### A lot of Pediatricians

We just returned from this year's American Academy of Pediatrics National Conference and Exhibition in Washington D.C. It was heartening and motivating to meet with thousands of pediatricians from across the country all dedicated to improving the health and welfare of children locally and globally. We attended numerous seminars, workshops, and lectures and even ran a 7 a.m. 5K race to benefit the American Academy of Pediatrics Friends of Children Fund. We plan to incorporate what we've learned these past few days both in our offices and in future blog posts.

We were fortunate to find other pediatricians who promote pediatric education outside of the office setting. We enjoyed exchanging ideas with fellow pediatric blogger Dr. Roy Benaroch. In addition to writing his blog, Dr. Benaroch has authored two books for parents: A Guide to Getting the Best Health care for Your Child and Solving Health Behavioral Problems from Birth Through Preschool: A Parent's Guide. Also, we spent time with Dr Kardos's medical school friend Dr. Laura Jana, author of Heading Home with your Newborn, from Birth to Reality and Food Fights. She is also a pediatric media spokesperson.

It was also nice to meet Dr David Hill from North Carolina whose work can be found as well on the internet.

With pediatricians like these, the health of our nation's children is in good hands.

Julie Kardos, MD and Naline Lai, MD

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# H1N1 vaccine information in a nutshell

As the first batches of the H1N1 vaccine are distributed, is my pleasure to introduce our first guest blogger Kimberly Lafferty. A mom and well respected scientist, she brings us information on the H1N1 vaccine. Dr. Lafferty holds a doctorate in pharmacology from University of North Carolina at Chapel Hill and a masters of business administration from Pennsylvania State University. She completed a fellowship in clinical research and drug development and is a mom to a young child and an infant.

Naline Lai, MD

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As a mother of two young children, I am always concerned about their health and well-being. So, naturally, I am especially concerned about the novel influenza A/H1N1 strain that has led to the current global pandemic. But, as a pharmacist with over ten years experience in the pharmaceutical industry (mostly in research & development), I also know the importance of good research and making decisions based on the best available scientific evidence. Therefore, I have spent quite a bit of time researching the novel H1N1 virus and the soon-to-be available vaccine. Below is a summary of my findings:

- 1. While most people infected with H1N1 have had only mild to moderate symptoms, there have been deaths associated with this virus. Many of these have been in people with underlying chronic health conditions, but some deaths have occurred in otherwise healthy, young people.
- 2. According to the CDC (US Center for Disease Control and Prevention) on 10/1/2009, 100 pregnant women in the U.S. have required treatment for H1N1 influenza in intensive care units;

- 28 of these have died. Pregnant women are especially vulnerable to infections (due to a weakened immune system) and are at especially high risk of complications from the H1N1 strain.
- 3. The H1N1 vaccine is made by the same companies and by the same processes as the seasonal flu vaccine. It is also undergoing the same lot testing and release procedures as the seasonal flu vaccine. The only difference between the seasonal vaccine and the H1N1 vaccine is that the H1N1 vaccine contains only one strain of influenza while the seasonal vaccine contains three. While the strain in the H1N1 vaccine is different from the strains in the seasonal vaccine, the seasonal flu vaccine has been safely admininstered to millions of people over many years, including children.
- 4. Because the H1N1 vaccine is made the same way as the seasonal flu vaccine, clinical trials were officially not necessary for this vaccine. However, the NIH (National Institute of Health) and the manufacturers are separately conducting clinical trials, not only to verify the safety of the vaccine, but also to determine the optimal dose and dosing schedule needed to ensure that people who are vaccinated become immune to the H1N1 strain of flu.
- 5. The H1N1 vaccines currently approved in the U.S. do NOT contain adjuvant (or "immune boosters"). Adjuvants are used in European seasonal flu vaccines and the European H1N1 vaccine.
- 6. As with the seasonal influenza vaccine, the H1N1 vaccine will be available in preservative-free formulations. These will most likely be targeted to young children and pregnant women.

