Stop the Spread...Spread the Word

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Excuses for Not Getting Flu Vaccine FACTS or Myths?

- “I got the flu shot once and then still got the flu”
- “I got a flu vaccine last year”
- “I’m healthy—I don’t need a flu vaccine”
- “The flu isn’t so bad, right?”
- “I’ll get vaccinated only if my family and friends get ill”
- “I don’t trust the vaccine”
- “I hate shots”
What is Influenza?

- Influenza is a contagious respiratory illness caused by influenza viruses
- Seasonal influenza outbreaks occur every year
- Rates of serious illness & death are greatest in:
  - Persons aged 65 years and older
  - Children less than 2 years of age
  - Persons (any age) with medical conditions that put them at high risk for complications from influenza
    - Diabetes, heart, lung or kidney conditions
Influenza Disease

“Classic” flu symptoms include an abrupt onset of:
- Fever, chills, muscle aches, headache, nonproductive cough, fatigue, and sore throat

Complications include:
- Pneumonia, myocarditis, encephalopathy

5% – 20% of US population infected annually
Facts Related to Influenza Disease

- Range of 3,000-49,000 (average 23,607) influenza-related deaths annually in the US
- 90% of flu related deaths are in persons aged 65 years and older
  - Persons aged 85 years/older are 16x more likely to die from flu complications than persons aged 65-69 years
- Up to 50% of flu infections are asymptomatic
  - Persons who do not have symptoms of illness but are spreading the disease to others
- Adults can be infectious from the day before symptoms begin through about 5 days after illness onset
Month of Peak Influenza Activity United States, 1976–2008

- Dec: 13%
- Jan: 19%
- Feb: 47%
- Mar: 3%
- Apr: 3%
- May:
### How Well are We Protected?

#### U.S. Influenza Vaccination Rates by Age

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Vaccination Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aged 6 months - 17 years</td>
<td>49.4%¹</td>
</tr>
<tr>
<td>Aged 18 - 49 years</td>
<td>35.8%¹</td>
</tr>
<tr>
<td>Aged 50 - 64 years</td>
<td>51.0%¹</td>
</tr>
<tr>
<td>Aged 65 years and older</td>
<td>70.8%¹</td>
</tr>
</tbody>
</table>

#### Michigan Influenza Vaccination Rates

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Vaccination Rate</th>
</tr>
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<tbody>
<tr>
<td>Aged 65 years and older</td>
<td>67.5%²</td>
</tr>
</tbody>
</table>

¹Preliminary Results: Influenza vaccination coverage by age group, March National Immunization Survey and National Flu Survey, March 2012  
²2010 Behavioral Risk Factor State Survey data
Health Care Personnel (HCP) & Influenza

• 70% of HCP continue to work despite being ill with flu
• HCP have caused outbreaks among patients in health care settings
• Two studies on influenza
  – Vaccination of HCP was associated with decreased deaths among nursing home patients
  – Hospital-based influenza outbreaks frequently occur where unvaccinated HCP are employed

MMWR 2010/ Vol. 59/No RR-8
HCP Flu Vaccination Internet Panel Survey, U.S., November 2011

"Other" includes settings other than hospitals, physician’s offices, or long-term care facilities.
Data from: http://www.cdc.gov/flu/professionals/vaccination/health-care-personnel.htm#methods
Influenza

“… vaccination is the primary method for preventing influenza and its severe complications.”

MMWR 2010; Vol. 59/No RR–8
2012–2013 Seasonal Flu Vaccine Strains

- A/California/7/2009-like (H1N1)
- A/Victoria/361/2011 (H3N2)
- B/Wisconsin/1/2010 (Yamagata lineage)

• Type A = moderate to severe illness affects all ages
• Type B = generally milder disease primarily affects children
• All 3 influenza viral strains are contained in all TIV (shot) and LAIV (nasal spray) vaccines

ACIP Influenza Recommendation available at www.cdc.gov/vaccines/recs
Trivalent (Inactivated) Influenza Vaccine (TIV) Recommendations

- TIV (flu shot) may be given to anyone 6 months of age or older including:
  - HCP working in any area of care
  - Persons who have a medical risk condition
    - i.e., diabetes, asthma, heart, lung or kidney conditions

- Given IM annually prior to and during flu season using the appropriate product based on age

- May be given at the same time as other vaccines
  - Or any time before or after other vaccines
**Live, Attenuated Influenza Vaccine (LAIV) Recommendations**

- LAIV can be given to any person 2-49 years of age, who are healthy and not pregnant
  - Do not give to persons with a high risk medical condition such as asthma or diabetes

