

BRIDGING PUBLIC HEALTH AND PHARMACIST DRIVEN VACCINATIONS

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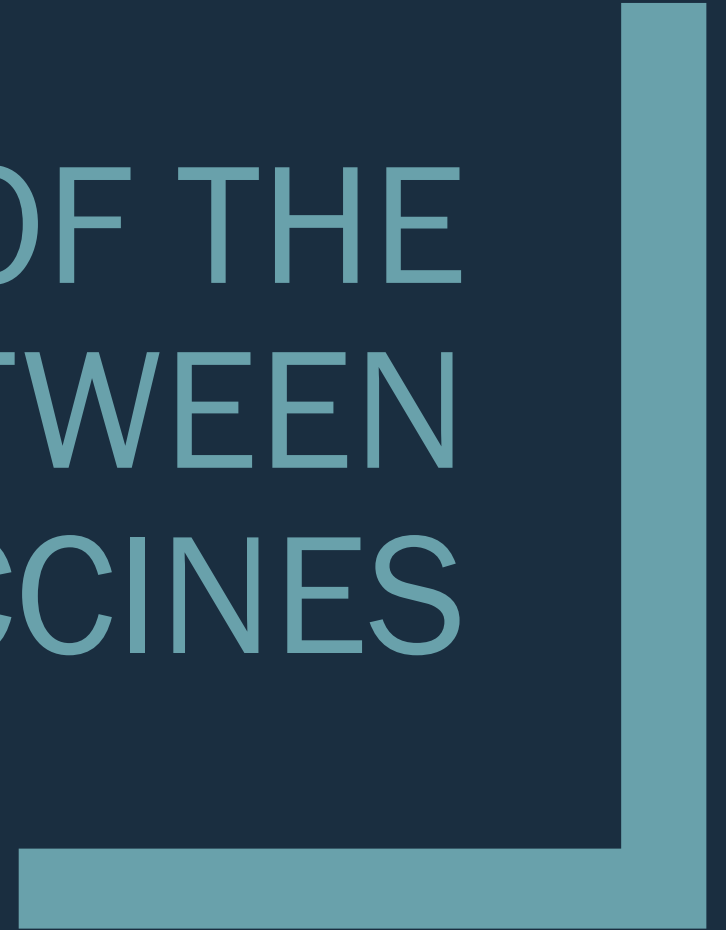
Outline

- History of pharmacy involvement in immunizations
- Differences between states in vaccines pharmacists can provide
- Breakout session
- Examples of pharmacist involvement with the community
- Discussion about local collaboration opportunities

Disclosures

- Stephanie Arnett, PharmD, CDE has nothing to disclose.
- Stephan Foster, PharmD, FaPhA, FNAP has served as a speaker for Merck Vaccines, Sanofi-Pasteur and Pfizer. He also serves on the advisory boards for Pfizer and Sequiris.
- Leslie Lake, PharmD has nothing to disclose.

HISTORY OF THE RELATIONSHIP BETWEEN PHARMACY AND VACCINES



Early History: The Vaccine Opportunity is Born

- 1796: First vaccine developed by Edward Jenner for smallpox
 - *Cowpox lesion to cut on small boy*
 - *Boy became immune to smallpox*
- Mid 1800s: First record of pharmacist involvement distributing the smallpox vaccine



<https://s-media-cache-ak0.pinimg.com/736x/c9/c3/54/c9c3541747e4c19439f5d14a40e35078.jpg>

5/14/1796

Cowpox Inoculation

Terrie YC. Pharmacy Times. 2010.
Hogue MD et al. *J Am Pharm Assoc.* 2006.

Late 1800 to Early 1900s: Wavering Pharmacy Involvement

- Diphtheria epidemic
- New York City: Board of health set up depots for physicians to work out of in drugstores
 - *Location to incubate throat cultures and prepare antitoxin*
- Illinois: Board of health appointed a pharmacy in each county to sell the antitoxin
- Transitioned to vaccines being distributed at local and state governments to local clinics or directors' offices for the poor

Early 1900s to Mid 1900s: Increased Pharmacy Presence

- During WWI, pharmacist educated the public and physicians about the benefits of vaccines
 - *Pharmacies would keep the specimen to diagnose diseases in incubators*
 - *Issues arose with investments and risk of improper storage/waste of product*
- Late 1950s to early 1960s: polio vaccine distributed by pharmacists
 - *Pharmacists played a key role in the mass polio immunization program*



<http://files.umwblogs.org/blogs.dir/5300/files/2011/03/salk-newspaper1.jpg>



https://upload.wikimedia.org/wikipedia/commons/b/b8/Polio_vaccine_poster.jpg

Hogue MD et al. *J Am Pharm Assoc.* 2006.

1970: From Dispensing to Administering

- National Center for Health Services Research and Development and the University of California San Francisco School of Pharmacy formed an interdisciplinary task force
- Provided recommendations for pharmacists to “administer biological products for immunizations, i.e., polio (oral and injectable) and small pox vaccines.”
- Barriers: 50 separate pharmacy practice act limitations



https://upload.wikimedia.org/wikipedia/commons/6/69/President_Ford_receives_a_swine_flu_inoculation_-_NARA_-_7064718.jpg

1990s: Support of Pharmacist Immunization

- 1993: United States Department of Health and Human Services asks the American Pharmaceutical Association, currently American Pharmacists Association (APhA), to define the role of the pharmacist in a providing vaccines to children
- Allowed pharmacists to play a role in vaccine education and mobilization, distribution, access and administration, and registries and tracking systems.



