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# Older Adult Vaccine Updates: Be a Clinical Champion

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# Objectives

- Understand current update on immunizations for adults in long-term care (LTC).
- Address the barriers and solutions to optimize immunizations among residents and staff.

# **Older Adult Vaccine Updates: Be a Clinical Champion**

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# Standards for Adult Immunization Practice

- Assess resident
- Make a strong recommendation
- Administer vaccine or refer
- Document and report

# What do you think???

- Approximately what percentage of the population must be vaccinated for the development of “herd immunity”?
  - 80%
  - 85%
  - 90%
  - 95%

2. Which of the following statements is true about Medicare coverage for adult vaccines?

- a. All vaccines are covered through Medicare Part B.
- b. All vaccines are covered through Medicare Part D.
- c. Some vaccines are covered through Part B and some are covered through Part D.
- d. Vaccines are not covered by Medicare.

3. Which of the following statements about vaccinations in long-term care facilities is true?

- a. Facilities are required to offer influenza and pneumonia vaccines to residents but residents are not required to accept them.
- b. All residents must be vaccinated annually against influenza unless they have medical or religious contraindications.
- c. Health care workers in these facilities must be vaccinated annually against influenza unless they have medical or religious contraindications.
- d. None of the above.

# What Do We Know?

- What is currently happening?
- Are there needs and opportunities?
  - Currently there are NO requirements that residents in AL, senior housing, retirement communities, CCRCs be immunized.
  - They can go to school regardless....as long as they don't have TB in select settings (e.g., AL).



# What Do We Know?

- An estimated 40,000 to 50,000 adults die each year from vaccine-preventable diseases in the United States
- Additionally, more than 1 million adults get shingles, an extremely painful condition
- The direct health-care costs associated with these diseases in adults is approximately \$10 billion annually

# What Do We Know?

- Influenza affects older adults disproportionately:
  - There are 23,000 influenza related deaths in the US, 90% of which are in older adults.
  - Acute respiratory failure from flu is 10-30 x as likely to affect older adults.

# What Do We Know?

- *Streptococcus pneumoniae* is the most common cause of community acquired pneumonia
- There are about 43,500 cases per year with 5,000 deaths, the majority of which are in older adults.

# Does it Matter?

- The rate of influenza and pneumococcal vaccine among older adults across all races and ethnicities was approximately 60%.
- For tetanus the rate was similarly 55%, although for tetanus with pertussis the rate was only 8%.
- The rate for herpes zoster vaccination was 20%.
- This is in contrast to the Healthy People 2030 adult goal of achieving immunization rates of 90%.

# Does it Matter?

- Adults who are not immunized not only can become ill themselves, but also can transmit the disease to others.
- For example, adults who have not been immunized against pertussis can transmit the disease to children who are too young to be vaccinated. Such events have resulted in the deaths of infants.

# Is it Worthwhile to Vaccinate?

- Although there is no immunization that is 100% effective in preventing the relevant disease, immunizations are effective in the majority of cases.
  - CDC recommends routine administration of pneumococcal conjugate vaccine (PCV15 or PCV20) for all adults 65 years or older who have never received any pneumococcal.
  - The vaccine against herpes zoster results in a 90% reduction in cases of herpes zoster and 66% reduction in the risk of having long term postherpetic neuralgia.

# Is It Worthwhile?

- Zoster infection occurs at a prevalence rate of approximately 50% for those who are 85 years of age and older.
- The incidence of post-herpetic neuralgia and chronic pain is present in 15% of those 80 years of age and older.
- Aside from the obvious negative impact of pain from a zoster infection, either acute or chronic, immunization will decrease the risk of having to isolate older adults from friends and family when actively infected with zoster.