- Exception: household or close contact (including HCP) of persons who are severely immunocompromised and in protective isolation
  - Bone marrow or hematopoietic stem cell transplants
Influenza Vaccine **DOES** Work

- Flu vaccine is up to 90% effective in preventing disease in healthy persons younger than 65 years

- Vaccine efficacy in older persons, age 65 years +
  - 30% to 40% effective in preventing illness
  - 50% to 60% effective in preventing hospitalization
  - 80% effective in preventing death

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MMWR 2010; August 6, 2010 Vol. 59/No. RR-8
Yaksich Family Message

- Alana’s Foundation
  - www.alanasfoundation.org

- Families Fighting Flu
  - 15 videos which include personal stories and powerful messages
    http://www.familiesfightingflu.org/

Why get a flu vaccine?
Ask the Yaksich family of Michigan.

This year and every year, make sure you and your loved ones are vaccinated against the flu. It could save a life.

Alana’s story

On February 2, 2003, 5¼-year-old Alana Yaksich spent the day with her parents and brothers watching movies, eating sundaes and playing. Even with a low-grade fever from a recent sore throat, Alana enjoyed the afternoon feeling healthy and surrounded by her family. That evening, Alana was rushed to the emergency room when her fever increased to 106 degrees. Within 24 hours of arriving at the local hospital, Alana died of flu-related complications that caused swelling and injury to her brain.

Flu is a serious disease that can be prevented through vaccination. Annually an average of 20,000 young children are hospitalized because of the flu.

In a recent mild flu season, 120 children in the United States died of the flu, of which half were previously healthy, just like Alana.

www.michigan.gov/immunize
No More Excuses
You Need a Flu Vaccine

“Oh, the flu isn’t so bad...right?”

Wrong.
The flu (influenza) is a contagious disease which affects the lungs and can lead to serious illness, including pneumonia. While pregnant women, young children, older people, and people with certain chronic medical conditions like asthma, diabetes and heart disease are at increased risk of serious flu-related complications, even healthy people can get sick enough to miss work or school for a significant amount of time or even be hospitalized.

“I’m Healthy, I don’t need a flu vaccine.”

Anyone can become sick with the flu and experience serious complications. Older people, young children, pregnant women and people with medical conditions like asthma, diabetes, heart disease, or kidney disease are at especially high risk from the flu, but kids, teens and adults who are active and healthy also can get the flu and become very ill from it. Flu viruses are unpredictable, and every season puts you at risk. Besides, you might be around someone who’s at high risk from the flu—a baby, your grandparents, or even a friend. You don’t want to be spreading flu, do you?

“I hate shots!”
The very minor pain of a flu shot is nothing compared to the suffering that can be caused by the flu. The flu can make you very sick for several days, send you to the hospital or worse. For most healthy, non-pregnant people ages 2 through 64 years old, the inactivated flu vaccine is a great choice for people who don’t like shots. Either way, a shot or spray can protect you from catching the flu. So, whatever little discomfort you feel from the musclegroup injection, or the max nasal spray of the flu vaccine is worthwhile to avoid the flu.

“Wait a minute, I got a flu vaccine once and still got sick.”

Even if you got a flu vaccine, there are still reasons why you might have felt flu-like symptoms:
• You may have been exposed to another flu virus before or after you got vaccinated. The flu vaccine can only protect against flu viruses.
• You might have been exposed to the flu after you got vaccinated but before the vaccine took effect. It takes about two weeks after you receive the vaccine for your body to build protection against the flu.
• You might have been exposed to an influenza virus that was very different from the viruses included in that year’s vaccine. The flu vaccine protects against the three influenza viruses that research indicates will cause the most disease during the upcoming season, but there can be other flu viruses circulating.

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For more information, visit
http://www.flu.gov
http://www.cdc.gov/flu or
call
800-CDC-INFO

National Center for Immunization and Respiratory Diseases

Centers for Disease Control and Prevention

But the flu vaccine makes me sick?
I can’t risk missing work or school.

The flu vaccine cannot give you the flu. The most common side effects from a flu shot are a sore arm and maybe a low fever or achiness. The live-inactivated flu vaccine might cause congestion, sneeze, sore throat, or cough. If you do not experience any of these, side effects are mild and short-lived. That’s much better than getting sick and missing several days of school or work or possibly getting a very serious illness and needing to go to the hospital.

“I got a flu vaccine last year, so I don’t need another one.”

