“Cocooning” is Goal to Protect Very Young, Elderly From Contracting Pertussis

Although the incidence of pertussis has lessened considerably since the 1920s and 1930s—when as high as 150,000 cases and 9,000 deaths annually were reported to the Centers for Disease Control and Prevention (CDC)—it remains a significant threat to some segments of the population. Babies less than 6 months old who have yet to receive their complete primary vaccine series and the elderly are particularly susceptible to serious illness and death from pertussis. The recent outbreak in California involving more than 6,600 confirmed cases and 10 infant deaths (as of November 9) illustrates the continuing health risks of this infectious disease.

“It is typical for pertussis to cycle, which means we have more cases every four to five years. The last upsurge occurred in 2004-2005, so the increased cases we are seeing now are consistent with the disease's cyclic nature,” says Alexis Elward, MD, infectious diseases attending physician and medical director of infection control at St. Louis Children’s Hospital. “The pertussis cases in California, however, are well beyond anything seen in many years.”

A contributing factor to the spread of pertussis is that the protection given by the initial vaccine series given during infancy wanes over time, leaving school-aged children and adults vulnerable to infection. “There's a second peak in terms of age of diagnosis in 11- to 20- year-olds. Typically these older children and teens with pertussis do not develop life-threatening complications as do infants and the elderly,” says Dr. Elward. “However, people this age as well as adults who have not been revaccinated become reservoirs for transmitting pertussis to infants and young children.”

Various studies have shown that household members are responsible for 75 percent of pertussis transmission to infants. Parents represented more than half of the source cases and mothers were the source in more than one-third of cases.

These types of findings have led the CDC's Advisory Committee on Immunization Practices (ACIP) and infectious diseases specialists throughout the country to advocate regular pertussis revaccination for older children and adults.

“In effect, people of all ages undergoing revaccination for pertussis would create a ‘cocoon’ of protection for vulnerable infants and the elderly,” says Dr. Elward. “This is especially important for anyone having contact with these populations; for instance, teenagers who do babysitting, health care workers caring for the young or old, and parents and grandparents.”

Tdap (tetanus, diphtheria, pertussis) vaccine was licensed for use in people aged 11-64 in 2005. In

continued on next page
Share Your Ideas

Should you have ideas or suggestions you would like brought before the Children’s Medical Executive Committee (CMEC), contact one of your CMEC private physician representatives:

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Let Us Hear From You

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Doctor’s Digest

Published for the attending and referring medical staffs of St. Louis Children’s Hospital.

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Medical Staff President

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Medical Staff
President-Elect

continued from previous page

October 2010, the ACIP expanded its recommendation to include adults over 65 and children aged 7-10 who are unvaccinated or who did not receive a complete primary series of the DTaP vaccine when they were younger.

“The ACIP also recommends administring the Tdap vaccine no matter how long ago a person has received other tetanus-containing vaccines,” says Dr. Elward. “There’s been no evidence that adverse events occur if you administer two tetanus-containing vaccines close together.”

In the midst of its pertussis outbreak, California is going a step further by giving the Tdap vaccine to pregnant women. Current CDC recommendations are that pertussis vaccination be considered during pregnancy if the benefit outweighs the risk. “Vaccination during pregnancy has several advantages “says Dr. Elward. “In addition to the mother being protected against disease during pregnancy and after birth, another potential advantage is that the mother’s antibody could cross the placenta during the third trimester, helping to give her baby some immunity.” Locally, current practice has been to vaccinate women in the immediate post-partum period. Household contacts and caregivers of infants should also receive vaccination.

Pertussis Symptoms, Diagnosis and Treatment

Pertussis usually takes one to three weeks to incubate, with patients typically passing through three stages. The most common symptoms are:

Catanrhal stage (often lasts one to two weeks)
- mild cough
- low-grade fever
- runny nose

Acute phase (may last for several weeks)
- cough gets worse and comes in severe fits
- cough is dry and harsh
- child may vomit with the coughing and appear to be strangling
- cough can be started by various factors, including feeding, crying or playing
- pneumonia may develop

Recovery phase (usually begins fourth week)
- vomiting and whooping cough cease first
- cough usually decreases around the sixth week but may continue on occasion for the next one to two months

“When a pediatric or adult patient has a cough that lingers for more than a week, pertussis should be added to the differential diagnosis,” says Alexis Elward, MD, infectious diseases attending physician and medical director of infection control at St. Louis Children’s Hospital. “Pertussis in its early stages is difficult to diagnose because its symptoms resemble those of a cold or influenza. If there is a suspicion of pertussis, a polymerase chain reaction (PCR) test is the best way to diagnose it. This should be done as soon as possible so that the patients and their family members can be started on azithromycin once the diagnosis is confirmed.”

