IMMUNIZATION: IMPLICATIONS FOR VACCINE UPTAKE AND DEVELOPMENT

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OBJECTIVES

At the conclusion of this presentation, pharmacists will be able to:

1) Explain issues regarding patients missing routine vaccinations
2) Identify ways to assess for missed vaccines
3) List key vaccines for catchup
4) Discuss safe practices to provide immunizations

At the conclusion of this presentation, pharmacy technicians will be able to:

1) Identify issues regarding patients missing routine vaccinations
2) Identify ways to assess for missed vaccines
3) List key vaccines for catchup

DISCLOSURE

- Dr. Girotto has a relationship with Lexi-Comp as a consultant. There is no conflict of interest associated with this presentation.

HERD IMMUNITY

https://www.cdc.gov/vaccines/vac-gen/whatifstop.htm

HERD IMMUNITY THRESHOLD

<table>
<thead>
<tr>
<th>Disease</th>
<th>Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measles</td>
<td>83 – 94%</td>
</tr>
<tr>
<td>Mumps</td>
<td>75 – 86%</td>
</tr>
<tr>
<td>Rubella</td>
<td>83 – 85%</td>
</tr>
<tr>
<td>Pertussis</td>
<td>92 – 94%</td>
</tr>
<tr>
<td>Polio</td>
<td>80 – 86%</td>
</tr>
<tr>
<td>Diphtheria</td>
<td>85%</td>
</tr>
</tbody>
</table>

CDC

Impact of COVID-19 On Pediatric Vaccinations

Santolini, et al. MMWR May 2020
BLUE CROSS BLUE SHIELD OF AMERICA

- BCBSA Shared Data 11/18 Demonstrating Decreased Vaccinations
- Estimates decline of 38% IPV, 36% MMR, 25% DTaP vaccine doses

<table>
<thead>
<tr>
<th>Disease</th>
<th>CDC Herd Immunity Thresholds</th>
<th>BCBSA 2019 Vaccination Rate</th>
<th>BCBSA 2020 Vaccination Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measles (MMR)</td>
<td>83-94%</td>
<td>92%</td>
<td>89%</td>
</tr>
<tr>
<td>Pertussis (DTaP)</td>
<td>92 - 94%</td>
<td>82%</td>
<td>79%</td>
</tr>
<tr>
<td>Polio</td>
<td>80 - 86%</td>
<td>93%</td>
<td>89%</td>
</tr>
</tbody>
</table>


NOT JUST A PEDIATRIC ISSUE...

- Pregnancy recommendations Flu & Tdap 2010-2019

<table>
<thead>
<tr>
<th>Population</th>
<th>Flu vaccinated</th>
<th>Tdap vaccinated</th>
<th>Both flu and Tdap</th>
</tr>
</thead>
<tbody>
<tr>
<td>All pregnant</td>
<td>61%</td>
<td>57%</td>
<td>40%</td>
</tr>
<tr>
<td>Provider offer/referred</td>
<td>75%</td>
<td>72%</td>
<td>58%</td>
</tr>
<tr>
<td>Provider recommend but not offer/refer</td>
<td>50%</td>
<td>Not reported due to small sample size</td>
<td>14%</td>
</tr>
<tr>
<td>No recommend</td>
<td>21%</td>
<td>2%</td>
<td>0%</td>
</tr>
</tbody>
</table>

https://www.cdc.gov/mmwr/volumes/69/wr/pdfs/mm6939a2-H.pdf

MEASLES IMPACT BEYOND MEASLES...