Since there are a lot of myths and misinformation out there regarding the H1N1 vaccine, focus your own research on

independent, credible sources such as the World Health Organization (WHO), the US Centers for Disease Control and Prevention(CDC), the Food and Drug Administration (FDA), and your state/local health departments. One important resource is www.flu.gov.

Kimberly Lafferty, Pharm D, MBA

# H1N1 vaccine update

FDA Approves Vaccines for 2009 H1N1 Influenza Virus

The U.S. Food and Drug Administration has approved four vaccines against the 2009 H1N1 influenza virus. Vaccine distribution is expected in the next month.

# Confused over the flu? About the seasonal flu and the swine flu

Why the recent American media hub-bub over "the flu" and "the swine flu"? Both are forms of the same virus called

influenza. Usually known as "the flu," this year, "the flu" is called the seasonal flu in order to distinguish it from "the swine flu," properly known as the 2009 H1N1 flu. Getting hit by any form of influenza can feel like being hit by a ton of bricks. Just ask my husband. Last winter, the same man who ran his first Marathon in the fall, couldn't run 500 feet for nearly a month after his bout with the seasonal flu. Complications from either form of influenza include sinus infections, pneumonia and even death. Influenza infections in the States occur mainly from October to April each year. Usually, only the seasonal strain is of concern, but this season there is the added concern that the 2009 H1N1 strain, which first leaped into the spotlight this past spring, will also add to the total number of people affected by influenza.

Both influenza forms are viral illnesses which predominantly cause airway symptoms. Classic flu symptoms are sudden onset of nasal discharge, cough, high fever, headache and achiness. A virus is a category of germs which are named for the way they reproduce. Examples of viruses vary wildly. Chicken pox, the common cold, and Human Immunodeficiency Virus (HIV) are all caused by viruses. Whether an illness is caused by either a virus or a bacterial germ does not necessarily reflect the severity of an illness. To add to the confusion, people sometimes call any viral illness which causes stomach upset "the stomach flu." "The Stomach flu" is not caused by an influenza virus. If your child has diarrhea and vomiting alone with no stuffy nose or cough, they are not likely to have a form of influenza.

How do I protect my kids against either the Seasonal Flu or H1N1?

Wash, wash, wash.

Hand washing with soap and water for 15 seconds has been proven to decrease germs. For young (or impatient) children, have them sing the Happy Birthday Song until they are done. One note-alcohol containing hand sanitizers do kill germs; however, most brands contain a greater percentage of ethylene alcohol than distilled drinks. Hand sanitizers contain over 60 percent alcohol versus 30-40 percent alcohol in liquor.

According to my sister, Melisa Lai, MD, a Boston area toxicologist, toddlers have ended up in comas from alcohol poisoning after drinking hand sanitizer.

No nose-to-nose.

Both forms of influenza are spread through air via coughing and sneezing. Tell your kids that they don't want boogies from other kid's noses to go into their nose. If their noses can touch the noses of other children, then they are too close. Cough away from other kid's faces. If we use national standards for spacing between sleeping cots in daycares (Caring For Our Children Health and Safety Standards, 2nd edition), children are ideally kept two feet apart.

Keep 'em away from crowded places.

Any parent knows, keeping playing children two feet apart from each other is near impossible. If your child is sick, keep them away from crowded places such as birthday parties, school and daycare. If your child is already ill, you do not want them to catch a secondary illness on top of their current illness. For the protection of your child and others, keep your child at home until he/she is 24 hours fever free. school and daycare exclusion criteria is already recommended not only for influenza by the American Academy of Pediatrics, but for all illnesses (www.AAP.org). A few days ago, the Centers for Disease Control http://www.cdc.gov/h1n1flu/schools/ published the same guidelines for influenza.

#### Immunize.

There are two types of immunizations against the seasonal flu. Because the seasonal influenza strains change from year to year, the vaccine changes and need to be given yearly. One is a nasal spray for children two years old and up. The other type is injected into muscle and is approved for those six months and above. Because the vaccines are made up in eggs, children with egg allergies cannot receive the vaccine.