Azithromycin works to decrease the burden of infectious organisms in patients, which helps lessen transmission of pertussis. However, it does not alter the course of the disease for individual patients.

“The pertussis bacteria makes a chemical that’s a toxin, and that causes the symptoms,” says Dr. Elward. “Patients don’t start to get well until their bodies can clear the infection away.”

For patients who become seriously ill—most often young babies—hospitalization to provide supportive care like intravenous fluids and total parenteral nutrition is needed.

“These babies can develop apnea and bradycardia, and it is heartbreaking to see them struggle for breath and cough until they are blue in the face. The disease can be hard on their growth and development because they don’t want to eat and vomit after a long paroxysm of coughing,” says Dr. Elward. “With the Tdap vaccine now available for adolescents and adults, it is imperative that we all work to ensure widespread vaccination against pertussis so that we can protect the most vulnerable within our population.”
Medical Staff News | Gala Recognizes Physicians’ Longstanding Service to SLCH

Physicians with 25 years of service at St. Louis Children’s Hospital (SLCH) were recognized at the hospital’s biennial Physician Appreciation Gala held in November at the James S. McDonnell Planetarium. Honored for their years of service were:

**Patricia J. Amato, MD**
Associate Professor of Clinical Pediatrics, WUSM
Private practice physician, Esse Health

**Earl C. Beeks Jr., MD**
Associate Professor of Clinical Pediatrics, WUSM
Private practice physician, University City, Missouri

**Keith H. Bridwell, MD**
Asa C. and Dorothy W. Jones Distinguished Professor of Orthopaedic Surgery, WUSM
Adjunct Prof. of Neurological Surgery, WUSM
Chief, Adult/Pediatric Orthopaedic Spine Surgery, BJH/SLCH

**Charles E. Canter, MD**
Professor of Pediatrics, WUSM
Medical director, SLCH cardiac transplant program

**Darryl S. Cohen, DO**
Assistant Professor of Clinical Pediatrics
Private practice pediatrician, Chesterfield Pediatrics

**John C. Davis, MD**
Associate Professor of Clinical Pediatrics, WUSM
Private practice pediatrician, Tots Thru Teens Pediatrics

**Joel A. Goebel, MD, FACS**
Professor and Vice Chairman, Otolaryngology – Head and Neck Surgery, WUSM
Attending otolaryngologist, SLCH

**Melanie K. Hampton, MD**
Assistant Professor of Clinical Pediatrics
Private practice pediatrician, South County Pediatric Associates

**Robert M. “Bo” Kennedy, MD**
Professor of Pediatrics
SLCH emergency medicine attending physician; division of emergency medicine associate director, educational affairs

**Shirley M. Knight, MD**
Professor of Clinical Pediatrics
Private practice pediatrician, Esse Health

**Katherine L. Kreusser, MD**
Professor of Clinical Pediatrics
Private practice pediatrician, Children’s Clinic

**John F. Mantovani Jr., MD**
Associate Professor of Clinical Neurology and Pediatrics
Private practice pediatric neurologist

**Thomas C. McKinney, MD**
Associate Professor of Clinical Pediatrics
Private practice pediatrician, St. Louis Pediatric Associates

**Jerome H. O’Neil Jr., MD, MBA**
Assistant Professor of Clinical Pediatrics
Private practice pediatrician, Southwest Pediatrics

**James R. Rohrbaugh, MD**
Associate Professor of Clinical Neurology and Clinical Pediatrics

**Martin D. Rudloff, MD**
Instructor in Clinical Pediatrics
Private practice pediatrician, Washington, Missouri

**Robert D. Spewak, MD**
Assistant Professor of Clinical Pediatrics
Private practice pediatrician, Southwest Pediatrics

**Robert H. Strashun, MD**
Assistant Professor of Clinical Pediatrics
Private practice pediatrician, University City, Missouri

**Jeffrey M. Wright, MD**
Assistant Professor of Clinical Medicine and Clinical Pediatrics
Private practice allergist/immunologist, Allergy Consultants

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New RSV brochures available

Educational brochures describing the symptoms and treatment options for respiratory syncytial virus, RSV, are now available. Contact Children’s Direct at 800.678.HELP (4357) to request copies for your office.
When Mark McGranahan, MD, describes his tours of duty in Afghanistan and Iraq as focusing mostly on “adolescent medicine,” it takes a minute to understand his meaning. And then it hits home—most of the soldiers he cared for were in their late teens and early 20s, many of them right out of high school. His experiences with those young soldiers in combat continue to influence his interactions with the teens he cares for in his private practice today.