# WHAT IS NEW????

Vaccine	19-26 years	27-49 years	50-64 years	≥65 years
<a href="#">COVID-19</a> ⓘ	2- or 3- dose primary series and booster ( <a href="#">see notes</a> )			
<a href="#">Influenza inactivated (IIV4)</a> or <a href="#">Influenza recombinant (RIV4)</a> ⓘ	1 dose annually			
<b>or</b> <a href="#">Influenza live attenuated (LAIV4)</a> ⓘ	1 dose annually			
<a href="#">Tetanus, diphtheria, pertussis (Tdap or Td)</a> ⓘ	1 dose Tdap each pregnancy; 1 dose Td/Tdap for wound management ( <a href="#">see notes</a> )			
	1 dose Tdap, then Td or Tdap booster every 10 years			
<a href="#">Measles, mumps, rubella (MMR)</a> ⓘ	1 or 2 doses depending on indication (if born in 1957 or later)			For healthcare personnel, ( <a href="#">see notes</a> )
<a href="#">Varicella (VAR)</a> ⓘ	2 doses (if born in 1980 or later)		2 doses	
<a href="#">Zoster recombinant (RZV)</a> ⓘ	2 doses for immunocompromising conditions ( <a href="#">see notes</a> )		2 doses	
<a href="#">Human papillomavirus (HPV)</a> ⓘ	2 or 3 doses depending on age at initial vaccination or condition	27 through 45 years		



<b><u>Pneumococcal</u></b> <b>(PCV15, PCV20, PPSV23) ⓘ</b>	<p>1 dose PCV15 followed by PPSV23 OR 1 dose PCV20 (<a href="#">see notes</a>)</p>	<a href="#">See Notes</a>
<b><u>Hepatitis A</u></b> <b>(HepA) ⓘ</b>	<p>2, 3, or 4 doses depending on vaccine</p>	
<b><u>Hepatitis B</u></b> <b>(HepB) ⓘ</b>	<p>2, 3, or 4 doses depending on vaccine or condition</p>	
<b><u>Meningococcal A, C, W, Y</u></b> <b>(MenACWY) ⓘ</b>	<p>1 or 2 doses depending on indication, <a href="#">see notes</a> for booster recommendations</p>	
<b><u>Meningococcal B</u></b> <b>(MenB) ⓘ</b>	<p>2 or 3 doses depending on vaccine and indication, <a href="#">see notes</a> for booster recommendations</p>	
<b><u>Haemophilus influenzae type b</u></b> <b>(Hib) ⓘ</b>	<p>19 through 23 years</p>	<p>1 or 3 doses depending on indication</p>

# Pneumonia Vaccines 65+

- Give 1 dose of PCV15 or PCV20.
  - If PCV15 is used, this should be followed by a dose of PPSV23 at least one year later.
    - The minimum interval is 8 weeks.
  - If PCV20 is used, a dose of PPSV23 is NOT indicated.

# Pneumonia Vaccines 65+

- **For adults 65 years or older who have only received PPSV23, CDC recommends you:**
- May give 1 dose of PCV15 or PCV20.
  - The PCV15 or PCV20 dose should be administered at least one year after the most recent PPSV23 vaccination.
  - Regardless if PCV15 or PCV20 is given, an additional dose of PPSV23 is not recommended

# Pneumonia Vaccine 65+

- For adults 65 years or older who have only received PCV13, CDC recommends you:
  - Give PPSV23
  - For adults who have received PCV13 but have not completed their recommended pneumococcal vaccine series with PPSV23, one dose of PCV20 may be used if PPSV23 is not available. If PCV20 is used, their pneumococcal vaccinations are complete.

# Lets Start with Flu Vaccine

- Currently licensed influenza vaccine products are classified as inactivated influenza vaccine (IIV), live attenuated influenza vaccine and recombinant influenza vaccine.
- IIV is the only one approved for older adults.
  - Given intramuscularly
  - Three different strains of hemagglutinin antigen have been included: 2 strains of influenza A and one strain of B.

# Flu Vaccine

- Choosing just one strain of B can lead to a gap in coverage...so.....
  - In 2013 quadrivalent influenza vaccine (IIV4) was approved for use.
  - ALSO there is now the high-dose formulation of IIV3 approved for older adults
    - 4x the amount of hemagglutinin
    - Better hemagglutinin inhibitory antibody titers and greater rates of seroconversion (decreased flu from 1.9% to 1.5%)
    - May cause more site reactivity

# Egg Allergy Challenges

- The virus for inactivated influenza vaccines is grown in eggs.
  - Mild allergy can use the vaccine
  - No option recommended for older adults - the recombinant influenza vaccine is only recommended for those 18-49.

