Speakers

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   Pharmacist, Walgreens Pharmacy

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   American Pharmacists Association Liaison for the ACIP

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   Board President, Indiana Immunization Coalition
Acknowledgements

- Nathan Hantz, PharmD Candidate, Butler University
- Michael Peters, PharmD Candidate, Purdue University
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 Seqiris.

- 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
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
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

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 providing vaccines to children.

- Allowed pharmacists to play a role in vaccine education and mobilization, distribution, access and administration, and registries and tracking systems.


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)
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)
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
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
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

- **Influenza, Pneumo and Zoster (I, P, Z)**: NH
- **Other combos**: NY, WV**, WY**

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

Used with permission from APhA
Pharmacist Administered Vaccines

Prescriber issued protocols vs Rx

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

<table>
<thead>
<tr>
<th>Number of states / territories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protocol</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Protocol</th>
<th>FL, KS, MN, NV, WI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protocol or Rx (depending on age and/or vaccine)</td>
<td>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</td>
</tr>
<tr>
<td>Protocol/Rx or No Prescriber/Rx Needed (depending on age and/or vaccine)</td>
<td>AK, AZ, CA, ID, LA, ME, MD, MT, NH, NJ, NM, OR, SC, SD, VA, WV, WY</td>
</tr>
</tbody>
</table>

APhA / NASPA Survey of State IZ Laws/ Rules
Used with permission from APhA
Patient Age Limitations

The impact made in increasing immunization access for adults could also enhance access for adolescent and child populations, where needed.

<table>
<thead>
<tr>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any age</td>
</tr>
<tr>
<td>Restricted at some age less than 18</td>
</tr>
<tr>
<td>18 and older only</td>
</tr>
</tbody>
</table>

Based on data collected by NASPA (July 2015)
Used with permission from APhA
Pharmacist Administered Vaccines

Patient-Age Limitations via prescriber protocol

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

<table>
<thead>
<tr>
<th>Age Limit</th>
<th>States/Territories</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;18yo</td>
<td>CT, FL, HI, ME, MA, MT*, NJ, NY*, PR*, VT, VA</td>
</tr>
<tr>
<td>&gt;14yo</td>
<td>HI*, NC*</td>
</tr>
<tr>
<td>&gt;13yo</td>
<td>GA*</td>
</tr>
<tr>
<td>&gt;12yo</td>
<td>DC, MO*</td>
</tr>
<tr>
<td>&gt;11yo</td>
<td>IN</td>
</tr>
<tr>
<td>&gt;10yo</td>
<td>IL*, MN*</td>
</tr>
<tr>
<td>&gt;9yo</td>
<td>DE, KY*, ME*, PA*, RI*</td>
</tr>
<tr>
<td>&gt;7yo</td>
<td>AR, OH*, TX*</td>
</tr>
<tr>
<td>&gt;6yo</td>
<td>IA*, KS*, WI, VA*</td>
</tr>
<tr>
<td>&gt;5yo</td>
<td>ND*</td>
</tr>
<tr>
<td>Any age</td>
<td>AL, CA, CO, MI, MS, MT, NE, NM, NV, OK, SD, TN, UT, WA</td>
</tr>
</tbody>
</table>

* Scope varies
Pharmacists Practicing in Indiana

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

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
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.


APhA / NASPA Survey of State IZ Laws/ Rules
ACIP Vaccine Recommendations, 2016.
Healthy People 2020 Topics & Objectives: Immunization and Infectious Diseases
Influenza Vaccines

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

<table>
<thead>
<tr>
<th>Age Group</th>
<th>% Vaccinated against influenza during 2012-13 season</th>
<th>Health People 2020 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 months – 17 years</td>
<td>50.5%</td>
<td>70%</td>
</tr>
<tr>
<td>18 years and older</td>
<td>42.6%</td>
<td>70%</td>
</tr>
</tbody>
</table>

Healthy People 2020 Topics & Objectives: Immunization and Infectious Diseases
ACIP Vaccine Recommendations, 2016.
Pharmacist Administered Vaccines
Influenza - Age of Adm Authorized by Protocol

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

Number of states / territories

<table>
<thead>
<tr>
<th>Age of Adm</th>
<th>Number</th>
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<tbody>
<tr>
<td>&gt;18yo</td>
<td>8</td>
</tr>
<tr>
<td>&gt;14yo</td>
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<tr>
<td>&gt;13yo</td>
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<tr>
<td>&gt;12yo</td>
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<tr>
<td>&gt;11yo</td>
<td>2</td>
</tr>
<tr>
<td>&gt;10yo</td>
<td>4</td>
</tr>
<tr>
<td>&gt;9yo</td>
<td>3</td>
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<tr>
<td>Any age</td>
<td>11</td>
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<table>
<thead>
<tr>
<th>Age of Adm</th>
<th>States</th>
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<td>DC, MO</td>
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<td>&gt;11 yo</td>
<td>IN</td>
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<tr>
<td>&gt;10 yo</td>
<td>IL, MN</td>
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<tr>
<td>&gt;9 yo</td>
<td>DE, KY, PA, RI</td>
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<tr>
<td>&gt;7 yo</td>
<td>AR, OH, TX</td>
</tr>
<tr>
<td>&gt;6 yo</td>
<td>AZ, IA, KS, WI</td>
</tr>
<tr>
<td>&gt;5 yo</td>
<td>ND</td>
</tr>
<tr>
<td>Any age</td>
<td>AL, CA, CO, MI, MS, NE, NV, OK, SD, TN, UT, WA</td>
</tr>
</tbody>
</table>

APhA / NASPA Survey of State IZ Laws/ Rules
Used with permission from APhA
Pharmacist Administered Vaccines
Influenza  No MD protocol or Rx Needed

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

Number of states / territories

<table>
<thead>
<tr>
<th>Age Group</th>
<th>States</th>
</tr>
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<tbody>
<tr>
<td>&gt;18yo</td>
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<tr>
<td>&gt;12yo</td>
<td>4</td>
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<tr>
<td>&gt;9yo</td>
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<tr>
<td>&gt;6mo</td>
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</tr>
<tr>
<td>Any age</td>
<td>3</td>
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</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Gender</th>
<th>Healthy People 2020 Goal (%)</th>
<th>US National Average, 2014 (%)</th>
<th>Indiana, 2014 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>80%</td>
<td>39.7%</td>
<td>44.4%</td>
</tr>
<tr>
<td>Male</td>
<td>80%</td>
<td>21.6%</td>
<td>12.8%</td>
</tr>
</tbody>
</table>

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

CDC. 2014 NIS-Teen Vaccination Coverage Table Data
Healthy People 2020 Topics & Objectives: Immunization and Infectious Diseases
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)


APhA / NASPA Survey of State IZ Laws/ Rules
ACIP Vaccine Recommendations, 2016.
Pharmacist Administered Vaccines
Patient-Age Limitations – for HPV Vaccination

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

<table>
<thead>
<tr>
<th>Number of states / territories</th>
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<th>5</th>
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<td>&gt;18yo</td>
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<td>&gt;9yo</td>
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<tr>
<td>&gt;6yo</td>
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<tr>
<td>No age limit</td>
<td></td>
<td></td>
<td>17</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Younger ages under prescription/protocol
R Requires a prescription

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

Used with permission from APhA
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/worksite 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
“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!
References


4. 856 IAC 4-1-1. Authority: IC 25-26-13-4


7. APhA / NASPA Survey of State IZ Laws/ Rules

8. IC 25-26-13-31.2; (13)HE1464.1.1

