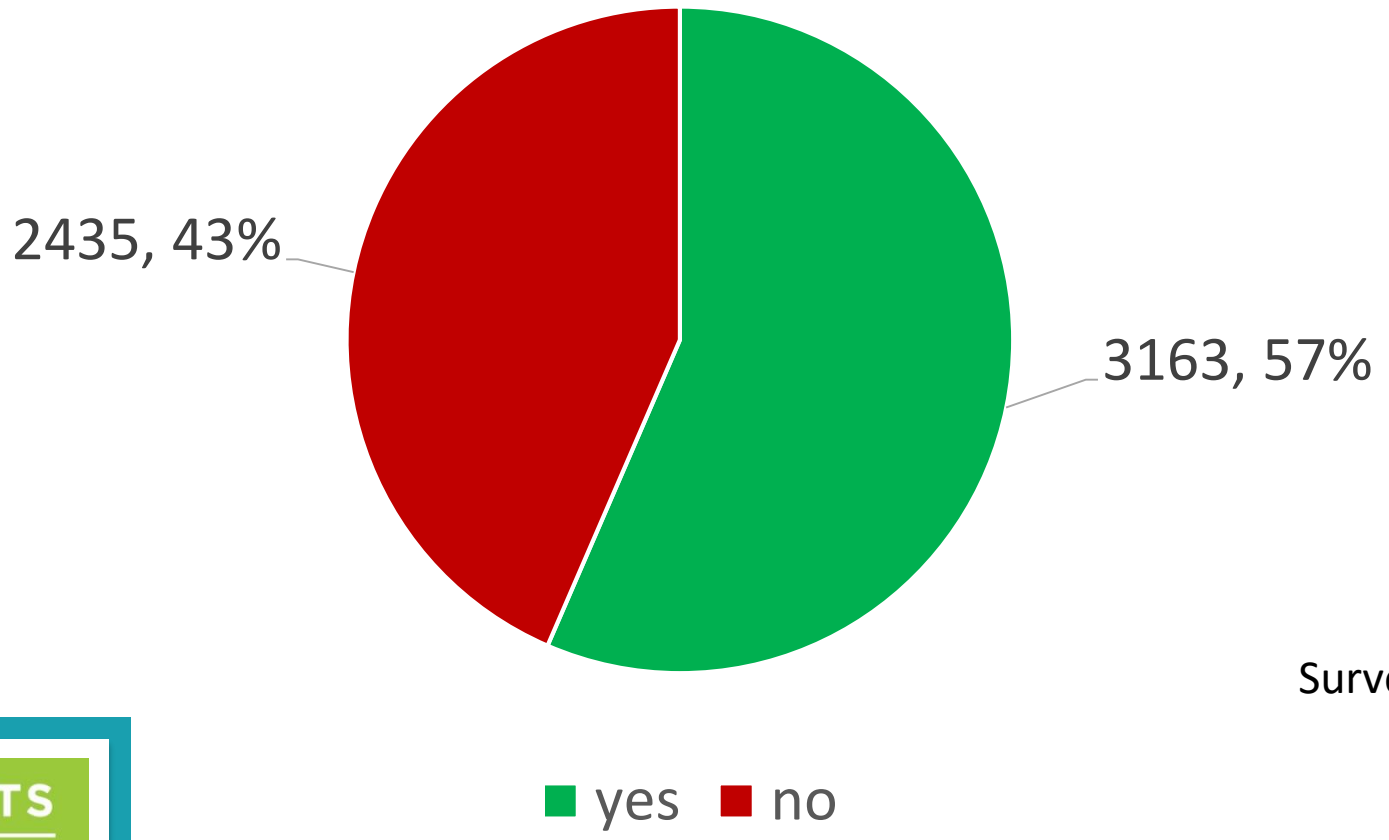


June 28, 2017

How many pharmacy vaccine recipients report having a PCP (CA + MI)?