Your body’s level of immunity from a vaccine usually lasts a season and is expected to have declined. You may not have enough immunity to be protected from getting sick this season. You should get vaccinated again to protect yourself against the three viruses that research suggests is likely to circulate again this season.

“I’ll get vaccinated only if my family and friends get sick with flu.”

If you wait until people around you get sick from the flu, it will probably be too late to protect yourself. It takes about two weeks for the flu vaccine to provide full protection, so the sooner you get vaccinated, the more likely it is that you will be fully protected once the flu begins to circulate in your community. Flu vaccines are easy to find. They are offered in various locations like your doctor’s office, chain pharmacies, grocery stores, and health clinics.

“It’s too late for me to get protection from a flu vaccination this season.”

Flu seasons are unpredictable. They can begin early in the fall and last late into the spring. As long as the season isn’t over, it’s not too late to get vaccinated, even during the winter. Getting a flu vaccine is the best way to protect you and your family. If you miss getting your flu vaccine in the fall, make it a New Year’s resolution. Flu season doesn’t usually peak until January or February and can last until May. The flu vaccine offers protection for you all season long.
Pneumococcal Disease

- Causes pneumonia, meningitis, bacteremia
- Pneumococcal pneumonia accounts for:
  - Estimated 175,000 hospitalizations per year
  - Up to 36% of adult community-acquired pneumonia & 50% of hospital-acquired pneumonia
  - Case-fatality rate: 5-7%
  - Significantly higher mortality (death) in persons 65 years/older & in those with certain health conditions
- Pneumonia is a common complication of Influenza
Conditions Causing Increase Risk for Invasive Pneumococcal Disease

Risk includes:

- Decreased immune function
- Asplenia
  - No spleen or spleen that does not function correctly
- Chronic heart, pulmonary, liver or renal disease
- Cigarette smoking
- Cerebrospinal fluid (CSF) leak
Who Should Receive Pneumococcal Polysaccharide Vaccine?

- Persons aged ≥ 65 years
- Persons aged 19-64 years who smoke cigarettes or have asthma
- Persons aged 2-64 years with certain medical conditions including:
  - Chronic pulmonary, kidney or heart disease
  - Diabetes mellitus; alcoholism
  - Immunosuppression including: HIV, functional or anatomical asplenia, sickle cell, general malignancy
Diabetes added as Risk for Hep B

- HBV highly contagious & environmentally stable
- Can be transmitted by medical equipment contaminated with blood not visible to unaided eye
- **Lapses in infection control** associated with assisted blood glucose monitoring have led to HBV transmission
  - Multi-patient use of finger stick devices designed for single-patient
  - Inadequate disinfection and cleaning of monitors between patients
- Transmissions have occurred in multiple settings
  - LTC facilities, hospitals, private offices, homes, health fair
Hepatitis B Vaccination

- All persons with diabetes aged 19 through 59 years should complete a 3-dose hep B series
  - Soon after diagnosis and if not previously vaccinated

- Providers may consider vaccination for persons aged 60 years or older
Pertussis Disease Reporting

- Pertussis disease persists across the U.S.
  - 26,000 cases reported so far this year
    - Overall, most cases in last 50 years
    - 13 deaths related (11 infants and 2 toddlers)

- Confirmed cases in MI
  - June 2012 = 284
  - July 2012 = 389 with one documented infant death

- Vaccination against pertussis disease is the **best defense** available
Tdap Recommendations

- Tdap is recommended to be given to all adults aged 19 years and older **now**
  - Including persons aged 65 years and older
  - Regardless of the interval since their last Td dose
  - If no documentation of a previous dose

- Persons around with infants less than 12 months should be vaccinated at least 2 weeks before contact

MMWR “Updated Recommendations for Tdap Vaccine in Adults aged 65 Years and Older, ACIP 2012” June 29, 2012 / 61(25) 468-470
### Recommended Immunizations for Adults