<http://pcdblog.com/wp-content/uploads/2015/06/image.jpg>

1996 to Present: Creation of Training Program

- Mississippi Department of Public Health asks the Mississippi Pharmacists Association and APhA to create a national training program to allow pharmacists to provide influenza and pneumococcal vaccines
- First training session held for group of 50 pharmacists in Seattle, Washington
- CDC endorsed the Pharmacy-Based Immunization Delivery program
- October 2009: All US states allow pharmacists to administer immunizations (Maine was the last to do so)



Terrie YC. Pharmacy Times. 2010.
Hogue MD et al. *J Am Pharm Assoc*. 2006.
Immunization Center. APhA. 2016.

PHARMACIST- ADMINISTERED VACCINES: THE HOW AND THE WHAT



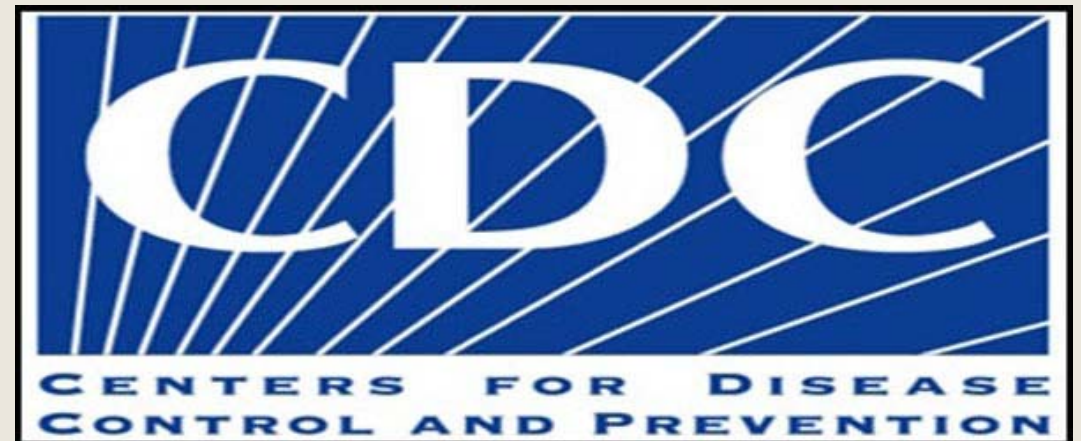


THE HOW: PHARMACIST IMMUNIZATION TRAINING

Indiana: What is Required by Law?

- In order to qualify to administer immunizations, a pharmacist must successfully complete a course of training in immunization that is provided by an Accreditation Council for Pharmacy Education accredited provider and meets the standards set forth by:
 - *(1) the Centers for Disease Control and Prevention;*
 - *(2) a similar health authority; or*
 - *(3) a professional body approved by the Indiana board of pharmacy.*

- Other Requirements:
 - *CPR certification (current)*
 - *Blood Borne Pathogen training (yearly)*



<http://www.laproximaparada.com/wp-content/uploads/2010/04/cdc-logo1.jpg>

Ask the Audience

- What should be included in training to allow for pharmacists to be able to administer immunizations?



Pharmacist Immunization Certification Programs

- Training Must Include:
 - *Study Materials*
 - *Hands-on training*
 - *Techniques for administering vaccines*
- Training must comply with CDC and OSHA guidelines



<http://actionecon.com/wp-content/uploads/2015/03/Osha-30.png>

Content of Certification Programs

- Mechanisms of action for the following:
 - *Vaccines.*
 - *Contraindication.*
 - *Drug interaction.*
 - *Monitoring after vaccine administration.*
- Standards for immunization practices.
- Basic immunology and vaccine protection.
- Vaccine-preventable diseases.
- Recommended immunization schedule.
- Vaccine storage management.
- Biohazard waste disposal and sterile techniques.
- Informed Consent.
- Physiology and techniques for vaccine administration.
- Patient pre-vaccine and post-vaccine assessment and counseling.
- Immunization record management.
- Management of adverse events, including the following:
 - *Identification.*
 - *Appropriate response.*
 - *Documentation.*
 - *Reporting.*

APhA Pharmacy-Based Immunization Certificate Training Program



More about the APhA National Certification

- 20-hour certification program
 - *Self Study (12 hours)*
 - Online powerpoints, videos, handouts
 - *Live Program (8 hours)*
 - Takes place all in one day
 - *Vaccine Administration Practice*
 - 2 Intramuscular injections
 - 1 Subcutaneous injection



Self Study

- Pharmacists as Vaccine Advocates
- Immunology
- Vaccine-Preventable Diseases
- Establishing a Pharmacy-Based Immunization Program
- Administering Vaccines
- Appendices
- Self-Study Assessment



Live Program

- Importance of Vaccines
- Shortfalls in Vaccine Delivery and Opportunities for Pharmacists
- How Do Vaccines Prevent Disease
- Vaccine-Preventable Diseases
- Identifying Vaccination Needs
- Establishing a Pharmacy-Based Immunization Program
- Practice Implementation
- Adverse Events Following Vaccination and Emergency Preparedness
- Vaccine Administration Technique



APhA 2016 Statement



- 2016 will mark the **20th Anniversary** of APhA's Pharmacy-Based Immunization Certificate Training Program.
- Since that time, more than **280,000 pharmacists** have been trained to administer vaccines, the scope and authority of pharmacists has greatly expanded and pharmacists are recognized as valued members of the immunization neighborhood.
- These accomplishments have been achieved because of the work and commitment of thousands of pharmacists and other stakeholders to improve the health of patients and the communities served.