Survey: July 2017

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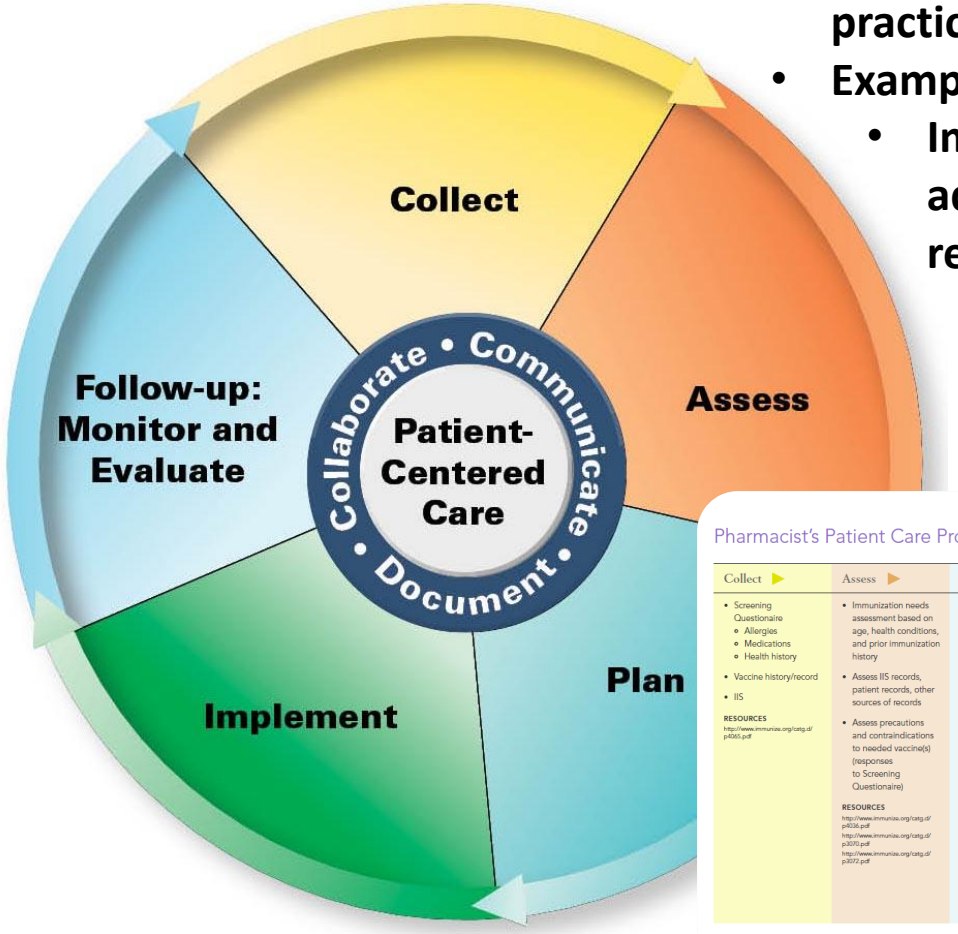
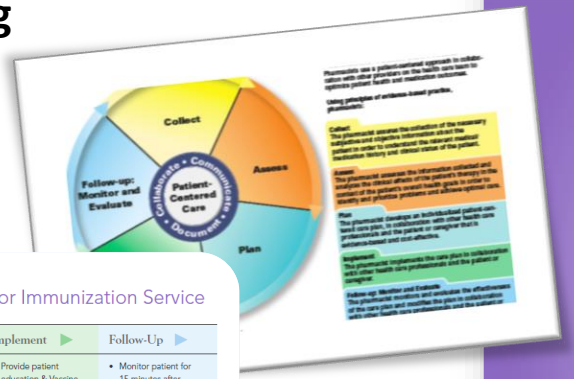
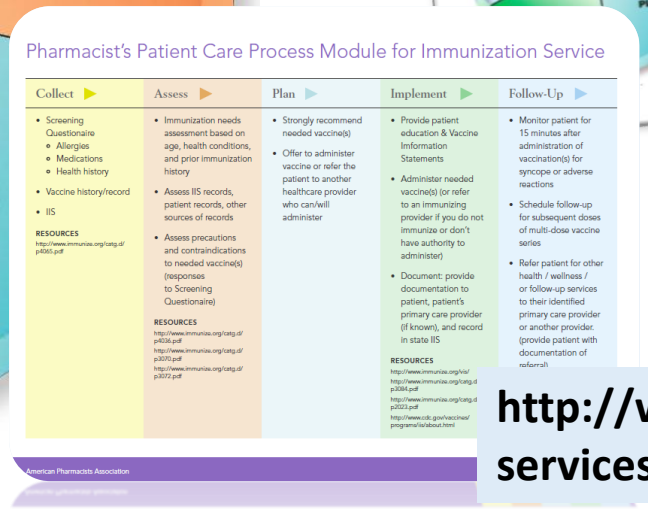
Pharmacists' Patient Care Process: Providing consistency for patients and health care