“I served as a battalion surgeon with the U.S. Army’s 101st Airborne Division, which meant I was the physician for about 750 soldiers,” he says. “Every day I saw these young men and women handling stressful, dangerous situations with a maturity beyond their years. Their nobility and selflessness gave me insight into what kids that age are capable of, and I use that knowledge to encourage my adolescent patients who are having difficulties.”

Growing up in Kenosha, Wis., the ability to impact lives is what drew Dr. McGranahan from an early age to the medical profession. He received his medical degree from Saint Louis University School of Medicine and completed his residency in general pediatrics at Madigan Army Medical Center in Tacoma, Wash. At first, his goal during medical school was to become a geriatrician. But then he entered his pediatrics rotation at the end of his third year.

“Normally at that point you are exhausted and overwhelmed because of all the clerkships you have to complete,” he says. “But for my two months in pediatrics, I had more energy and there was a spring in my step—even my friends and family noticed how happy I was. I looked forward to seeing the kids every day, and it was gratifying to realize I was making a difference early in these children’s lives.”

Dr. McGranahan also found parallels between caring for older adults and children. “These patients are more dependent upon their physicians and family members. Even though you are dealing with the two extremes of life’s spectrum, in both cases there is a larger role for reassurance and prevention,” he says. “Dealing with families is important in both instances, and that is something I greatly enjoy. In the end, it was the joy I saw in those working with children that swayed my decision.”

Dr. McGranahan’s admiration of his uncle’s military service during Vietnam influenced his decision to join the Army and complete his medical training. Like the rest of the country, what he didn’t foresee was September 11, 2001.

“I completed my residency right before 9/11, which resulted in my being deployed to Afghanistan and Iraq at the beginning of both those conflicts,” he says. “We worked out of tents, and the conditions were fairly primitive, which contributed to the intense experience.”

He adds, “A really gratifying aspect of my deployments was the humanitarian aid we were able to provide once both the conflicts settled down a bit. For instance, in Iraq we helped set up a couple of pediatric clinics and had an opportunity to work with local Iraqi physicians.”


“As do all pediatricians I know, I enjoy following children on a long-term basis, watching them grow, seeing new siblings added to families, and even running into them around town or at Cardinals games,” he says. “I also like the flexibility and control that comes with being in private practice.”

Dr. McGranahan has served as a COPE preceptor for five years, working first with Natasha Kasbekar, MD, and now with SLCH resident Kora Felsch, MD. “I marvel at what an opportunity the COPE program is for Children’s Hospital residents,” he says. “My focus with the residents is to give them as much practical, real-world experience as I can, both as a pediatric clinician and from the practice management standpoint, including billing, coding and medical liability issues—all those pearls of wisdom that can’t be acquired during medical school and residency. We also work to provide them with a completely supportive environment in which they feel comfortable asking any questions.”

Dr. McGranahan and his wife, Robin, a former pediatric ICU nurse at Cardinal Glennon Children’s Medical Center, have two sons, Casey, 9, and Michael, 3. Most of their time is spent with family and church activities, and they are involved in the building drive for the new Father McGivney Catholic High School in Glen Carbon, Illinois. Dr. McGranahan also serves as medical consultant for the Madison County Health Department.
Mary C. Dinauer, MD, PhD, has been named the first Fred M. Saigh Distinguished Chair in Pediatric Research at St. Louis Children’s Hospital and professor of pediatrics at Washington University School of Medicine.

In addition, Dinauer will serve as scientific director of the Children’s Discovery Institute. The Institute is a partnership between St. Louis Children's Hospital and Washington University School of Medicine created in 2006 to speed discoveries in children’s medicine. Since its inception, the Children’s Discovery Institute has awarded more than $18 million in total grants for child health research.

Dinauer’s appointments are the culmination of a two-year nationwide search to further strengthen leadership in children’s health at both institutions. She is considered one of the world’s foremost experts on how children’s blood cells fight infection.

“I’m thrilled to be a part of one of the world’s leading hubs of pediatric medicine and research, as well as to lead the efforts of the Children’s Discovery Institute in understanding the genetic basis of children’s diseases,” Dinauer says. “Receiving this new research chair from the Saigh Foundation is extremely gratifying, and a reflection of their visionary support for leading-edge medical research, medical training and community outreach on behalf of children.”