# Current Advisory Committee on Immunization Practice (ACIP) Flu Vaccine Recommendations

- May use either:
  - Standard inactivated influenza IIV3
  - Quadrivalent vaccine IIV4
  - Or high dose trivalent vaccine



# The *S. pneumoniae* Vaccine

- Current two types
  - Pneumococcal polysaccharide vaccine (PPSV)
  - Pneumococcal conjugate vaccine (PCV)
  - the number at the end of the vaccine indicates how many capsular subtypes are in the vaccine

# The First Pneumonia Vaccine

- Established in 1983: PPSV-23
- Has estimated efficacy of 74% for preventing invasive pneumococcal disease

# Shingles Vaccine

- Zostrix is a live attenuated virus
- This vaccine reduces the incidence of shingles to 50%
- This vaccine reduces the risk of postherpetic neuralgia to 60%
- Shingrix is the new shingles vaccine

# Shingrix

- **Indication**
- SHINGRIX is a vaccine indicated for prevention of herpes zoster (shingles) in adults aged 50 years and older.
- SHINGRIX is not indicated for prevention of primary varicella infection (chickenpox).

# Shingrix

- SHINGRIX is contraindicated in anyone with a history of a severe allergic reaction (eg, anaphylaxis) to any component of the vaccine or after a previous dose of SHINGRIX
- Review immunization history for possible vaccine sensitivity and previous vaccination-related adverse reactions.
- Common local adverse reactions in subjects aged 50 years and older were pain (78.0%), redness (38.1%), swelling (25.9%), myalgia(44.7%), fatigue (44.5%), headache (37.7%), shivering (26.8%), fever (20.5%), and gastrointestinal symptoms (17.3%)
- Vaccination with SHINGRIX may not result in protection of all vaccine recipients

# CDC Recommendation

- Recommended for those age 50 and above who are not immunocompromised
- Recommended for those who received the live zoster vaccine
- Recommended over the live zoster vaccine

# Administration

- SHINGRIX should be refrigerated. DO NOT FREEZE:
- SHINGRIX is supplied as an adjuvant and antigen for reconstitution: The antigen is to be reconstituted only with the accompanying adjuvant suspension. After reconstitution, SHINGRIX should be administered immediately or stored refrigerated between 2° and 8°C (36° and 46°F) and used within 6 hours. Discard reconstituted vaccine if not used within 6 hours. Do not freeze. Discard if the reconstituted vaccine has been frozen.
- SHINGRIX is a recombinant vaccine for intramuscular injection only.
- SHINGRIX is administered as a 2-dose series:
  - The second dose can be administered anytime between 2 and 6 months after the first dose.
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# Billing

CPT Code (Product): 90750

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CPT Code (Administration)

1 vaccine administered: 90471

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Each additional vaccine administered during same encounter: 90472

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ICD-10-CM Code (Encounter for Immunization): Z23

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Administration Modifier for Medicare: GY

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MVX Code: SKB

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CVX Code: 187\*

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# ACIP Guidelines

- Established in 2008
- Routine immunization for adults over age 60....even for those lucky ones who already had shingles.
- Contraindications include immunosuppressive conditions such as hematological malignancy, high dose steroids (>20mg per days for more than 2 weeks) or use of tumor necrosis factor alpha inhibitors.

# Tetanus, Diphtheria and Pertussis

- Since the beginning of the 21<sup>st</sup> there has been a rise in cases of pertussis to 48,000 cases in 2012. WHY?
  - Decrease in childhood immunizations
  - Change from use of whole-cell pertussis to acellular pertussis (shorter duration of protection)
  - Led to a change in recommendations for Tdap booster

# Tetanus, Diphtheria and Pertussis

- In 2012 ACIP recommended a one time Tdap booster for all adults-this is to protect adults and their grandchildren!
- Tdap can be given at any time.
- Continue with routine Td immunization every 10 years.