- Applies to all patient care services delivered by pharmacists in any practice setting
- Example –
  - Immunizations: assessing, administering, and/or referring



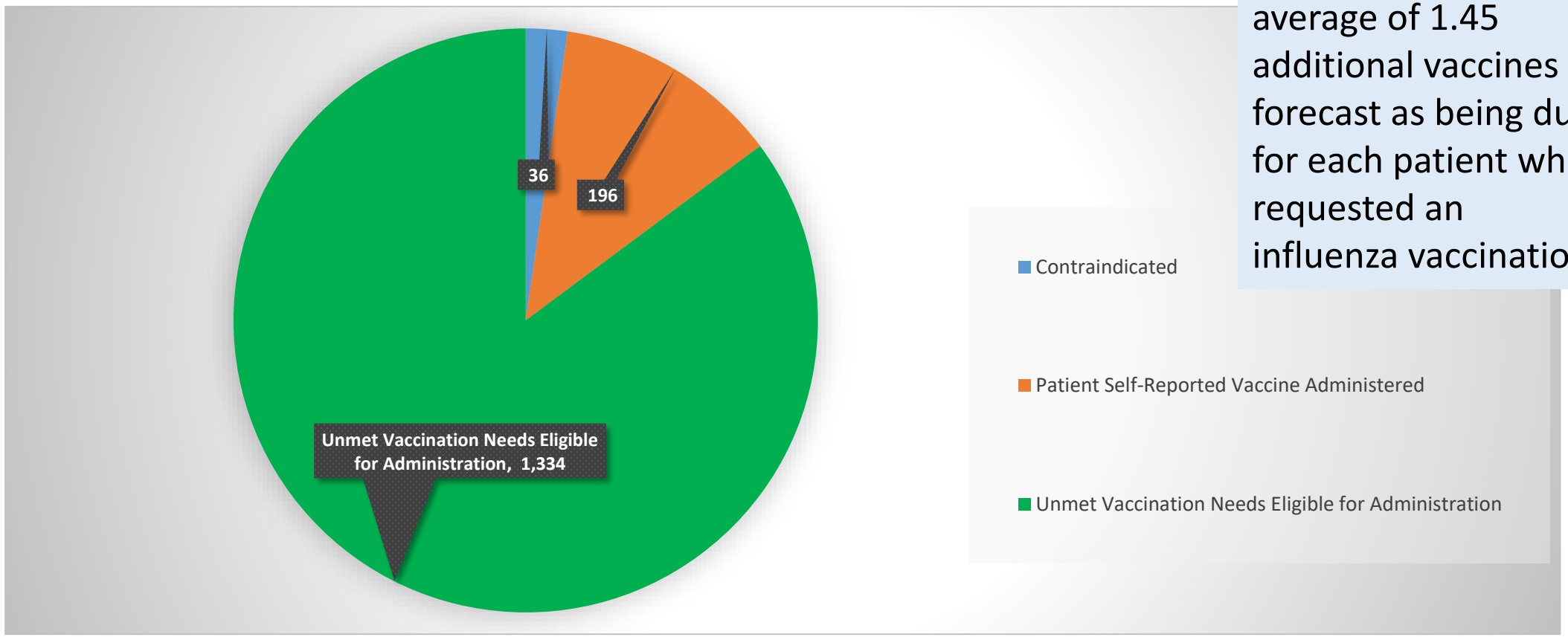




http://www.pharmacist.com/resource-guide-immunization-services?dfptag=imz

Project IMPACT Immunizations Pilot Results: Distribution of Forecasted Unmet Vaccination Needs

There was an average of 1.45 additional vaccines forecast as being due for each patient who requested an influenza vaccination



Population Health Management (available online; DOI: 10.1089/pop.2017.0049, June 2017)