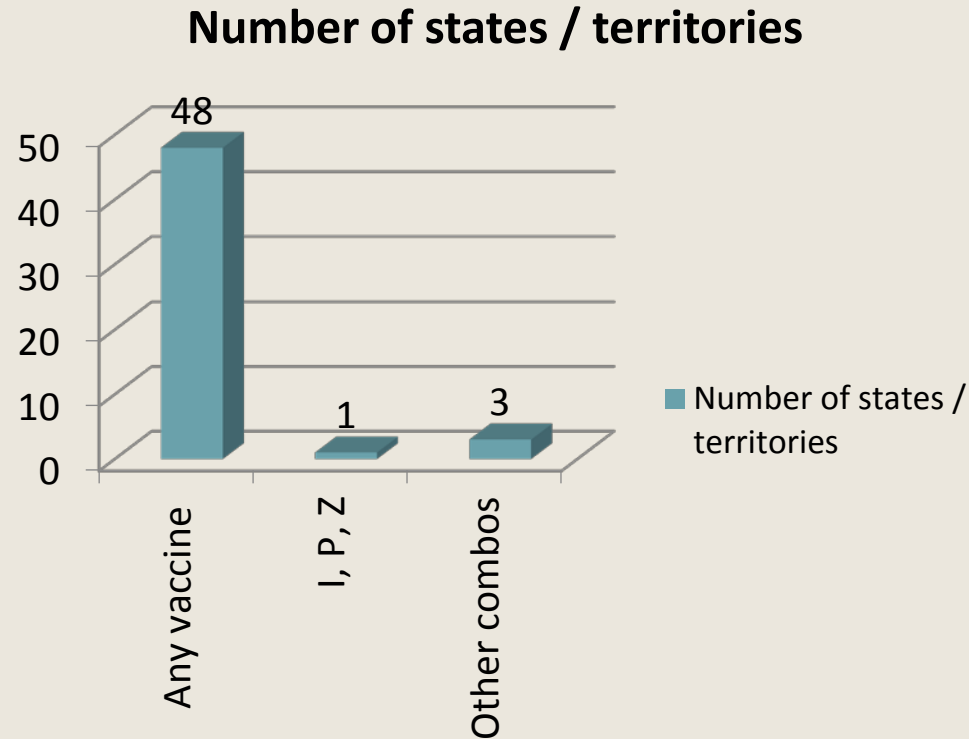
THE WHAT: PHARMACIST ADMINISTERED VACCINES



Pharmacist Administered Vaccines

Types of Vaccines Authorized to Administer

Based upon APhA / NASPA Survey of State IZ Laws/ Rules



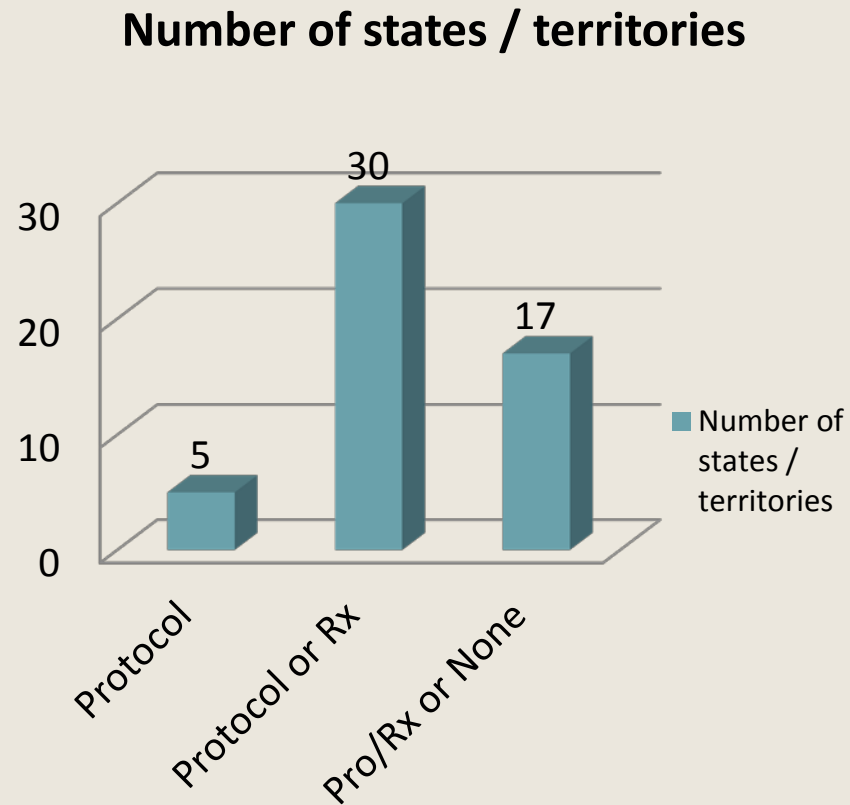
Any vaccine	AL, AK, AZ*, AR*, CA, CO, CT, DC*, DE*, FL, GA*, HI*, ID, IL, IN*, IA, KS, KY*, LA*, MA, ME, MD, MO*, MI*, MN, MS, MT, NE, NV, NJ*, NM, NC, ND, OH, OK, OR, PA, PR*, RI, SC*, SD*, TN, TX, UT*, VT, VA*, WA, WI
Influenza, Pneumo and Zoster (I, P, Z)	NH
Other combos	NY, WV**, WY**