# Review of Recommendations

Vaccine	Recommendation	Issues to Consider	Coverage
Influenza	All older adults	May use standard or high dose	Medicare covered under Part B
Pneumococcal	All older adults	PCV-23 already given then PCV-13 at least a year later.  NO PCV-23 then give PCV-13 and follow with PCV-23 6-12 months later.	Medicare covered under Part B
Shingles vaccine	All older adults	Avoid if significantly immunocompromised	Medicare covered under Part D
Tdap	All older adults-once	No contraindications	Medicare covered under Part D UNLESS GIVEN FOLLOWING AN INJURY (Part B)
Hepatitis A and B	Give based on risk factors	? May want to consider Hepatitis B for diabetics	Covered by Medicare Part B if indicated 9



# YOUR job is to ASSESS

## H-A-L-O checklist of factors that indicate a possible need for adult vaccination

Vaccine	Health factors									Age factors	Lifestyle factors						Occupational or other factors				
	Pregnant	Certain chronic diseases	Immunosuppressed (including HIV)	History of STD	Asplenia	Cochlear implant candidate/recipient	Organ transplant (for stem cell transplant, see ACIP's General Recommendations on Immunization)	CSF leaks	Alcoholism		Born outside the U.S.	Men who have sex with men	Not in a long-term, mutually monogamous relationship	User of injecting or non-injecting drugs	International traveler	Close contact of international adoptee	Cigarette smoker	College students	Parent or caregiver of a young child	Healthcare worker	Certain lab workers
HepB		✓	✓	✓							✓	✓	✓	✓	✓				✓		✓
Influenza	Annual vaccination is recommended for all adults .....																				
PCV13		✓	✓		✓	✓	✓	✓		65 yrs & older											
PPSV23		✓	✓		✓	✓	✓	✓	✓	65 yrs & older						✓					✓
Tdap	A single dose is recommended for all adults; pregnant women should receive Tdap during each pregnancy .....																				
Zoster										60 yrs & older											

Adapted from <http://www.immunize.org/catg.d/p3070.pdf> on August 28, 2014 and <http://www.cdc.gov/mmwr/pdf/wk/mm6337.pdf>

# Then What Do you Do?



# Barriers

- Lack of a systemic infrastructure requiring adult vaccinations.
- Most schools, childcare facilities, and summer camps require proof of immunization when children enroll, there is no similar requirement for adults. In contrast, few employers may require immunizations (e.g., for health care workers or military personnel) or older adults in institutional settings.



# Barriers

- There generally is no similar systematic incentive for adults and the impetus for vaccination of adults must come from health care providers and/or from residents themselves.
  - One exception is that nursing homes must offer influenza and pneumococcal vaccines to residents, but residents are not required to accept them.

# Barriers

- Access?
  - A growing number of pharmacists now administer vaccines (and can bill through Medicare Part D), but resident may still encounter out-of-pocket costs due to co-pays and other cost-sharing requirements in Part D plans.
  - Medicaid coverage for adult vaccines is inconsistent from state to state, and private insurance does not always pay for adult vaccines.

# Barriers

- The lack of a guaranteed source of payment for vaccines is also a concern for providers who do not want to maintain an inventory of an expensive product with a relatively short shelf-life, and that must be discarded if specific storage requirements are not maintained.
- Predicting demand is much more challenging for adult vaccines than it is for children.

# We are Bad Examples!

- Health care workers themselves often do not receive recommended vaccines.
- Immunizations are particularly important for health care workers due to their frequent interactions both with residents who may be carrying the diseases, as well as those who may be more susceptible to diseases.
- This issue is particularly important in long-term care facilities and hospitals where many elderly, frail, and medically fragile residents are susceptible to infection.

# Overcoming the Challenges

- Take on the challenge and tell residents and families you are administering vaccines as per recommendations by the CDC unless they refuse!

# Overcoming the Challenges

- Work with a local pharmacy (or your institutional pharmacy depending on what state you are in and what type of setting) and prearrange delivery, storage and reconstitution of the vaccine.
- Zoster vaccine must be stored frozen at minus 15 degrees Celsius and is then reconstituted with 0.7mL of sterile water prior to administration. Maintenance of the frozen cold-chain is critical and the vaccine has to be used within 30 minutes of reconstitution.
- Pre order and do this all at the same time on a floor, unit or facility.