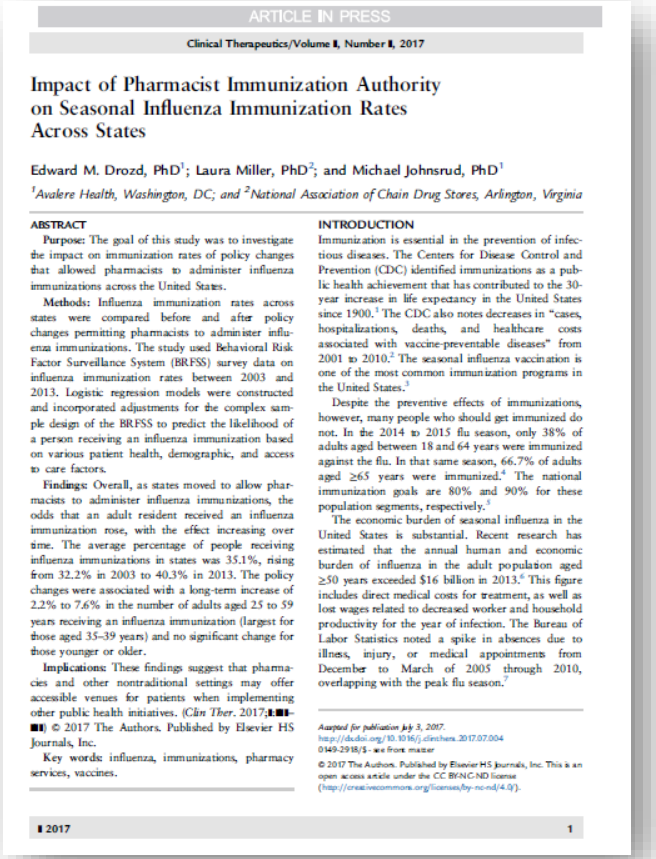
Conclusion: Project IMPACT Immunizations – *Pilot*

With proper tools, pharmacists increase adult vaccination rates

- The Project IMPACT Immunizations innovative practice model enabled pharmacists to conduct comprehensive vaccination history reviews at the point-of-care, which allowed them to:
  - Identify a significant number of unmet vaccination needs
  - Educate patients about their vaccination needs
  - Increase the number of vaccines administered
  - Improve vaccination rates for routinely recommended adult vaccinations
- **As a result of using the innovative process of care, the number of vaccines administered increased by 41.4%**
- We need to continue exploring how to successfully integrate and sustain streamlined principle-centered processes of care that allow pharmacists and other health care providers to utilize actionable point-of-care data to effectively engage and educate patients to improve vaccination rates

Study: *Patients more likely to get the influenza shot when it's available at community pharmacy*

- Published in *Clinical Therapeutics*, conducted by Avalere and NACDS. https://doi.org/10.1016/j.clinthera.2017.07.004
- Findings suggest:
  - pharmacies and other nontraditional settings may offer accessible venues for patients when implementing other public health initiatives.
  - state-level policy changes that permit pharmacists to administer influenza immunizations were connected with a nearly 8% rise in seasonal influenza immunization rates within 6 years after the policy changes between 2003 and 2013.
    - During this time, overall seasonal influenza immunization rates increased 25% among those surveyed.
    - Influenza immunization rates increased by age, while fewer individuals who reported access to care issues due to cost received influenza immunizations compared with those who reported no such issues (22% vs. 37%).



ARTICLE IN PRESS

Clinical Therapeutics/Volume ∎, Number ∎, 2017

Impact of Pharmacist Immunization Authority on Seasonal Influenza Immunization Rates Across States

Edward M. Drozd, PhD[1]; Laura Miller, PhD[2]; and Michael Johnsrud, PhD[1]

[1]*Avalere Health, Washington, DC; and* [2]*National Association of Chain Drug Stores, Arlington, Virginia*

ABSTRACT

Purpose: The goal of this study was to investigate the impact on immunization rates of policy changes that allowed pharmacists to administer influenza immunizations across the United States.

Methods: Influenza immunization rates across states were compared before and after policy changes permitting pharmacists to administer influenza immunizations. The study used Behavioral Risk Factor Surveillance System (BRFSS) survey data on influenza immunization rates between 2003 and 2013. Logistic regression models were constructed and incorporated adjustments for the complex sample design of the BRFSS to predict the likelihood of a person receiving an influenza immunization based on various patient health, demographic, and access to care factors.

Findings: Overall, as states moved to allow pharmacists to administer influenza immunizations, the odds that an adult resident received an influenza immunization rose, with the effect increasing over time. The average percentage of people receiving influenza immunizations in states was 35.1%, rising from 32.2% in 2003 to 40.3% in 2013. The policy changes were associated with a long-term increase of 2.2% to 7.6% in the number of adults aged 25 to 59 years receiving an influenza immunization (largest for those aged 35–39 years) and no significant change for those younger or older.

Implications: These findings suggest that pharmacies and other nontraditional settings may offer accessible venues for patients when implementing other public health initiatives. (*Clin Ther*. 2017;∎∎∎–∎∎∎) © 2017 The Authors. Published by Elsevier HS Journals, Inc.