* Via Rx for some; ** broad list of vaccines

Pharmacist Administered Vaccines

Prescriber issued protocols vs Rx

Based upon APhA / NASPA Survey of State IZ Laws/ Rules



Protocol	FL, KS, MN, NV, WI
Protocol or Rx (depending on age and/or vaccine)	AL, AR, CO, CT, DC, DE, GA, HI, IL, IN, IA, KY, MA, MI, MS, MO, NE, NY, NC, ND, OH, OK, PA, PR, RI, TN, TX, UT, VT, WA
Protocol/Rx or No Prescriber/Rx Needed (depending on age and/or vaccine)	AK, AZ, CA, ID, LA, ME, MD, MT, NH, NJ, NM, OR, SC, SD, VA, WV, WY

Patient Age Limitations

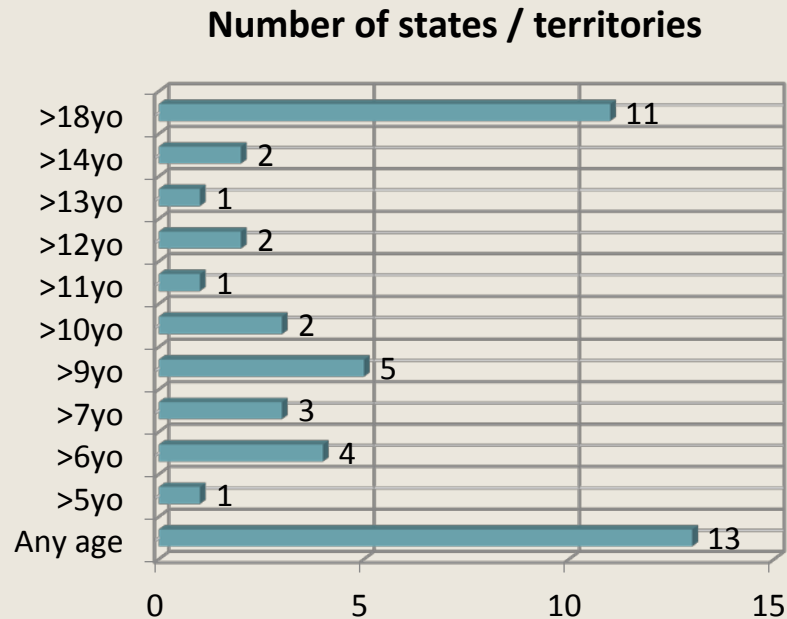


	Any age
	Restricted at some age less than 18
	18 and older only

Pharmacist Administered Vaccines

Patient-Age Limitations **via prescriber protocol**

Based upon APhA / NASPA Survey of State IZ Laws/ Rules



≥18yo	CT, FL, HI, ME, MA, MT*,NJ, NY*, PR*, VT, VA
≥14yo	HI*, NC*
≥13yo	GA*
≥12yo	DC, MO*
≥11yo	IN
≥10yo	IL*, MN*
≥9yo	DE, KY*, ME*, PA*,RI*
≥7yo	AR, OH*, TX*
≥6yo	IA*, KS*, WI, VA*
≥5yo	ND*
Any age	AL, CA, CO, MI, MS, MT, NE, NM, NV, OK, SD, TN, UT, WA

* Scope varies

Pharmacists Practicing in Indiana

Can administer under Physician-Approved Protocol	Cannot <u>currently</u> administer under Physician-Approved Protocol
Influenza (age 11+)	Haemophilus Influenza B
Tetanus/Diphtheria (age 11+)	Measles, Mumps, and Rubella
Tetanus, Diphtheria, and Pertussis (age 11+)	Hepatitis B
Herpes Zoster (age 60+)	Hepatitis A
Meningococcal (age 11+)	Polio (IPV)
Human Papillomavirus (age 11+)	Varicella
Pneumococcal (age 65+)	Other travel vaccinations

According to Indiana law, pharmacists can administer ANY vaccine with a **valid Rx** from a prescriber to patients of ANY age.

- Some limitations may apply per *company* policy.