<table>
<thead>
<tr>
<th>Vaccine Type</th>
<th>Ages 19-21</th>
<th>Ages 22-26</th>
<th>Ages 27-49</th>
<th>Ages 50-59</th>
<th>Ages 60-64</th>
<th>Ages 65+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza (Flu)</td>
<td></td>
<td></td>
<td></td>
<td>Get a flu vaccine every year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tetanus, diphtheria, pertussis (Td/Tdap)</td>
<td>Get a Tdap vaccine once, then a Td booster vaccine every 10 years</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Varicella (Chickenpox)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HPV Vaccine for Women</td>
<td>3 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HPV Vaccine for Men</td>
<td>3 doses</td>
<td>3 doses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zoster (Shingles)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 dose</td>
<td></td>
</tr>
<tr>
<td>Measles, mumps, rubella (MMR)</td>
<td>1 or 2 doses</td>
<td></td>
<td>1 or 2 doses</td>
<td>1 or 2 doses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pneumococcal (pneumonia)</td>
<td>1 or 2 doses</td>
<td></td>
<td>1 dose</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meningococcal</td>
<td></td>
<td></td>
<td>1 or more doses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis A</td>
<td></td>
<td></td>
<td>2 doses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis B</td>
<td></td>
<td></td>
<td>3 doses</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Boxes this color show that the vaccine is recommended for all adults unless your doctor or nurse tells you that you cannot safely receive the vaccine.**

**Boxes this color show when the vaccine is recommended for adults with certain risks related to their health, job or lifestyle that put them at higher risk for serious diseases. Talk to your doctor or nurse to see if you are at higher risk.**

## Footnotes:

1. Influenza vaccine: There are four different flu vaccines available—talk to your doctor or nurse about which flu vaccine is right for you.

2. HPV vaccine for men: There are two different kinds of HPV vaccine but only one HPV vaccine (Gardasil®) can be given to men. Gay men or men who have sex with men who are 22 through 26 years old should get HPV vaccine if they haven’t already started or completed the series.

3. MMR vaccine: If you were born in 1957 or after, you should have already gotten MMR vaccine. Talk to your doctor or nurse about how many doses you may need.

4. If you are traveling outside of the United States, you may need additional vaccines. Ask your doctor or nurse which vaccines you may need.

For more information, call toll free 1-800-CDC-INFO (1-800-232-4636) or visit [http://www.cdc.gov/vaccines](http://www.cdc.gov/vaccines)

Copy of 2012 Adult Schedule for Providers can be found at [www.cdc.gov/vaccines](http://www.cdc.gov/vaccines)
Recommend Flu and Other Vaccines!

Studies consistently show that **provider recommendation** is the strongest predictor of influenza vaccination.

Adults who are initially reluctant, are likely to receive an influenza vaccination when the health care provider’s opinion of the vaccine is positive.
Alternative to using 2 stand-alone units:
  ◦ Use the refrigerator compartment of a combination refrigerator/freezer unit to store refrigerated vaccines and use a separate stand-alone freezer unit to store frozen vaccines

Small single-door (dorm-style) units with a freezer compartment should never be used to store vaccines

Contact your LHD for guidance before purchasing units

*MMR can be stored in freezer or refrigerator.
Key Storage and Handling Practices

- Place a calibrated, certified thermometer in the center of the storage unit
  - Check & record temperatures twice a day (am/pm)
    - Keep temp logs for 3 years
  - If temperatures are out of range, have an emergency response plan ready & take action
- Keep vaccines in original boxes with tops on
- Clearly label vaccine boxes to prevent errors
- Check and rotate vaccines at least once a week
  - Use vaccine that will expire first!
Safety Considerations

- When administering **any vaccine**, clinical staff need to be prepared for an emergency situation.

- **Steps to take**
  - All staff should be CPR-trained.
  - The clinic’s emergency plan is known by all staff.
  - At minimum, epinephrine and equipment to maintain an airway are readily available.

- If a clinically significant adverse event occurs after vaccine administration, fill out VAERS report (Vaccine Adverse Event Reporting System) at [www.vaers.hhs.gov](http://www.vaers.hhs.gov)
Utilize the Michigan Care Improvement Registry (MCIR)

- All vaccines administered to your clients should be recorded in MCIR
- Allows all providers with access to view a person’s immunization record
  - HIPPA compliant
- Decrease over-immunization and missed opportunities to vaccinate—use MCIR!
- Visit www.mcir.org
Several vaccines are recommended for Health Care Personnel

- **Hepatitis B**
- **Influenza**
- **MMR** • measles, mumps, rubella
- **Varicella** • chickenpox
- **Tdap/Td**
Resources

- Vaccine information, handouts, posters:
  - [www.michigan.gov/immunize](http://www.michigan.gov/immunize)
  - [www.cdc.gov/vaccines](http://www.cdc.gov/vaccines)
  - [www.aimtoolkit.org](http://www.aimtoolkit.org)
  - [www.immunize.org](http://www.immunize.org)
  - [www.mcir.org](http://www.mcir.org)

- For ongoing influenza updates:
  - [www.michigan.gov/flu](http://www.michigan.gov/flu)
  - [www.cdc.gov/flu](http://www.cdc.gov/flu)