Key words: influenza, immunizations, pharmacy services, vaccines.

INTRODUCTION

Immunization is essential in the prevention of infectious diseases. The Centers for Disease Control and Prevention (CDC) identified immunizations as a public health achievement that has contributed to the 30-year increase in life expectancy in the United States since 1900.[1] The CDC also notes decreases in "cases, hospitalizations, deaths, and healthcare costs associated with vaccine-preventable diseases" from 2001 to 2010.[2] The seasonal influenza vaccination is one of the most common immunization programs in the United States.[3]

Despite the preventive effects of immunizations, however, many people who should get immunized do not. In the 2014 to 2015 flu season, only 38% of adults aged between 18 and 64 years were immunized against the flu. In that same season, 66.7% of adults aged ≥65 years were immunized.[4] The national immunization goals are 80% and 90% for these population segments, respectively.[5]

The economic burden of seasonal influenza in the United States is substantial. Recent research has estimated that the annual human and economic burden of influenza in the adult population aged ≥50 years exceeded $16 billion in 2013.[6] This figure includes direct medical costs for treatment, as well as lost wages related to decreased worker and household productivity for the year of infection. The Bureau of Labor Statistics noted a spike in absences due to illness, injury, or medical appointments from December to March of 2005 through 2010, overlapping with the peak flu season.[7]

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0149-2918/$ - see front matter

Referral Tools – examples

are there components within these you can use in your system?

American Pharmacists Association
APhA

Template Referral Form from Pharmacist to Physician for Adult Patient

Patient Name: _____ Date of Birth: ____/____/_____

Referring Pharmacist: _____

Pharmacy Practice: _____ Phone Number: _____

Email: _____ Date of Referral: _____

Signature: _____ **Date:** _____

The above patient was seen our practice today. In the course of working with the patient the below item(s) were identified as needing follow-up with your practice. Feel free to contact us if you have further questions. We would appreciate receiving an update after you have seen the patient so that we can update our records and support your treatment plan.

Reason for Referral:

Patient needs immunization ❑ **Influenza** ❑ **Pneumococcal** ❑ **Tdap** ❑ **High Dose** ❑ **PCV13** ❑ **Inactivated** ❑ **PPSV23** ❑ **Live nasal** ❑ **Intradermal** ❑ **Recombinant** ❑ **Zoster** ❑ **Hepatitis B** ❑ **Hepatitis A** ❑ **HPV** ❑ **Meningococcal** ❑ **MMR** ❑ **Travel :** _____ ❑ **Other:** _____ **Comment:**	❑ **Patient needs an immunization follow-up** *(questions about vaccination for this patient)* **Comment:** ❑ **Evaluation of post-vaccination reaction** **Comment:**
❑ **Patient needs wellness/screening follow-up** *Based upon the patient's age and information provided the patient may need:* ❑ **Eye-check-up** ❑ **Colon-cancer screening** ❑ **Mammogram** ❑ **Prostate cancer** ❑ **Skin cancer** ❑ **Other:** _____ **Comment:**	❑ **Medication Therapy Follow-up** ❑ **Blood Pressure** ❑ **Cholesterol** ❑ **Blood Glucose** ❑ **Other:** **Comment:**
❑ **Other evaluation:**	

Comments from Physician:

Vaccine Report Tool

ACP American College of Physicians
American Pharmacists Association APhA

Patient Name:_____
Date:_____

Vaccines	Vaccines Recommended	Vaccines Administered	Vaccination reported to IIS
Influenza, standard dose, inactivated	☐	☐	☐
Influenza, high dose, inactivated	☐	☐	☐
Influenza, intradermal	☐	☐	☐
Influenza, recombinant	☐	☐	☐
Meningococcal	☐	☐	☐
MMR (measles, mumps, and rubella)	☐	☐	☐
Pneumococcal polysaccharide (PPSV23)	☐	☐	☐
Pneumococcal 13-valent conjugate (PCV13)	☐	☐	☐
Td (tetanus and diphtheria only)	☐	☐	☐
Tdap (Td plus pertussis, "whooping cough"	☐	☐	☐
Zoster (shingles)	☐	☐	☐
Hepatitis A	☐	☐	☐
Hepatitis B	☐	☐	☐
Combination Hepatitis A and B vaccine	☐	☐	☐
HPV (Human papillomavirus)	☐	☐	☐
Other Vaccine:	☐	☐	☐