Healthy People 2020 Objectives

- Set of objectives put together by the Office of Disease Prevention and Health Promotion (ODPHP)
- Each vaccine has baseline data from the U.S. from 2008-2012 of the percentage of patients with an **indication** for the vaccine who actually **received** it.
- ODPHP has a goal for the percentage of these patients who receive the vaccine by 2020



https://www.healthypeople.gov/sites/default/files/HP-Logo-Banner_3.jpg

Pneumococcal Vaccines

- Healthy People 2020:
 - *Percentage of persons aged 65 and older who had ever received a pneumococcal vaccination in 2013: **59.7%***
 - *Target for 2020: **90%***
- Opportunity for Pharmacist Involvement:
 - *Patients turning 65 years old*
 - *Patients over age 65 who haven't received Pneumococcal Vaccine*
 - *Patients who don't regularly see a PCP*
- Pharmacists can administer Pneumococcal Vaccines in all states, but some states require Rx and other states only allow pharmacists to administer PPSV23 (WY)



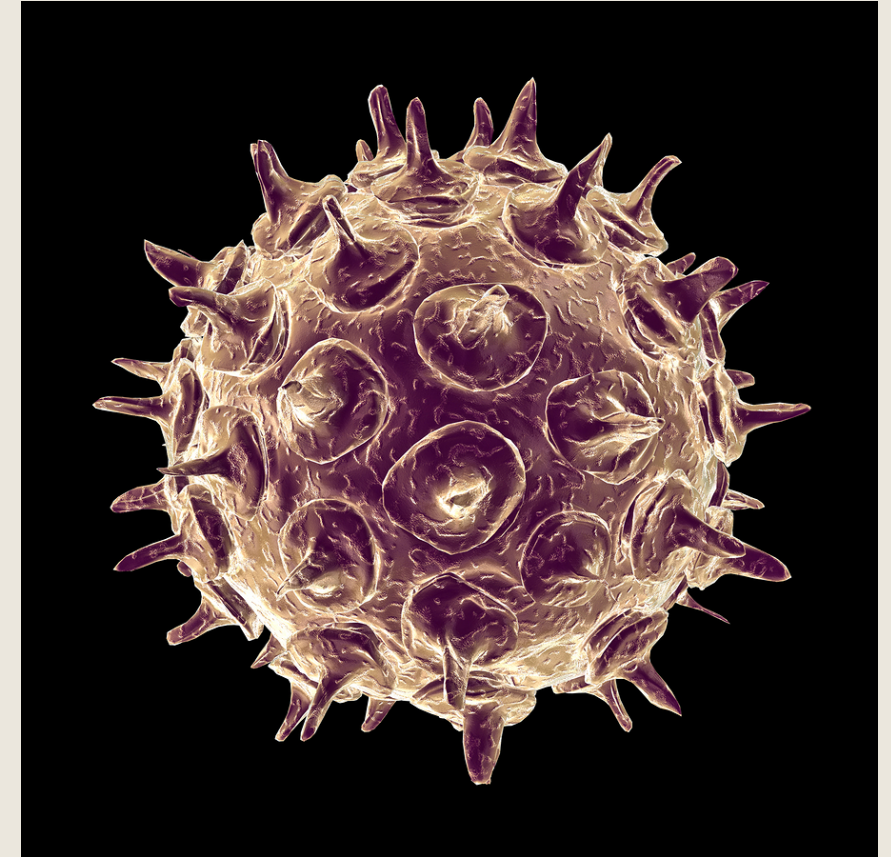
http://www.pneumogen.net/gps/img/strep_sanger.jpg

APhA / NASPA Survey of State IZ Laws/ Rules
ACIP Vaccine Recommendations, 2016.

Healthy People 2020 Topics & Objectives: Immunization and Infectious Diseases

Zoster Vaccines

- Healthy People 2020:
 - *Percentage of adults aged 60 years and older who had ever received Zoster in 2013: **24.2%***
 - *Target for 2020: **30%***
- Opportunity for Pharmacist Involvement:
 - *Patients turning 60 years old*
 - *Patients over age 60 who have not received Zoster vaccine*
- Pharmacists can administer Zoster vaccine in all 50 states under Physician-Approved Protocol.



<http://jonliefmd.com/wp-content/uploads/2014/02/bigstock-Varicella-zoster-virus-6997801.jpg>