- Patients with measles infection had loss of 11-73% of total baseline antibodies after infection and only reestablished after being re-exposed to pathogens
- Similar loss was NOT seen in MMR vaccinated children
- Data suggests this results in clinical susceptibility to infections that patients had prior immunity from prior infection or immunization


ASSESSMENT

- Which of the following is NOT true regarding measles and vaccinations?
  A. Patients without MMR vaccines are more susceptible to measles
  B. Measles community outbreaks more likely when communities dip below herd immunity thresholds
  C. Patients who get measles disease are NOT more likely to get sick with other illnesses
• Estimated 90 percent of Americans lived within five miles of a community pharmacy.
• Pharmacies have extended hours and are convenient.
• “Pharmacists are trusted healthcare professionals with established relationships with their patients. Pharmacists also have strong relationships with local medical providers and hospitals to refer patients as appropriate.”
• Pharmacists were estimated to have given ~1/3 of adult flu vaccines in 2018-19 season.


PHARMACIST AS VACCINE PROVIDERS

• Amendment of PREP act August 19th authorizing pharmacists to order and administer FDA approved vaccines 3 through 18-year-olds as per ACIP immunization schedules (only as part of PREP act during Pandemic declaration)
• Further amendment of PREP act September 3rd authorizing pharmacists to administer to persons three or older COVID-19 vaccinations that have been authorized or licensed by the Food and Drug Administration (FDA) and recommended per ACIP

The licensed pharmacist (or pharmacy intern being supervised) must
1. Complete a practical training program of ≥20 hrs. & approved by ACPE (include hands-on injection technique, clinical evaluation of indications and contraindications of vaccines, and the recognition and treatment of emergency reactions to vaccines).
2. Have a current certificate in basic cardiopulmonary resuscitation.
3. Complete a minimum of two hours of ACPE-approved, immunization-related continuing pharmacy education during each State licensing period.
4. Comply with recordkeeping and reporting requirements of the jurisdiction in which he/she administers vaccines, including informing the patient’s PCP, submitting immunization information to the State vaccine registry, complying with requirements with respect to reporting adverse events, and complying with requirements whereby the person administering a vaccine must review the vaccine registry or other vaccination records prior to administering a vaccine.
5. Inform childhood-vaccination patients and the adult caregivers accompanying the children of the importance of a well-child visit with a pediatrician or other licensed primary care provider and refer patients as appropriate.

“COMMUNICATING THE IMPORTANCE OF VACCINATION TO PATIENTS AND PARENTS/CAREGIVERS AS WELL AS THE SAFETY PROTOCOLS AND PROCEDURES …CAN HELP PROVIDE REASSURANCE TO THOSE WHO MAY OTHERWISE BE HESITANT TO PRESENT FOR VACCINATION VISITS.”

https://www.cdc.gov/vaccines/pandemic-guidance/index.html

COMPARISON OF HCP ADULT STANDARDS
Slide 16

jg2  jennifer girotto, 11/12/2020
jg3  jennifer girotto, 11/12/2020
ASSESSMENT FOR IMMUNIZATIONS

• Staying up to date on CDC immunization recommendations.
• Implement protocols for patients to immunization needs to be routinely reviewed and reminders are provided to patients about vaccines they need.
  • Computer Prompts
  • Refill reminders for subsequent doses
  • Routine questionnaires

NOTIFICATIONS

• What are some ways you have incorporated into your practice to assess patients for vaccinations?
  A. Computer prompts
  B. Refill reminders for subsequent vaccinations
  C. Vaccination questionnaires for patients
  D. Advertisements
  E. Other (comment)

STANDING ORDERS

• Resources available at immunize.org – clinic resources

RECOMMEND VACCINES YOUR PATIENTS NEED
RECOMMENDATIONS FOR VACCINATION

- Make a clear and strong recommendations when they are indicated
- Explain why vaccines are indicated
- Address questions and concerns
- Highlight positive experiences with vaccination (personal or in your practice)

RESOURCES TO HELP ANSWERING QUESTIONS

- Common vaccine concerns
  - https://www.cdc.gov/vaccinesafety/concerns/index.html
- Help addressing parents’ vaccine questions
  - https://www.cdc.gov/vaccines/parents/FAQs.html
  - https://www.cdc.gov/vaccines/hcp/communicating/preparing-for-parent-vaccine-questions.html