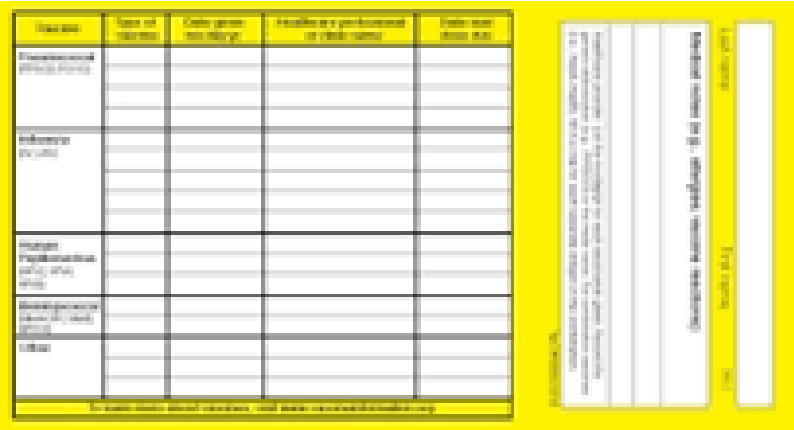
Referring Healthcare Provider:_____
Signature: _____
Contact information: _____
Date:_____
Comments:

Administering Healthcare Provider:_____
Signature: _____
Contact information: _____
Date:_____
Comments:

Increase public understanding

Communication / Documentation *engagement of providers and patients*

- **U**pdate
- **R**eport
- **C**arry
- **S**hare



Protect **yourself,** your **family,** and your **community** by keeping your immunization record up-to-date

After **YOU** receive any immunization:

- Ask your pharmacist and other health care providers to **UPDATE** your Immunization Record Card
- Ask your pharmacist and other health care providers to **REPORT** the vaccination to the Immunization Registry
- **CARRY** and **SHARE** your updated Immunization Record / Card with every member of your health care team

American Pharmacists Association
Improving medication use. Advancing patient care.
APhA

Receive **your** recommended immunizations. Have **your** immunization record updated. Help keep **yourself,** your **family,** and **community** healthy.

Check the CDC Immunization recommendations below!

Recommended to All Adults
(During your lifetime; Talk to your healthcare provider to find out if you need these recommended vaccines)
- ☐ Flu
- ☐ Measles, Mumps, Rubella (MMR)
- ☐ Meningitis
- ☐ Human Papilloma Virus
- ☐ Chickenpox
- ☐ Tetanus, Diphtheria, Whooping Cough (Td/Tdap)

Recommended for Older Adults
- ☐ Shingles (> 60 years)
- ☐ Pneumococcal (> 65 years)

Special Recommendations
(People with certain health conditions may need these vaccines)
- ☐ Pneumococcal
- ☐ Hepatitis A or B
- ☐ Meningitis

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Pharmacy Computer System & IIS Survey

*The following information had a **100%** reported capture rate:*

Information Captured
Patient ID (previously listed as "Medicaid Number")
Patient Name: First
Patient Name: Last
Patient Date of Birth
Patient Gender
Patient Address: Street
Patient Address: City
Patient Address: State
Patient Address: Zipcode
Patient Telephone Number
Patient Telephone Number Type (e.g., home, cell)
Vaccine Product Type Administered

Green = identified as required field by AIRA; Red = identified as required field but may be empty

survey represents **13 pharmacy computer systems** and **more than 10,000 pharmacy practices**.

Pharmacy Computer System & IIS Survey

*The following information had a **≥50%** reported capture rate:*

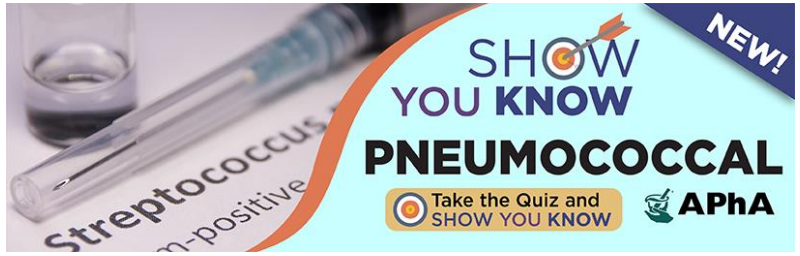
Information Captured	Percentage
Patient Name: Middle	58%
Patient Address: Country	67%
Patient E-mail Address	83%
Vaccination Administration Date	67%
Vaccine Manufacture Name	83%
Vaccine Lot Number	58%
Vaccine Expiration Date	50%*
Vaccine dose volume and unit	75%*
Vaccine Ordering Provider Name	83%*

