Shingles: Disease & Vaccine Update

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Reminders & Housekeeping

- This webinar is being brought to you by the Maine Immunization Program (MIP), part of Maine CDC, Department of Health & Human Services. There is no continuing education available.

- MIP has no relationship with vaccine manufacturers or distributors.

- All information within this webinar is up-to-date as of February 23, 2018. Please refer to the manufacturers websites for additional updates.
At the end of this webinar, participants will be able to:

1. Describe Shingles, how the disease progresses, and identify risk factors, symptoms, and complications from the disease.

2. Discuss the two vaccines available for Shingles including, but not limited to: storage and handling requirements, indications and the new ACIP recommendations.

3. Understand why Shingrix is now recommended over Zostavax.

4. Talk with patients about why they should receive Shingrix vaccine.
Shingles

- Shingles is a viral infection primarily characterized by a painful rash located on the head or torso, usually on one side of the body. Anyone who has gotten the Chickenpox can get Shingles – even children.

- Symptoms:
  - Pain, itching or tingling of the skin
  - Rash of blister-like sores
  - Fever, headache, chills (~20% of patients)
  - Upset stomach
Shingles

• If a patient had Chickenpox as a child, the Herpes Zoster (HZ) virus is already inside their body.
  – Patients who never had the Chickenpox disease do not have the HZ virus inside their body, however the Chickenpox, or HZ, virus may be contracted through contact with an infected person.
  – Current research suggests the patients that have never had Chickenpox would benefit from vaccination.

• As the body ages the immune system cannot suppress the HZ virus as well, causing the virus to flare and symptoms to develop.

• About 1 in 3 people will develop Shingles at age 60 or older.
  – That’s about 1 million cases per year

Source: US CDC, NFID
Shingles

• Risk Factors:
  – Increasing age
  – Female (increased risk)
  – White (risk is 2x higher in whites than African Americans)
  – Trauma/surgery in affected dermatome

Image: http://infectioncontrol.ucsfmedicalcenter.org/education
Source: US CDC, NFID
balance the slide (text and graphics vs white space)
Coaty, Kristen, 1/25/2018

Added graphic to help explain what a dermatome is
Levesque, Ashley, 1/29/2018
Shingles

Source: US CDC
Shingles

• Those who have Shingles should avoid contact with the following people:
  – Pregnant women who have never had Chickenpox or the Varicella vaccine
  – Premature or low birth weight infants
  – Those with a weakened immune system

• There are currently no recommendations to stay home from work or school

• Transmission of Shingles virus is less contagious than Chickenpox.
  – Only contagious before blisters have crusted

• Covering the rash greatly minimizes risk of transmission.
• Blisters will begin to scab over in 7 – 10 days and the rash typically clears in 2 – 4 weeks.

• Treatment is fairly limited:
  – Acyclovir, Valacyclovir or Famciclovir
  – Pain medicines
  – Wet compresses, calamine lotion & colloidal oatmeal baths

• Best ‘treatment’ is prevention!
• All children should receive two doses of Varicella vaccine per ACIP Recommendations.

• Adults should receive Shingles vaccine whether they had the Chickenpox or not.

• Two vaccines available in the US:
  – Zostavax
  – Shingrix
Zostavax

- Live Attenuated Zoster Vaccine
- Licensed in 2006 for those 60 years old and older
- Must be kept frozen
- Single dose administered subcutaneously

- Is 51% effective against HZ
  - Only ~35% effective for those over 70
  - Immunity wanes after 1-2 years
- Efficacy is 67% for postherpetic neuralgia (PHN)
- Low uptake for the vaccine, only about 30% of population vaccinated
- Contraindicated for people with immunosuppression

Source: NFID, US CDC
• Adjuvanted Recombinant Zoster Vaccine
• Licensed October 2017 for those 50 years old and older
• Must be refrigerated - antigen component must be mixed with adjuvant suspension
• 2 dose series administered intramuscularly in the deltoid and 0 and 2-6 months.

• Efficacy for HZ amongst the 4 groups studied ranges: 91.3% – 97.9%
• Expected to potentially prevent 53,000 cases of Shingles and 4,000 cases of PHN per year.

• Contraindications: History of severe allergic reactions to components of the vaccine or after 1st dose. Additional studies are currently being conducted with individuals with immunosuppression.
• Shingrix is recommended for:
  – Prevention of herpes zoster and related complications for immunocompetent adults aged 50 years and older.
  – Prevention of HZ and related complications for immunocompetent adults who previously received zoster vaccine live (Zostavax)

• Shingrix is preferred over Zostavax for the prevention of HZ and related complications.

• US CDC accepted this ACIP Recommendation on January 26, 2018.
Why The Change of Recommendation?

• Vaccine efficacy against HZ and PHN is much higher in Shingrix
  – Current data suggests high efficacy in ALL age groups studied over 4 years
    • Ages 50-80
  – Efficacy for HZ amongst the 4 groups ranges: 91.3% – 97.9%
  – Efficacy for HZ after 4 years: 87.9%
  – Efficacy for PHN in those 70 and older: 88.8%
  – Remember, Zostavax efficacy against HZ is 51% and against PHN is 67%

• Efficacy unknown for just 1 dose

Source: NFID
Safety Profile

• All data currently shows there is no increased risk of adverse events.