Influenza Vaccines

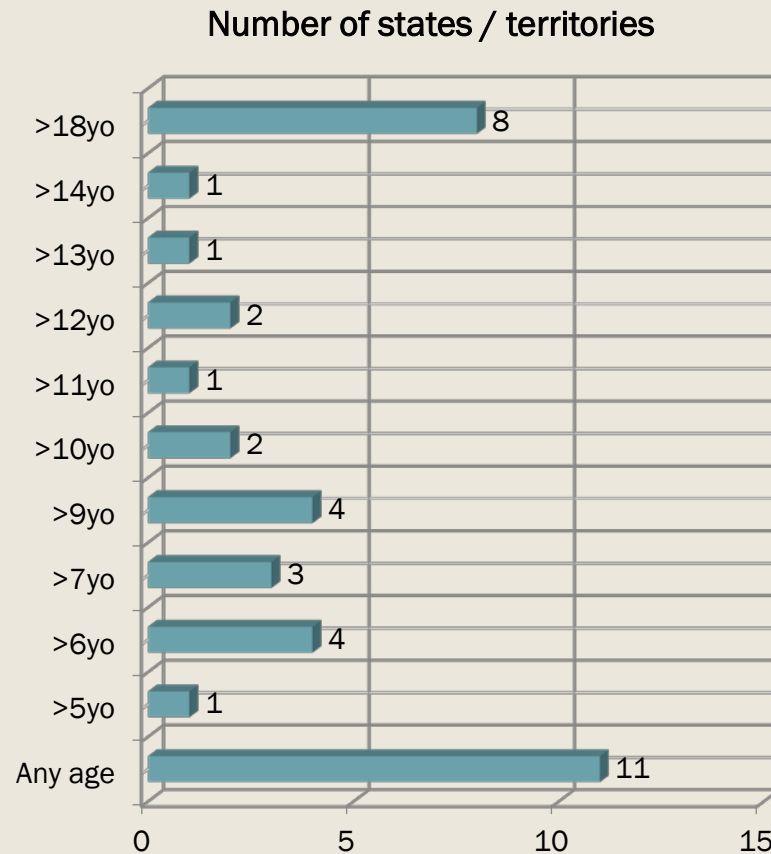
Age Group	% Vaccinated against influenza during 2012-13 season	Health People 2020 Target
6 months – 17 years	50.5%	70%
18 years and older	42.6%	70%

- Opportunity for Pharmacist Involvement:
 - *All patients over 6 months old are recommended to receive some form of influenza vaccine yearly*
 - *Pharmacies are easily accessible to patients and their families*

Pharmacist Administered Vaccines

Influenza - Age of Adm Authorized by Protocol

Based upon APhA / NASPA Survey of State IZ Laws/ Rules

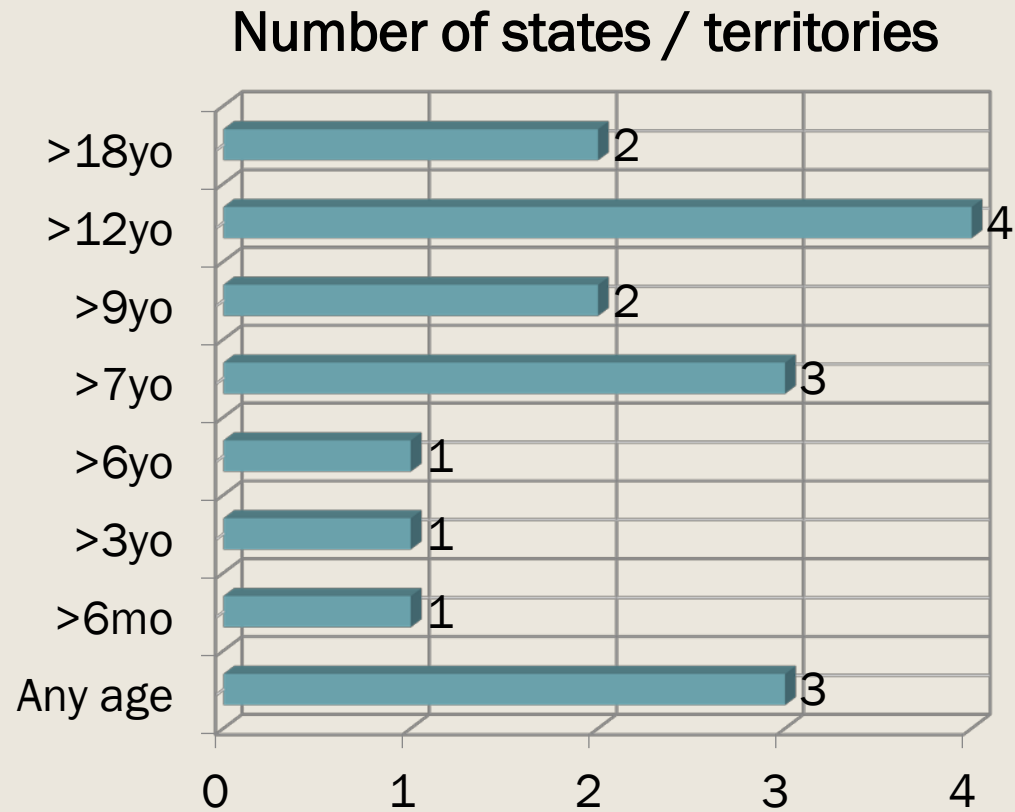


≥18yo	CT, FL, HI, MA, NJ, NY, PR, VT
≥14yo	NC
≥13yo	GA
≥12 yo	DC, MO
≥11yo	IN
≥10yo	IL, MN
≥9yo	DE, KY, PA, RI
≥7yo	AR, OH, TX
≥6yo	AZ, IA, KS, WI
≥5yo	ND
Any age	AL, CA, CO, MI, MS, NE, NV, OK, SD, TN, UT, WA

Pharmacist Administered Vaccines

Influenza **No MD protocol or Rx Needed**

Based upon APhA / NASPA Survey of State IZ Laws/ Rules



≥18yo	SD, WV
>12yo	ID, MT, NJ, SC
≥9yo	ME, MD
≥7yo	LA, OR, WY
≥6yo	AZ
≥3yo	CA
≥6mo	VA
Any age	AZ, NH, NM