* Additional exploration and education needed as info is collected by providers on consent/intake forms and filed or scanned but not placed in data fields

Green = identified as required field by AIRA;
Red = identified as required field but may be empty

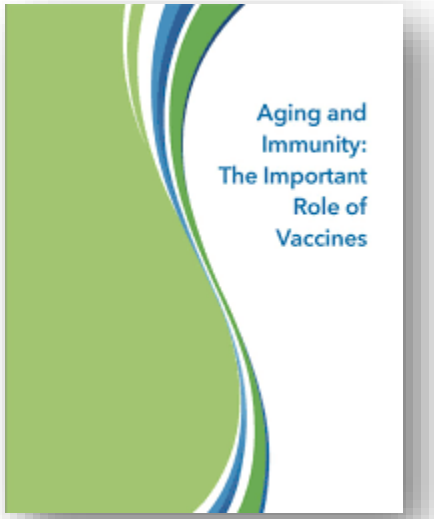
survey represents **13 pharmacy computer systems** and **more than 10,000 pharmacy practices**.

Continuous Learning
Additional education needs



* understanding of the strains that cause hospitalization and death.
* knowledge of the impact of influenza on myocardial infarction risk.
* difference between high dose influenza vaccine and adjuvanted vaccine.
* CDC recommendation for the timing of influenza vaccination.
+ 90% of the respondents knew what Should Injury Related to Vaccine Administration (SIRVA) was.
+ 75% of participants knew what immunosenence was in regards to older adults.

* order and to whom to administer pneumococcal vaccines.
* groups who should not receive pneumococcal vaccination.



Considerations to achieve the 3 C's

Coordination, Collaboration, Communication

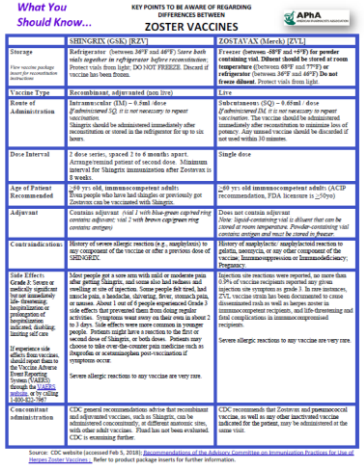
- Recommendations from recent CDC Cooperative Agreement
  - Enhance support, through **onboarding programs**, from State Public Health Departments.
  - Pharmacies need to **connect into the registry** and work with pharmacy administration, information technology staff, and other pharmacy personnel.
  - **Enhance procedures** for IISs to remove duplicate entries and streamline access.
  - Pharmacists need to continue to **provide information to primary care** providers via fax while work continues to seamlessly integrate pharmacy data systems into the EHR and IIS.
  - Pharmacists should proactively **assess a patient's immunization history**. Requirements for reporting of vaccination data should be **consistently applied** across all immunization providers.
  - Continue **educating patients** about the importance of tracking their vaccine history.
  - Further development and testing of a **referral** sheet for other healthcare providers to refer patients to a pharmacy for necessary immunizations.

Pharmacists: Advancing Core Elements of the Immunization Neighborhood and the Adult Immunization Standards (funded by the CDC Cooperative Agreement number H23IP000984)

For ALL Immunization Providers

What You Should Know…Zoster Vaccines

A pdf of a one-page comparison chart can be downloaded at http://www.pharmacist.com/sites/default/files/files/2018ZosterVaccinesChartv9Final.pdf



