



★ February 2006 ★

Flu Facts

by *Veronica Kane, CPNP*

Concerns about the potential of a pandemic of avian flu appear with increasing frequency in the press of late. Avian flu cases reported to date have mostly resulted from direct, prolonged contact between the person and infected birds. Only one death to date has been attributed to direct human to human contact, but this incident is enough to fuel concerns about a virulent pandemic. The widespread publicity surrounding concerns about an avian flu pandemic means that we are being questioned by clients about the realities and the risks. An overview of relevant principles should help in understanding the menace of an influenza pandemic.

Influenza viruses are classified as type A, B, or C. All three of the types can cause disease in humans. Type B influenza occurs widely among humans. Type C influenza infects several classifications of animals, as well as humans, presenting in a mild respiratory form, but does not become epidemic.

Type A originates with animals though

the infection may also occur in humans. This type of influenza resides in wild aquatic birds though typically does not harm them. Because of frequent mutations the virus easily jumps the species barrier colonizing in domesticated birds which then develop infections. The next skipping of the species barrier typically produces infection in pigs. Pigs are also susceptible to forms of influenza that infect humans. This dual porcine susceptibility poses a real danger if a pig being simultaneously infected with bird as well as human types of a Type A flu virus. During this dual infection a transformation can occur as the genes exchange causing the avian form to become infectious to humans. This is the current situation occurring in Asia with the Avian Flu. At present exposure directly to the infected bird (uncooked) is still necessary for human infection . . . except for that one little girl who represents the first incidence of direct infection between humans. The much feared pandemic won't occur until the virus is readily transmissible from human-to-human.

Influenza is one of the more changeable viruses complicating medicines ability to prevent or treat it with antiviral agents.

Small continuous changes occur in type A & type B influenza. This phenomenon is known as *antigenic drift*. The drifting occurs frequently enough to make the virus hard for the human immune system to recognize. This antigenic drift is the phenomenon that necessitates the annual development of vaccine to update our immune systems.

Type A also undergoes rare, but rapid changes, called antigenic shift. The shift happens when different virus strains infect the same cell and exchange genetic material. Because the emergence of the totally new subtype is unrecognized by most people's immune systems infection spreads quickly before vaccinations can be developed and disseminated. These outbreaks of infection can result in severe flu epidemics or pandemics (NIAID, 2005). Such an antigenic shifts have occurred and produced pandemics three times in the twentieth century: 1918, 1957, and 1968.

Adding to pandemic concerns is that the predominant strain of the virus has increasingly shown resistance to the two antiviral drugs commonly used for treatment, rimantadine and amantadine. Last year only 11 percent of flu viruses were resistant to antivirals, but this year the CDC reported that 91 percent of samples tested were resistant to common agents. As a precaution the CDC has announced that providers avoid using the older agents to treat influenza since it is ineffective. This resistance has resulted in increased reliance on newer antiviral agents to treat common flu. This shift in pharmacologic reliance raises concerns because of the potential risk of developing resistance to the newer agents. If transmission of the avian flu becomes transmissible between humans this threat of additional drug resistance sends ripples of fear through infectious disease specialists. The transformations that occur as the virus jumps transmission host delay developing a vaccine until that occurs.

Sources:

<http://www.niaid.nih.gov>

<http://www.cdc.gov/flu>

<http://nlm.nih.gov/medlineplus/druginfo>

It's About Time!!

Pertussis

Immunization Is Back!

by Cathy Sizer, CPNP

Tdap (“teedap”) has finally been approved by the CDC, AAP and ACIP and recommended for all children entering seventh grade as well as wound management, catch-up doses for older adolescents and adults. Pertussis immunity wanes by adolescence and diagnosing and managing pertussis as you know, is difficult. This relatively new vaccine will significantly reduce the number of pertussis cases each year. Don’t forget to inform parents of young infants that they should be immunized to protect the infant as well as themselves.

There are two versions: BOOSTRIX from GlaxoSmithKline for those 10-18 years of age and ADACEL from Sanofi Pasteur for ages 11 years-64 years . The State will provide BOOSTRIX to all pediatric offices for the 11 and 12 year olds entering seventh grade ONLY. There isn’t enough to use in all circumstances where a tetanus booster is required. The number of vaccines is based on your Td use over the past year. The AAP polled most major HMO’s and found that they will reimburse at cost at a minimum to full reimbursement so don’t hesitate to purchase vaccine above the free BOOSTRIX. The recommendations are evolving such as boosters beyond this one. Other points include:

- Minimum intervals between Td and Tdap vaccines: 5 years although shorter periods of time can be used.
- If possible administer Tdap and MCV4 or Menactra (contains diphtheria toxin) at the same visit.
- Use Tdap instead of Td for wound management but not the state provided vaccine.
- Adolescents with a history of Pertussis should still receive Tdap according to the routine recommendations.
- Those who never received DPT as younger children should receive a 3 dose series with Tdap used for only one of those 3 doses.
- Pregnancy is not a true contraindication, but those in the second or third trimester of pregnancy should be considered for a dose.
- There is a separate VIS sheet for this vaccine available at www.cdc.gov and www.immunize.org/vis.