# Coverage

- Just as a reminder, Medicare Part B covers most vaccines: influenza, pneumococcal, Tdap, and any vaccine directly related to the treatment of an injury (e.g., tetanus) or direct exposure to a disease or condition.
- The zoster vaccine is covered by Part D. Part D coverage includes both the vaccine and the administration of the vaccine.

## Resources

Association of Immunization Managers	<a href="http://www.immunizationmanagers.org/index.phtml">http://www.immunizationmanagers.org/index.phtml</a>
Centers for Disease Control and Prevention National Immunization Program	<a href="http://www.cdc.gov/nip/">www.cdc.gov/nip/</a>
Immunization Action Coalition Listing of state and local coalitions	<a href="http://www.immunize.org">www.immunize.org</a> <a href="http://www.izcoalitions.org">http://www.izcoalitions.org</a>
Immunization Gateway: Your Vaccine Fact-Finder	<a href="http://www.immunofacts.com">www.immunofacts.com</a>
Infectious Diseases Society of America	<a href="http://www.idsociety.org">www.idsociety.org</a>
National Adult Immunization Coordinators Partnership List of adult immunization outreach materials by state/territory	<a href="http://www.cdc.gov/vaccines/ed/adultimupdate/downloads/naicp-outreach-materials.pdf">http://www.cdc.gov/vaccines/ed/adultimupdate/downloads/naicp-outreach-materials.pdf</a>
National Coalition for Adult Immunization	<a href="http://www.nfid.org/ncai">www.nfid.org/ncai</a>
National Foundation for Infectious Diseases	<a href="http://www.nfid.org">www.nfid.org</a>
National Network for Immunization Information	<a href="http://www.immunizationinfo.org">www.immunizationinfo.org</a>



# Take on the Challenge

- I. Be or identify a champion
- II. Gather a team
- III. Establish the barriers/challenges
- IV. Establish solutions
- V. Make it happen

# A Champion

A clinical staff member who leads efforts to advance immunization practices, rates, reporting, and quality within a clinical practice.

The champion promotes the preventive health value of immunizations; ensures staff are trained and systems are aligned to advance immunization rates and adherence to related quality measures; and interprets, communicates, and integrates changes in vaccine policies, recommendations, and quality measures into practice as they occur.

# Team?

- Might be other office staff; DON; AL manager etc.

# First Step: ASSESS YOUR residentS/RESIDENTS

- What to asses:
  - Adult vaccination status
- When to assess:
  - At EVERY encounter
- How to assess:
  - HALO Checklist
  - Summary of Recommendations for the Big 5 Adult Immunizations
  - Adult Immunization Record
  - Appointment Reminder Card
- Who will assess:
  - ALL staff have a role in assessing
  - Skills Checklist for Immunization
  - Strategies for Increasing Coverage Rates

# Staff Role in Assessment

- Consider what's currently in place in your practice:
  - What does your staff currently do to assess vaccination status?
  - What can you do to get staff buy-in to increase vaccination rates and affect their role in achieving that goal?
  - What processes can be put into place so that staff understands their role?

# ADMINISTER OR REFER

- What
  - The needed vaccination or referral to appropriate provider
- When
  - During the admission/annually?
- How
  - Administering Vaccines: Dose, Route, Site & Needle Size
  - Guide to Contraindications & Precautions to Commonly Used Vaccines
  - Standing Orders
  - Emergency Response Worksheet
  - Vaccine Finder Health Map
  - Vaccine Information Statements
  - Safe Storage & Handling of Vaccines
- Who
  - Champions, physicians, nurse practitioners, nurses

# ADMINISTER OR REFER

- What does your practice/setting need most to be ready to successfully administer vaccinations or refer to a local provider?
- What is currently getting in the way ?
- How can you remove those obstacles?