What You Should Know…

KEY POINTS TO BE AWARE OF REGARDING DIFFERENCES BETWEEN

ZOSTER VACCINES

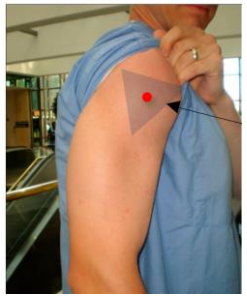
APhA

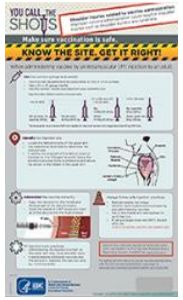
	SHINGRIX (GSK) [RZV]	ZOSTAVAX (Merck) [ZVL]
Storage *Have vaccine package insert for reconstitution instructions*	Refrigerator (between 36°F and 46°F) *Store both vials together in refrigerator before reconstitution.* Protect vials from light. DO NOT FREEZE. Discard if vaccine has been frozen.	Freezer (between -58°F and +5°F) **for powder containing vial. Diluent should be stored at room temperature** (between 68°F and 77°F) **or refrigerator** (between 36°F and 46°F) **Do not freeze diluent**. Protect vials from light.
Vaccine Type	Recombinant, adjuvanted (non live)	Live
Route of Administration	Intramuscular (IM) – 0.5ml /dose *If subcutaneous (SQ) it is not necessary to repeat vaccination.* Shingrix should be administered immediately after reconstitution or stored in the refrigerator for up to six hours.	Subcutaneous (SQ) – 0.65ml / dose *If subcutaneous (IM) it is not necessary to repeat vaccination.* The vaccine should be administered immediately after reconstitution to minimize loss of potency. Any unused vaccine should be discarded if not used within 30 minutes.
Dose Interval	2 dose series, spaced 2 to 6 months apart. Arrange/remind patient of second dose. Minimum interval for Shingrix immunization after Zostavax is 8 weeks.	Single dose
Age of Patient Recommended	≥50 yrs old, immunocompetent adult: Even people who have had shingles or previously got Zostavax can be vaccinated with Shingrix.	≥60 yrs old immunocompetent adult: (ACIP recommendation, FDA licensure is ≥50yrs)
Adjuvant	Contains adjuvant *vial 1 with blue-green capped ring contains adjuvant; vial 2 with brown cap/green ring contains antigen*	Does not contain adjuvant *Note: liquid-containing vial is diluent that can be stored at room temperature. Powder-containing vial contains antigen and must be stored in freezer.*
Contraindications	History of severe allergic reaction (e.g., anaphylaxis) to any component of the vaccine or after a previous dose of SHINGRIX.	History of anaphylactic: anaphylactoid reaction to gelatin, neomycin, or any other component of the vaccine. Immunosuppression or Immunodeficiency; Pregnancy
Side Effects: Grade 3: Severe or medically significant but not immediately life-threatening; hospitalization or prolongation of hospitalization indicated; disabling; limiting self care If experience side effects from vaccines, should report them to the Vaccine Adverse Event Reporting System (VAERS) through the VAERS website, or by calling 1-800-822-7967	Most people got a sore arm with mild or moderate pain after getting Shingrix, and some also had redness and swelling at site of injection. Some people felt tired, had muscle pain, a headache, shivering, fever, stomach pain, or nausea. About 1 out of 5 people experienced Grade 3 side effects that prevented them from doing regular activities. Symptoms went away on their own in about 2 to 3 days. Side effects were more common in younger people. Persons might have a reaction to the first or second dose of Shingrix, or both doses. Persons may choose to take over-the-counter pain medicine such as ibuprofen or acetaminophen post-vaccination if symptoms occur. Severe allergic reactions to any vaccine are very rare.	Injection site reactions were reported, no more than 0.9% of vaccine recipients reported any given injection site symptom as grade 3. In rare instances, ZVL vaccine strain has been documented to cause disseminated rash as well as herpes zoster in immunocompetent recipients, and life-threatening and fatal complications in immunocompromised recipients. Severe allergic reactions to any vaccine are very rare.
Concomitant administration	CDC general recommendations advise that recombinant and adjuvanted vaccines, such as Shingrix, can be administered concomitantly, at different anatomic sites, with other adult vaccines. Fluad has not been evaluated. CDC is examining further.	CDC recommends that Zostavax and pneumococcal vaccine, as well as any other inactivated vaccine indicated for the patient, may be administered at the same visit.

Source: CDC website (accessed Feb 5, 2018); Recommendations of the Advisory Committee on Immunization Practices for Use of Herpes Zoster Vaccines. Refer to product package inserts for further information.

New VIS Sheet Released: https://www.cdc.gov/vaccines/hcp/vis/vis-statements/shingles-recombinant.pdf

- **Preventing Shoulder Injury Related to Vaccine Administration (SIRVA)**





* Infographic: You Call The Shots

* Proper Vaccine Technique: Pharmacy Today Article

* CDC resources: new online vaccination resources library that has links to videos, job tools, reference materials, and web-based training courses.

PHARMACISTS PROVIDE CARE

Rx to our nation's immunization initiative

American Pharmacists Association
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Questions

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