Note: authority comes from statute and/or regulation from BOP or Public Health

HPV Vaccination Rates: Indiana vs. National

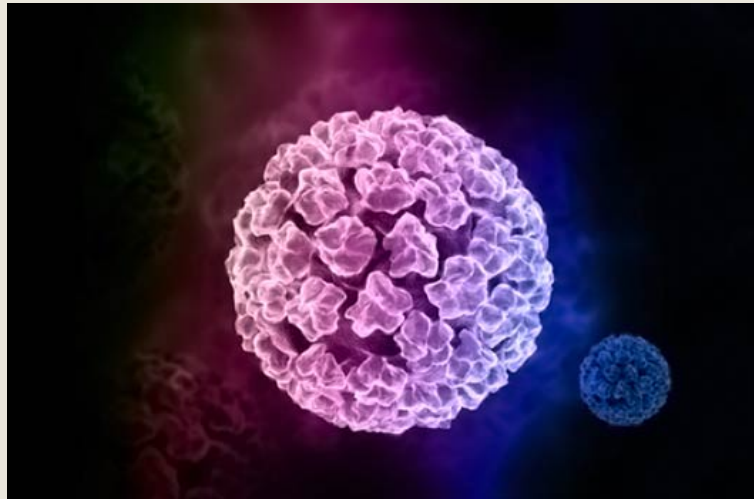
All 3 HPV doses received, ages 13-17

Gender	Healthy People 2020 Goal (%)	US National Average, 2014 (%)	Indiana, 2014 (%)
Female	80%	39.7%	44.4%
Male	80%	21.6%	12.8%

- Indiana (2014)
 - *Females: Ranked 17th in the US*
 - *Males: Ranked 43rd in the US*

HPV Vaccines

- Opportunity for Pharmacist Involvement
 - *HPV vaccine must be given in a 3-part series*
 - *Alleviate time and cost burden for office visits.*
 - *Boys and girls age 11 or 12*
 - *Patients age 11-26 who have not received HPV Vaccine*
 - Excluding pregnant females and some other populations
- Pharmacists can administer HPV vaccines in 47 states (Excluding NH, NY, WV)

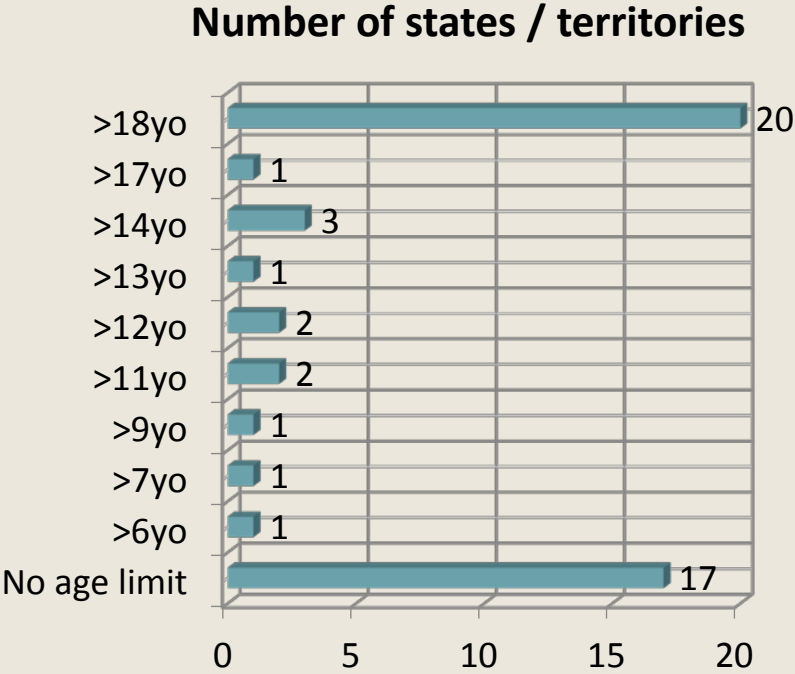


<http://mamiverse.com/wp-content/uploads/2013/01/Human-Papillomavirus-HPV-A-Silent-Enemy-MainPhoto1.jpg>

Pharmacist Administered Vaccines

Patient-Age Limitations – for HPV Vaccination

Based upon APhA / NASPA Survey of State IZ Laws/ Rules



>18yo	AZ*, AR*, CT, FL, HI, IA*, KS, ME, MD*, MA, MN, MT, NCR, NJ, PA, PR ^R , RI, SC*, VA*, VT, WY
>17yo	LA*
>14yo	IL, KY*, TX*
>13yo	OH*
>12yo	ID*, DC*
>11yo	IN*, ND
>9yo	DE
>7yo	OR
>6yo	WI
No Age Limit	AL, AK, CA, CO, GA ^R , MI, MS, MOR ^R , NE, NV, NM, OK, SC, SD, TN, UT, WA