KEY VACCINES FOR CATCH-UP

- Focus on information from CDC regarding vaccine focus areas during an emergency
- For pediatric patients focus on catch-up recommendations and high-risk conditions
- For adults focus on routine and high-risk conditions

ADULT SCHEDULE
VACCINATING SAFELY DURING EMERGENCIES

• Checking current guidance
  • https://www.cdc.gov/vaccines/pandemic-guidance/index.html

VACCINATING SAFELY: MINIMIZE CHANCE OF HCP EXPOSURE DURING EMERGENCIES

• Follow screening procedures
• Have barrier protection during triage and initial intake
• Ensure patients have appropriate PPE (e.g., cloth masks if over 2 years for COVID-19)
• Ensure adherence to appropriate hand hygiene

VACCINATING SAFELY: FOLLOW INFECTION CONTROL

• Ensure standard precautions, or higher depending on the emergency and risk factor

VACCINATION RECOMMENDATIONS COVID-19

• What precautions do you currently take with providing vaccines to your patients in Dec 2020? (check all that apply)
  A. Wear mask
  B. Wear face shield/ goggles
  C. Wear gloves
  D. Wash hands between patients
  E. Wear gown
  F. Other (comment)
In addition to appropriate hand hygiene, what precautions do you believe the CDC is currently recommending you take with providing vaccines to your patients?

A. Wear mask
B. Wear face shield/goggles
C. Wear mask and face shield/goggles
D. Wear mask, face shield/goggles, and gowns

VACCINATING SAFELY: APPLICATIONS TO COVID-19

- Wear a medical face mask at all times
- Use eye protection especially in cases of moderate to high community transmission
- Gloves
  - Required when administering intranasal or oral vaccines due to risk of mucosal exposure
  - If used for IM/SQ they should be changed and appropriate hand hygiene performed between patients
- Limit exposure times
  - Use electronic communications to minimize face-to-face time
  - Ensure physical distancing for all stages of vaccination (check-in, checkout, screening, and post-vaccination monitoring)

ASSESSMENT

What changes, if any, to safety procedures during immunization will you be implementing based upon this information?

A. Wear face shield/goggles
B. Wash hands between patients
C. Wear medical face mask
D. Other enhanced procedure
E. No changes, already implemented all recommended safety procedures

CDC CURRENT GUIDANCE INFLUENZA

- Additional focus on vaccinating against influenza recommended to limit severe disease and "twindemic"
- All patients > 6 mos old without contraindications
- Focus groups
  - Essential workers
  - >65 years
  - 6 mos to <5 years
  - Pregnant
  - Pts with neurologic conditions
  - Pts with other high-risk conditions

CDC CURRENT GUIDANCE PEDIATRICS

- "It is important to assess the vaccination status of all children and adolescents at each patient visit to avoid missed opportunities for vaccination and ensure timely vaccine catch-up. All vaccines due or overdue should be administered according to the recommended CDC immunization schedules during that visit, unless specific contraindication exists."
**CDC CURRENT GUIDANCE**

**ADULTS**

- **Pregnant people:** If Tdap and Influenza have been delayed, these should be received at the next in-person appointment.

- **Adults:** Healthcare personnel should ensure that their patients continue to receive vaccines. If vaccination is deferred, older adults and those with underlying medical conditions who subsequently become infected with a vaccine-preventable disease are at increased risk for complications.

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**INFORMATION ABOUT COVID19 VACCINES**

- Up to date information from the WHO: [https://www.who.int/publications/m/item/draft-landscape-of-covid-19-candidate-vaccines](https://www.who.int/publications/m/item/draft-landscape-of-covid-19-candidate-vaccines)


- ACIP meeting information: [https://www.cdc.gov/vaccines/acip/meetings/index.html](https://www.cdc.gov/vaccines/acip/meetings/index.html)

- Questions patients may ask: [https://www.cdc.gov/vaccines/hcp/covid-conversations/answering-questions.html](https://www.cdc.gov/vaccines/hcp/covid-conversations/answering-questions.html)