

H1N1 and your Allergic/Asthmatic Child

Kelly Newhall, M.D.

Chicago Family Asthma & Allergy

H1N1

- Definitions
- Epidemiology
- Disease prevention measures
- H1N1 and Asthmatic children
- Vaccines and Egg allergic children

What is H1N1 Flu

- It is a new influenza virus causing illness in people
- “Swine” flu was first noticed in 4/2009 in the United States
- It did not come from pigs, but the virus is similar to viruses which cause illness in pigs

The “Stats”

- Disproportionally affects persons younger than 25 years of age
- 144 deaths of children since 4/2009 in the United States
- Children ages 0-4 years have the highest hospitalization rate
- 70% of persons hospitalized had a condition recognized as “high risk”

Seasonal flu deaths in children

- 2003/2004 – 153 deaths reported
- 2004/2005 – 47 deaths reported
- 2005/2006 – 46 deaths reported
- 2006/2007 – 68 deaths reported
- 2007/2008 – 83 deaths reported

- In 2008/2009 only 20% of children ages 5 – 18 years were vaccinated for the seasonal flu

High Risk Groups

- Pregnant women
- Obese persons
- Persons with chronic diseases
 - Asthma/COPD
 - Diabetes
 - Congenital Heart Disease
- Persons younger than 25 years
- Health care workers

Symptoms

- Fever
- Cough
- Runny nose
- Sore throat
- headache
- Body aches
- Chills
- Fatigue
- Vomiting/diarrhea

Testing

- Four types
 - Rapid influenza diagnostic tests
 - Direct immunofluorescence assays
 - rRT-PCR
 - Viral culture (gold standard)
- Not recommended for routine diagnosis of the flu
- Recommended for hospitalized patients with symptoms of influenza and immunocompromised patients

Anti – Viral Medications

- Tamiflu (oseltamivir) -
 - Patients 6 months and above
 - Liquid or capsules
 - Safe for pregnant women
 - Side effects of nausea, vomiting, unusual behavior
- Relenza (zanamivir) –
 - Patients 7 years old and above
 - Inhaled powder
 - Cannot be used for persons with asthma or heart disease
 - Dizziness, sinusitis, runny nose, cough, nausea, diarrhea, unusual behavior

Who should take Tamiflu?

- Persons at greater risk for complications of the flu:
 - Children younger than age 2 (Note - children ages 2-4 have a higher rate of complications compared to older children)
 - Pregnant women
 - Adults 65 years and older
 - Persons with chronic medical illnesses
 - Asthma, heart disease, diabetes, HIV

What can you do to help protect your family?

- Wash hands
 - 20 second hand wash (sing Happy Birthday twice)
 - Especially before and after meals
- Vaccinate family members when possible
- Stay Home !!!
- Boost their Immunity
 - Probiotics, yogurt or keifer every day
 - Children had 30% fewer viral infections
 - Stay hydrated
 - Immune cells function more effectively with good hydration

Travel

- Do not travel if you have symptoms of the flu
- Other countries (not the US) are screening international travelers for the flu. Travel may be delayed because of this
- H1N1 is the predominant influenza virus in both the northern and southern hemispheres
- No significant difference found between the virus in different countries/hemispheres



How to prevent the Flu

H1N1 Vaccine

- Two forms – Myst and Injectable
- May contain egg protein
- Similar safety profile to the seasonal flu vaccine
 - Soreness, low grade fever, muscle aches, nausea
- Children younger than 10 will need a vaccine booster

H1N1 Inactivated vaccine

- Injected/Inactivated vaccine – you cannot get influenza from the vaccine
- Safe for persons with asthma or other chronic diseases
- May contain thimerisol
- May contain a significant amount of egg protein
- Approved for persons older than 6 months

Live Attenuated nasal vaccine

- A live vaccine
- Approved for persons between 2 and 49 years of age
- May contain a significant amount of egg
- Side effects include – runny nose, cough, headache, fever and wheezing

Who should get the H1N1 vaccine?

- Pregnant women
- Persons with children less than 6 months of age in their home
- Children 6 months through 4 years of age
- Children 5 through 18 years with a chronic disease
- Health care workers

H1N1 Vaccine Availability

- Doses are being distributed to different areas based on the percentage of the population which live there.
- The United States Government has procured 250 million doses of the vaccine

Pneumovax

- Strep Pneumonia is the leading cause of pneumonia, sinusitis and otitis media in children
- Boosts immunity against 23 different types of Strep pneumonia
- Prevnar covers 7
- Now recommended for any asthmatic patient over the age of two



The Incredible Edible Egg

Vaccines which contain Egg protein

- Seasonal Influenza vaccine (myst and injection)
- H1N1 vaccine (myst and injection)
- Yellow fever vaccine

- MMR (risk is more theoretic)

Flu/Egg Allergy

- Amount of egg in a vaccine may vary between lots, and manufacturers
- Vaccines are usually safe if the amount of egg they contain is < 1.2 micrograms/ml
- Egg allergic children should be evaluated by their allergists to determine if they are safe candidates for vaccination

Flu Testing procedure

- Skin testing with the full strength vaccine
- Children with a history of anaphylaxis should then have intradermal testing with diluted vaccine.
- If both are negative, they may receive the vaccine with a 30 min observation period.

What if testing's positive?

- Important to weigh the risks and benefits of not receiving the vaccine.
- In high risk patients, such as asthmatics, a desensitization protocol is recommended.

What's on the Horizon for food allergies?

- Duke desensitization challenge for peanut and egg allergic children
- John Hopkin's sublingual protocol for desensitization
- Food Allergy Herbal Formula - 2

Children's Hospital of Boston Food Allergy Study

- Using Xolair, an anti-IgE medication to help improve the safety of food desensitization protocols in food allergy patients with a history of anaphylaxis

Thank you! Questions?