Under nine years of age, the first year a child receives the seasonal flu vaccine, two doses are required. If only one immunization was given the first year, the child will require two the second year. If your child is ill or had a reaction to the seasonal vaccine in the past, ask your doctor about administration of the vaccine.

As of this writing, vaccines for the H1N1 flu are still not available. Vaccines are expected to be available in the late fall. Uncertainties about the H1N1 formulations, side effects and distribution still persist.

The priority groups for the seasonal flu immunization and the 2009 H1N1 flu immunization are slightly different. The main difference between the set of recommendations is that those over 65 years of age are not a target groups for the 2009 H1NI vaccine but a target for the seasonal flu vaccine. Also, college aged (19-24 years) adults are part of the 2009 H1N1 target group but not of the seasonal flu vaccine target group.

According to the Advisory Committee on Immunization Practices, a working group of the Centers for Disease Control which meets to review infectious disease data and recommends national guidelines for immunizations, the following groups are the priority groups for influenza vaccination:

Priority groups for the seasonal influenza vaccine:

- 1. Children aged 6 months up to their 19th birthday
- 2. People 50 years of age and older
- 3. People of any age with certain chronic medical conditions
- 4. People who live in nursing homes and other long-term care facilities
- People who live with or care for those at high risk for complications from flu, includes Health care workers, Household contacts of persons at high risk for complications from the flu, Household contacts and out of home caregivers of children less than 6 months of age (children too young to be vaccinated)
- 6. Pregnant women

Priority groups for the 2009 H1N1 influenza vaccine:

- 1. All people from 6 months through 24 years of age
- 2. Household contacts and caregivers for children younger than 6 months of age
- 3. People aged 25 through 64 years who have health conditions associated with higher risk of medical complications from influenza.
- 4. Healthcare and emergency medical services personnel
- 5. Pregnant women

#### Is there treatment?

Treatment is generally supportive. Have your child drink plenty of fluids and get as much rest as possible. Fever reducers such as ibuprofen (i.e. Morin, Advil) and acetaminophen (i.e. Tylenol) may help keep children comfortable enough to do the things such as drink and sleep that will make them better. Outpatient antiviral does exist but the strains of flu can morph, thus rendering them sometimes ineffective. Antiviral medications are for children whose illness is moderate or severe or if they are at high risk of complications. Generally antivirals work best within the first 48 hours after onset of symptoms. Antibiotics such as Amoxicillin and a "Z-pack "will not kill influenza viruses. Antibiotics are prescribed if there is bacterial infection overlying the influenza infection.

This winter, although your family may escape both strains of influenza, remember, there are plenty of "flu-like" illnesses out there which can also wreck havoc on your child's health. Hopefully, if the threat of the seasonal and 2009 H1N1 flu forces us to pay attention to good hygiene habits, we may overall end up with a healthier winter.

For the most up to date information on influenza: www.CDC.gov

Naline Lai, MD and Julie Kardos, MD

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# Maiden Voyage

My husband and I finally saw the Star Trek movie the other night, and as I write our first blog entry for Two Peds in a Pod® I feel like I am aboard the USS Enterprise taking off from the space station for the first time, to "explore all aspects of child care, to boldly go where this pediatrician has never gone before," namely, cyberspace.

After all, I spend my work days in my pediatric office seeing patients and interacting with parents directly. The internet was born while I was in medical school and because I was so busy studying, then working and raising a family, cyberspace remains mostly foreign territory to me. However, I realize that the huge majority of my patients' families turn to the internet for all sorts of information, including medical advice. Unfortunately, medical advice in cyberspace is often shady, inaccurate, or incomplete.

Dr. Lai and I hope to give you easily accessible, accurate pediatric information in the form of podcasts for those who are auditory learners and written blogs posts for those who prefer written material.

We will address the everyday questions that we hear from parents in our practices and we welcome your suggestions. Please email us at twopedsinapod@gmail.com to suggest future blog post and podcast content. We promise to keep our podcasts and blog entries brief so we can give you maximum information with your time constraints in mind.

Thank you for being a part of our maiden voyage.

Julie Kardos, MD

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