



Patterson and Tedford Pediatrics

H1N1: Why the fuss?

When it comes influenza it appears that we fall into one of two groups. Some of us seem to have the attitude that H1N1 influenza is little more than an inconvenience and our attention to flu and flu prevention overdone. These individuals believe that prevention measures like vaccination, recommended by virtually all infectious disease specialists, are at best unnecessary and at worst fraught with frightening side effects. The other group believes that H1N1 infection has the potential to cause widespread morbidity and mortality. They are genuinely afraid. Should you dismiss all this as much a do about what one parent labeled a “bad cold” or should you see a psychologist for therapy? I don’t think you should do either. Here is some background on H1N1 and an update.

In 1918 the world experienced a major H1N1 epidemic. American medicine was in its infancy and it took months for the best doctors of that era to realize they were dealing with the influenza virus and not a bacterial pneumonia. Young adults and pregnant women were the most severely infected groups and basic control measures like isolating infected individuals were applied inconsistently with devastating results. An estimated five million Americans (5% of the people who became infected) died and around the world the infection took a dreadful toll. Pregnant women were hit the hardest with about 25% mortality rates. It was not atypical for an individual to progress from a healthy young adult to death in less than 24 hours. Hard to believe? It’s true and well documented. For those interested in reading more about what the Spanish Flu pandemic of 1918-19 meant for this country I encourage you to read *The Great Influenza* by John Berry. It is a sobering account of a dark and frightening time in America.

Fast forward...this past April the current novel H1N1 virus was identified in Atlanta, Georgia at the Center for Disease Control. There virologists and infectious disease experts quickly ascertained that this newly identified flu virus was related to the 1918-19 Spanish flu virus and that very few if any Americans under the age of sixty had any natural protection. The virus came from Mexico and caused much illness and well publicized mortalities. The press dubbed it “swine flu”.

Over the past 7 months H1N1 has dominated the medical news. Scientists noted the impact that the novel H1N1 virus had in the southern hemisphere during their winter (our summer). It quickly became apparent that this virus was easily communicable and that it caused a spectrum of mild to severe disease. Some people infected with this virus show little or no fever or other clinical signs while others can become extremely ill and despite all the advances of modern medicine succumb to the infection. Armed with knowledge of the impact of the Spanish flu 91 years ago and the recent experience of our southern hemispheric neighbors in May, June, July and August experts from around the world opted to support the production of

November, 2009

an H1N1 vaccine and widespread immunization as the best way to limit morbidity and mortality.

The current H1N1 vaccine is produced using identical technology to that used to produce the regular or “seasonal” influenza vaccine. It is not an experimental vaccine and had the CDC known about the novel H1N1 virus 4 months earlier, the seasonal flu vaccine would likely have been modified to include protection against the novel H1N1 virus. This would have made this flu season much less confusing as there would have been only one flu vaccine to design, manufacture, ship and administer. The existence of 2 entirely different vaccines has challenged the manufacturers of the flu vaccines as they have limited capacity and more than twice the number of vaccines to produce as in a normal year. Predictably there have been delays in production and shipment of both the seasonal and the H1N1 vaccine.

Both vaccines remain in short supply and our office has been frustrated by our inability to plan appropriate immunization clinics. To date the vaccine has produced high antibody titers in children >10 years and adults after a single injection. This is welcome news as it means these individuals will only require a single vaccine to insure adequate protection.

The vaccine is being produced in two forms:

1. A shot (the virus has been killed and dismembered) without adjuvants.
2. A nasal mist (the virus is live but weakened).

Each vaccine is approved for specific age groups and/or medical circumstances. For example the nasal mist is NOT approved for children under the age of 2 or adults >49 years.

Children >10 years will get a single vaccine. Children above the age of 6 months and less than 10 will get 2 H1N1 vaccines separated by 28 days. The first vaccine primes the immune system and the second vaccine “boosts” protective antibody production to protective levels.

This continues to be a challenging time to be a parent and a pediatrician. I hope this information is of value to you and that you’ll neither panic or “blow off” H1N1 infections as medical hype.

BDP

Check out our newly designed website. It is your source for updated local information on influenza related topics and vaccine availability.

PATTERSONANDTEDFORD.COM