# Education of Staff

## Identifying the Best Approach for your Facility

- Knowledge doesn't change behavior but it is an important first step
- Different approaches
  - Traditional inservice?
  - Short training; 5 minute stories and tidbits of success stories
  - Capture the moment training
  - Written resources



# DOCUMENT & REPORT

- What
  - The vaccination or the referral, providing a VIS, and any adverse events
- When
  - Immediately following vaccination or referral; in case of adverse events, as soon as occur
- How
  - Document & Record Keeping Requirements: Adult Immunizations
  - List of State Immunization Information Systems
  - Adult Vaccination Tracker & Guide
  - Reminder Cards
- Who
  - The practitioner who vaccinated or referred

# DOCUMENT, RECORD KEEPING, and REPORTING Requirements

- Provide current VIS to residents/chart/proxy
- Document 5 facts:
  - Date of vaccination
  - Vaccine manufacturer & lot number
  - Name, address, signature & title of vaccinator
  - Edition of the VIS given to the resident
  - Date the VIS was given to the resident
- Report to VAERS
- Track resident's personal vaccination records with your state's IIS

# DOCUMENT & REPORT

- How do you document vaccination or a referral for your practice/affiliates/state IIS?
- Who is responsible for documenting and reporting?
- What challenges do you experience with documenting and reporting?
- What ideas do you have for consistent/comprehensive documentation and reporting?
- How can you use reminder cards? Nice gift for short stay residents!

# Measuring Your Progress

- Individually identify measures that support tracking progress
- What do you already have in place?
- Is the EMR going to help?

# Depending on Barriers/Challenges

- Identify the solutions.



# Case Example

- The case of Assisted Living

# Identify the Barriers & Solutions

- Use a brainstorming approach
- Don't assume you know the challenges
- .....How do you peel a banana?

# Brainstorming

- YOUR list of challenges/solutions to implementing vaccines routinely in your practice
- Group ideas into themes and develop the Affinity Diagram
- Develop the Interrelationship Diagrams and together we will draw paths to establish the best driver
- The driver is the theme that is most likely to have an impact on why vaccines are not routinely given/addressed .



# Lets Get Started

Figure 1  
Affinity Diagram

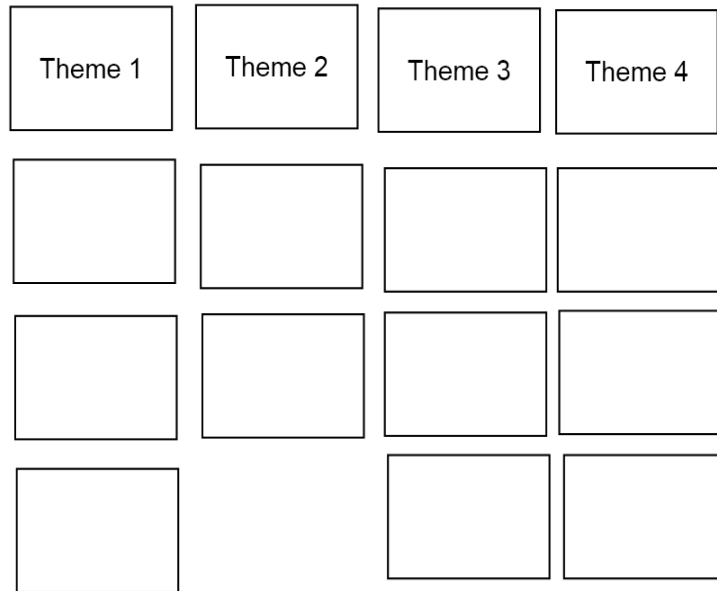
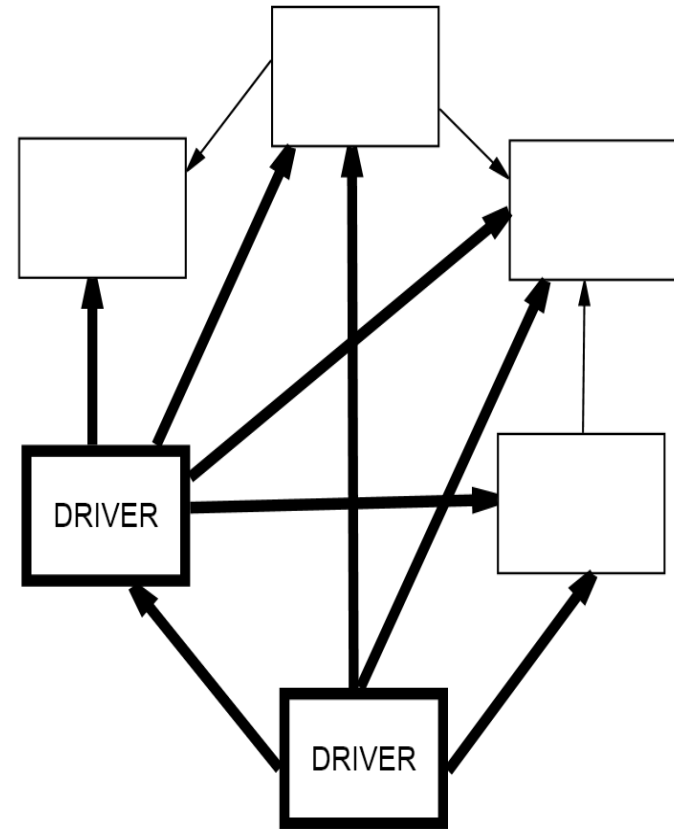