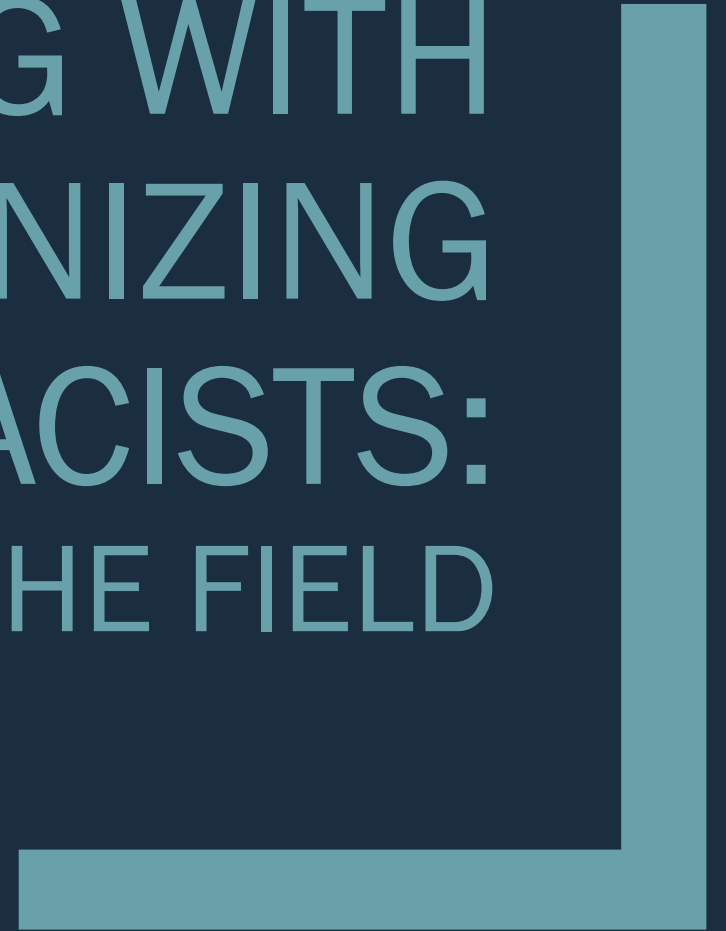
*Younger ages under prescription/protocol

^R Requires a prescription

APhA / NASPA Survey of State IZ Laws/Rules

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COLLABORATING WITH IMMUNIZING PHARMACISTS: EXAMPLES FROM THE FIELD



Audience Poll

- By a show of hands, how many of you have collaborated with pharmacists to set up a vaccination clinic?

General community needs

- Non-profit organizations
- Senior outreach
- Back to school collaborations
- Employer-based/worksites wellness

H1N1 collaboration examples

- In addition to providing in pharmacy locations, multiple off-site clinics to communities and worksites
- Communication to community about vaccine availability
- Potential storage solutions for a mass supply of vaccine

Louisville Metro and Walgreens Pharmacy

- Variety of partnerships, including ongoing communication amongst entities
- Rabies vaccination – Walgreens stock in all Jefferson Co. locations
- Referrals for employee bases clinics that were beyond the capacity of the health department
- Walgreens referrals back to the health department for those underinsured or not insured to get most cost affective price or VFC vaccine if eligible.

Indiana State Department of Health and Walgreens

- HIV outbreak in Scott Co Indiana
- Needs for Hep B and Tdap vaccinations to anyone in county
- Worked out logistics to have Indiana deputy state health commissioner sign off on patient specific prescriptions to meet pharmacy state law requirements

Influenza Vouchers for Underserved

- Walgreens has national partnership with Health and Human Services (HHS)
- No cost standard flu vaccinations to those who do not have insurance or insurance does not cover
 - *Partner with FQHC's*
 - *Churches*
 - *Non-profit mission groups*
 - *Coalitions and state departments of health*
 - Indiana example: ISDH, IIC and Walgreens, to publicize and immunize the community surrounding one of our intercity stores in Indianapolis

How else have pharmacists
partnered to drive increased
immunization rates?

Kroger Pharmacy: Partnering to Vaccinate against Measles

- February 2012: Measles outbreak in Indianapolis-area
 - *13 confirmed cases within two neighboring counties*
- Kroger Pharmacy partnered with the Pendleton School District to provide the M-M-R vaccine to teachers
- Collaborated with local physician and school district to vaccinate over 80 individuals

Senior Living Facilities: We'll Come to You!

- On-site influenza vaccine clinics at senior living communities
- Worked with on-site wellness coordinator to set up clinic
- Educated patients on additional vaccines needed to decrease missed opportunities



HPV Grant Submission

- “Evaluation of a Multidisciplinary Program to Improve HPV Vaccination Rates among Children and Young Adults in Medically Underserved Neighborhoods.”
- Proposed goal was to evaluate impact of educational intervention delivered in clinics and pharmacies on HPV vaccination rates in adolescents aged 11 – 16 years of age
- Submitted by Purdue University RxSafe-Net in collaboration with Kroger Pharmacy, Indiana State Department of Health, Marion County Health Department, and Indiana Immunization Coalition

Audience Participation: Local Collaboration Opportunities

- What are some unmet vaccine needs in your community and what could an Immunizing Pharmacist do to help?
- What subset of patients commonly does NOT receive vaccines in your community?
- Please take a few minutes to discuss and share

Audience Participation: Local Collaboration Opportunities

- What are some examples of locations or events where entire families commonly come together? Can these events serve as locations for immunization clinics?
- Please take a few minutes to discuss and share

Putting Ideas into Action!

How can you help improve public health by increasing vaccination rates?

Talk to YOUR pharmacist!



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