• Most common events were site reactions and systemic symptoms which usually resolved in 2-4 days.

• Need additional safety data, but the vaccine is considered safe to use now with your patients.

• Need more data on co-administration with other vaccines.

Source: NFID
Administration Safety

Identify the injection site
- Locate the deltoid muscle of the upper arm
- Use anatomical landmarks to determine the injection site
- In adults, the midpoint of the deltoid is about 2 inches (or 2 to 3 fingers’ breadth) below the acromion process (bony prominence) and above the armpit in the middle of the upper arm

Administer the vaccine correctly
- Inject the vaccine into the middle and thickest part of the deltoid muscle
- Insert the needle at a 90° angle and inject all of the vaccine into the muscle tissue

Always follow safe injection practices
- Maintain aseptic technique
- Perform hand hygiene before preparing and administering vaccines
- Use a new needle and new syringe for each injection
- If using a single-dose vial (SDV) discard after use
A SDV should be used for one patient only!

IM injection best practices
- Administering the injection too high on the upper arm may cause shoulder injury
- If administering additional vaccines into the same arm, separate the injection sites by 1 inch if possible

Report any clinically significant adverse event after vaccination to the Vaccine Adverse Event Reporting System (VAERS) at vaers.hhs.gov/

For additional information on proper vaccine administration, visit the CDC vaccine administration web page at www.cdc.gov/vaccines/hcp/admin/admin-protocols.html

Source: US CDC
Patient refusal should be considered temporary – be sure to assess why the patient is refusing vaccination at EVERY visit. May be accomplished by:

- Take an extra minute to find out why patient is refusing.
- Make a firm, positive recommendation to get the vaccine.
- Refer to another Provider if needed to finish series or for cost concerns.
  - Example: Refer patient to pharmacy for 2\textsuperscript{nd} dose

- **NFID Shingles Toolkit**

- **VIS – Zoster Recombinant published 2/12/2018**
Recalling Patients

• Remember, Shingrix is a 2-dose series

• Tips to vaccinate all adults aged 50 and older against Shingles:
  – Give the patient an appointment card.
  – Use recall reminders prior to 2\textsuperscript{nd} appointment.
  – Assess dose completion of series-dosed vaccines at each patient encounter.
  – Offer vaccines in the late afternoon, evening & weekends.
  – Partner with other Provider to complete the series.
  – Designate an Immunization Champion within your practice.

Source: NFID
There will be some changes in the ImmPact Scheduling Tracker to accommodate the new Shingrix recommendations

- Zoster Live = Zostavax
- Zoster Recomb = Shingrix

### ImmPact Scheduling Tracker

- **Vaccine Group**: Zoster Live
  - **Date Administered**: 01/10/2017
  - **Series**: 1 of 1
  - **Trade Name**: Yes
  - **Dose**: Yes
  - **Reaction**: 73 years, 28 days

### Vaccines Recommended by Selected Tracking Schedule

Non-validated doses are not included in the forecasting logic. Non-validated doses should be confirmed.

<table>
<thead>
<tr>
<th>Vaccine Group</th>
<th>Earliest Date</th>
<th>Recommended Date</th>
<th>Overdue Date</th>
<th>Latest Date</th>
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<tbody>
<tr>
<td><strong>Hep A</strong></td>
<td>01/02/1946</td>
<td>01/02/1946</td>
<td></td>
<td></td>
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<tr>
<td><strong>Hep B</strong></td>
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<td>01/02/1944</td>
<td></td>
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<tr>
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<td>08/02/1945</td>
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<tr>
<td><strong>Meningococcal</strong></td>
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<td>01/02/1958</td>
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<tr>
<td><strong>Pneumo-Poly</strong></td>
<td>01/02/1947</td>
<td>01/02/2010</td>
<td>01/02/2011</td>
<td></td>
</tr>
<tr>
<td><strong>Polio</strong></td>
<td>02/13/1945</td>
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<td>05/02/1945</td>
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<tr>
<td><strong>Td</strong></td>
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<td>01/02/1952</td>
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<tr>
<td><strong>Varicella</strong></td>
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<td>Complete</td>
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<td><strong>Zoster Recomb</strong></td>
<td>03/07/2017</td>
<td>03/07/2017</td>
<td>03/07/2017</td>
<td></td>
</tr>
</tbody>
</table>

Yellow = Can Administer, Green = Due, Blue = Overdue, Pink = Completed or Invalid

[View Explanation of Schedule Highlighting]
Remember – patients who have previously been vaccinated with Zostavax are recommended to be revaccinated with 2 doses of Shingrix.

*Shingles*. U.S. CDC. DHHS. [www.cdc.gov/shingles](http://www.cdc.gov/shingles)


VIS: [https://www.cdc.gov/vaccines/hcp/vis/current-vis.html](https://www.cdc.gov/vaccines/hcp/vis/current-vis.html)
Maine Immunization Program
Main Line: 207-287-3746
Education Line: 207-287-9972

Thank you!!