Figure 2  
Interrelationship Diagram



# Review Driver and Ways to Overcome the Challenge

- ? Knowledge
- ? Beliefs
- ?Staffing
- ?Resources
- ?Resistance
- ?Caring
- ?Perceptions of time

# There are no Requirements

- You can move in to AL never having had a vaccine.
- You just have to be free of TB!

# Each Year Flu and Pneumonia (PVC23) were Provided

- Excellent success at this level- over 90% vaccinated for flu
- Pneumonia ?????????? Timing of vaccine unknow.
- Shingles, TDAP, tetanus????? Unknown

# Identified the Challenges

- Getting the vaccine
- Covering the vaccine
- Getting permission from proxies
- Finding out who needed what

# Take on the Challenge in AL

- Worked with the delegating nurse to make this happen.
- May help decrease outbreaks within the setting.
- May help decrease hospitalizations and subsequent deconditioning and need for transfer among residents.

# Coordinated the Following

- Pharmacy support
- Facility support
- Family/proxy support
- Took the herd approach....everyone at once.

# Provided some Educational Resources

- Via handouts
- In newsletters
- In clinic offices
- In the mailroom in AL



# FLU Tidbits

## Is the flu a disease that can be spread from person to person?

Yes. It is caused by the influenza virus, which can be spread by coughing, sneezing, or talking. By getting flu vaccine you can protect yourself from influenza and may also avoid spreading influenza to others.<sup>1</sup>

## How do flu vaccines work?

Flu vaccines (the flu shot or nasal spray) help your body recognize and fight the specific type of the flu viruses expected to cause disease in a particular year.<sup>2</sup>

## Does the flu vaccine work right away?

It takes about 2 weeks after vaccination for your body to develop protection against the flu virus. In the meantime, you are still at risk for getting the flu. That's why it's better to get vaccinated early in the fall, before the flu season really gets under way.<sup>2</sup>

## When should you get a flu vaccine?

Get the vaccine as soon as it is available. Flu season usually peaks in January or February, but it can occur as late as May. Early immunization is the most effective, but it is not too late to get the vaccine in December, January, and beyond.<sup>2</sup>

## How long is my flu vaccination good for?

The flu vaccine will protect you for one flu season (typically late fall through early spring). The flu vaccine is designed to protect you from the types of flu that are expected that flu season.<sup>2</sup>

## Can I get the flu from the vaccine?

No, you cannot get the flu from the flu shot or the nasal spray.<sup>2</sup>

## What is pneumococcal disease?

Pneumococcal (NEU-mo-KOK-al) disease is an infectious illness caused by *Streptococcus pneumoniae* bacteria. It can make you very sick. The disease is spread from person to person by close contact.<sup>1,2</sup>

## How can pneumococcal disease affect me?

Some people think pneumococcal disease is an illness that only old or sick people get or that it is a disease only seen in hospitals or nursing homes. However, each year in the United States there are many types of pneumococcal disease cases reported among adults aged 50 years and older: 7,000 cases of blood infections, 442,000 cases of pneumonia (a lung infection), and 1,700 cases of meningitis (an infection of the protective covering surrounding the brain).<sup>3</sup> You can catch pneumococcal pneumonia where you live and work.