Other information including precautions can be found at

www.mass.gov/dph/

<http://us.gsk.com>

www.vaccineshoppe.com

www.adacelvaccine.com

Observances and Interesting Links

February 13–18 National Condom Week

American Social Health Association
P.O. Box 13827
Research Triangle Park, NC 27709
(919) 361-8400

lescun@ashastd.org

www.ashastd.org

Materials available. Contact: ASHA Media Relations Office

<http://www.advocatesforyouth.org/european.htm>

discussing sexuality and openness. The video is a must see!!

Online links that you might find interesting

<http://www.mchlibrary.info/>

looking for references on MCH topics

http://www.mchlibrary.info/KnowledgePaths/kp_spanish.html

Knowledge path with references for materials available in Spanish language

<http://www.mchlibrary.info/nonenglish.html>

compendium of non-english resources

http://ppc.mchtraining.net/custom_pages/national_ccce/

cross-cultural case studies

<http://www.pediatricsinpractice.org/pdfs/FacilitatorsGuide.pdf>

<http://casesblog.blogspot.com/>

clinical case discussion blog

H.E.L.P.

Healthy Eating Lifestyle Plan

by Cathy Sizer, CPNP

Pediatrics West

You have to have been hibernating in a cave to not be aware of the pervasive childhood and adolescent overweight problem in this country! (We try to not use the word “obesity.”) Given that our practice is in Westford – quite a drive from Children’s Hospital and the OWL clinic, about 6 months ago we put together our own similar program.

This is basically a nurse practitioner run clinic for our overweight patients identified by calculating and plotting BMI’s at annual physicals for ages 2 years and older. Actually this problem should be addressed whenever the child is seen since not everyone shows up for an annual physical exam. Anyone over the 95th percentile on the BMI chart is referred to the clinic. Those who plot in the “at risk” section (between the 85th and 95th percentile are offered the program).

They meet with a nurse practitioner for an hour reviewing child and family lifestyle surrounding eating and activities, child and family medical and psychological history, current meds, a targeted ROS and PE, measurements of arms, legs, waist and body fat analysis (there are scales that do this) and more.

Labs are ordered based on findings with a minimum LFT’s, Lipids, Glucose and PCOS assessment if warranted. We set a few simple goals like stopping juice or soda, less eating out, increasing physical activity, etc. They then meet with our nutritionist twice, and one of our physicians who performs physical fitness testing (treadmill, EKG, Spirometry) to be sure they can safely participate in a rigorous physical fitness program which we ask them to do at least three times a week for an hour.

They return to meet with us again to review what they have set up, progress and what changes in lifestyle they have made, identify barriers, etc. They receive a folder that contains lots of information for lifestyle changes concerning food and exercise and many resources for exercise that will give them a discount. If they cannot afford to do that, we have an alternative pedometer program. We have identified a couple of mental health resources if we feel that is necessary. Once a month we hold a group meeting with an expert in the field at no additional charge. The topics change each month. Those who wish to can share their successes and failures.

So far most of the families have discovered that finding the time to exercise is

the most difficult. We are collecting a lot of data that will make an interesting research article in the future. And recently we designed preventative handouts for the parents of infants and toddlers, i.e.. what NOT to feed, keeping children active, etc. This took many months of hard work to organize and learn to do. It is very exciting to see the children and their families change behaviors and maintain or lose weight!

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NAPNAP
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PNP wanted!

The Children's Hospital Surgical Service is looking to hire one full time and one part time PNP.

The role for the surgical PNP has been in existence here on this service for approximately 15 years. It is dynamic, and you learn something new every day. The hours are Monday – Friday, varying days, some evenings, and approximately 1 weekend a month. There are currently 4 inpatient PNP's and 3 outpatient PNP's. These current positions are for the inpatient service.

Anyone interested in speaking further about the position, can page Joanna Morganelli, RNC., MSN, PNP through The Children's Hospital page operator, beeper #1568. They can also contact nurse recruitment at Children's Hospital

Job description

Manage day to day care of general surgical patients, ages neonates to adolescents, order studies and diagnostic tests, interpret these studies/labs, daily H and P's, progress notes, rounding w/surgical team, collaborating w/appropriate consultants, attending appropriate rounds, educational rounds, teaching registered nurses, surgical residents, patient/family teaching and communication w/ such as plan of care/parental support ... it's a great role!

Poster Session

by Emily Young

EMNAPNAP's Spring Symposium (Saturday, April 8) will feature a poster session this year. We would like NPs and student NPs who are interested in creating a poster to submit poster ideas to the EMNAPNAP program committee. Recently presented posters are also acceptable. We are interested in posters or ideas that are applicable to the realm of Pediatrics or the role of the NP.

Possible ideas for the poster session include case studies, research projects, student papers and clinical updates. The ideas will be reviewed by the program committee and individuals who have submitted ideas will be contacted with poster session details. If you have never

presented a poster, we can help you find a mentor to help you through the process. Posters must contain a title, at least one objective and your qualifications.

The posters will be hung throughout the day and we will have a few short sessions when attendees can review posters and ask questions. The posters will not be presented individually but presenters, if attending, will be introduced during breakfast.

Poster presenters will be given a reduced conference attendance fee but do not need to be present the day of the symposium.

Please contact Emily Young emilyyoung01@yahoo.com or 617-730-3619 with an idea by mid-February or submit your completed poster by March 1.

Did you know that EMNAPNAP's calendar is online and that minutes of meetings are also lists there? Did you know there are links to email for all the officers on the website?

If you are not receiving occasional email from EMNAPNAP we probably do not have your most recent email address. Please send your name and email address to Patricia Kent, pkent1@partners.org