## Why are people ages 50 years and older at increased risk for pneumococcal disease?

As you get older, your immune system isn't able to respond as quickly to infection as it did when you were younger. This means that older individuals may be more likely to have severe cases of disease. And it is estimated that 75% of pneumococcal pneumonia cases requiring hospitalization occur in adults over 50 years old.<sup>3,4</sup>

## Is pneumococcal disease easily spread from person to person?

Like some other common infections, pneumococcal pneumonia is transmitted directly from person to person. Specifically, the disease is spread through close contact with droplets created when infected people cough, sneeze, or talk.<sup>2</sup>

## I thought pneumonia was like a cold, with symptoms that go away after several days.

### Is it really that bad?

Pneumococcal pneumonia is much more serious than the common cold, with symptoms that appear quickly and are sometimes severe. Certain symptoms, like cough and fatigue, can last for a month or more, even after treatment with antibiotics.<sup>5</sup>

## Is there anything I can do to keep from getting pneumococcal disease?

heating.<sup>1</sup>

**Diphtheria** is a respiratory disease caused by bacteria that is spread by coughing and sneezing. The symptoms include sore throat and low-grade fever. Airway blockage, coma, and death can occur if not treated.<sup>2</sup>

**Pertussis** is a highly contagious respiratory disease that is also known as whooping cough. After 1 to 2 weeks, severe coughing can begin. Pertussis can cause violent and rapid coughing, over and over, until the air is gone from the lungs and you are forced to inhale with a loud “whooping” sound. This extreme coughing can cause you to throw up and be very tired.<sup>3,4</sup>

### Who should be vaccinated?

All adults are advised to get a lifetime shot of Tdap. The following people should make sure they are up to date with their Tdap immunization: adults who are in contact with infants under 12 months (regardless of when you last received a Td vaccine), new mothers who have never received Tdap, health care workers who are in direct contact with patients, and pregnant women after 20 weeks of pregnancy.<sup>5,6</sup>

### If I have already been vaccinated for tetanus, diphtheria, and pertussis, why should I get another vaccination?

Some vaccines do not protect against illness for an entire lifetime. The Td vaccine that was available at the time for adults does not protect against pertussis; an adult version of Td with pertussis (Tdap) was not available in the United States until 2005.<sup>6</sup>

### If I never get sick, so why do I need Tdap?

Whooping cough is usually not deadly to adults and teenagers, but infants and young children are in danger of severe and life-threatening disease. Also, children do not receive all of their DTaP shots until they are 4 to 6 years old, so they are not fully protected in their early years. If you contract pertussis you may infect young children by coughing or sneezing near them.<sup>6</sup>

shingles rash has healed, some people will continue to have severe chronic pain in the affected areas.<sup>1</sup>

## **Who should get the shingles vaccine?**

Anyone 60 years of age or older should get the shingles vaccine, regardless of whether they recall having had chickenpox or not. Studies show that more than 99% of Americans aged 40 and older have had chickenpox, even if they don't remember getting the disease.<sup>2</sup>

## **How well does the shingles vaccine work?**

In studies, the vaccine reduced the risk of developing shingles by about 50%. People who were vaccinated but still developed shingles had pain for fewer days than people who were not vaccinated. Probably of most importance is that vaccinated people experienced shorter periods of severe pain after the shingles rash had disappeared.<sup>3</sup>

## **Does the shingles vaccine cause side effects?**

The most common side effects of the shingles vaccine are local reactions, such as redness, pain, tenderness, or swelling at the injection site, and headache.<sup>3</sup>

## **Should people without a history of chickenpox get the shingles vaccine?**

It is assumed that every person 60 years of age and older who has lived his or her entire life in the United States has been exposed to chickenpox and therefore should get the vaccine.<sup>3</sup>

## **Should adults who have already had shingles get the vaccine?**

Persons who have had shingles are unlikely to have it again (95% of cases occur in people with no history of shingles). However, the vaccine is approved for use in anyone 60 years of age and older regardless of his or her history of shingles.<sup>3</sup>

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