Mary C. Dinauer, MD, PhD, is one of the world’s leading experts in Chronic Granulomatous Disease, a life-threatening inherited immune deficiency that weakens the body’s white blood cell defenses against bacteria and fungi.

In her new positions, Dinauer will help foster collaborative research partnerships across a multitude of scientific departments at Washington University.

“Extensive biomedical research is the only way we can develop new approaches to the most serious diseases of children,” Dinauer says. “These include pediatric diseases that still await better diagnosis, treatment, or prevention, such as cancer, diabetes, congenital heart defects, muscular dystrophy and asthma.”

“Mary Dinauer is an outstanding pediatrician, scholar, educator and mentor,” says Alan L. Schwartz, PhD, MD, the Harriet B. Spoehrer Professor and head of Pediatrics at the School of Medicine. “She is a physician-scientist par excellence. We are truly delighted that she has joined us as we accelerate our advances in child health research.”

“Dinauer brings an international reputation that will not only enhance the prestige of St. Louis’ research community, it will help draw funding and additional medical expertise to the region,” says Lee Fetter, St. Louis Children’s Hospital president. “Having her as a mentor to up-and-coming innovators will shape the future of children’s health not just in St. Louis, but around the world.”

Dinauer is a specialist in blood disorders and is one of the world’s leading experts in Chronic Granulomatous Disease, a life-threatening inherited immune deficiency that weakens the body’s white blood cell defenses against bacteria and fungi. She has had her work published in more than 130 peer-reviewed journal articles.

Dinauer has trained and worked at the most respected children’s health centers in the United States. She earned medical and doctoral degrees from the University of Chicago, and completed a residency in pediatrics at the University of California, San Francisco, where she also served as chief resident in pediatrics.

Dinauer was a fellow in pediatric hematology/oncology at Harvard Medical School, Children’s Hospital Boston and Dana-Farber Cancer Institute. Her immediate past appointment was as Nora Letzter Professor of Pediatrics (Hematology/Oncology) and professor of microbiology/immunology and medical and molecular genetics at Indiana University School of Medicine.

This wealth of experience translates into powerful insights for pediatric research at St. Louis Children’s Hospital and Washington University School of Medicine.

“My vision is to build on what is truly unique about the Washington University research community — a spirit of collaboration among scientists that naturally fosters the very best ideas,” Dinauer says. “I want to help these scientists reach out across the university, across the country, and internationally, so that more and more of the finest discovery research happens right here and benefits children in St. Louis.”

—CDI News

CDI News | Renowned Child-Health Researcher to Head Children’s Discovery Institute
**Case Study | Telemedicine From the President**

The following case study was used by James P. Keating, MD, MSc, medical director, St. Louis Children’s Hospital Diagnostic Center, and his co-editor, Andrew J. White, MD, division director of pediatric rheumatology/immunology, as part of the “Patient of the Week” (POW) series. Many of the POW case studies cover uncommon illnesses, or common illnesses with unusual symptoms that can be overlooked. If you would like to be added to the POW e-mail distribution list, send an e-mail message to jkeating@wustl.edu or white_a@wustl.edu.

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**Ped:** Claudia Preuschoff, president, Missouri Chapter of AAP (Poplar Bluff)
**Diagnostic Center:** Drew Grimm/Jim Keating
**Dermatology:** Susan Joy Bayliss
**Au:** Drew Grimm

**4-year-old boy with CC: rash and photosensitivity**

**HPI/PMH:** Two weeks PTV—He injured the skin over the interphalangeal joint of his L thumb, which developed surrounding erythema and a small pustule. It ruptured one week later. Mother put some antibiotic salve on it.

One week prior to presentation, he complained of his “face burning” and had pain under his arms, and requested a fan and cool cloths or ice packs on his face. He appeared fatigued but had no visible skin changes.

Two days later, his face was swollen and red, and he complained of pain when exposed to the sun. He developed an intensely pruritic, diffuse, micropapular, erythematous rash (scarlatiniform) on his chest, back, groin, buttocks, arms and legs. He was treated with TMP/SMX (Bactrim), orapred and hydroxyzine (Atarax). The pruritis worsened, and he developed skin peeling on his face, behind his ears, under his arms, and in his groin. He was admitted to an outside hospital, where the TMP/SMX was discontinued, and he was given IV vancomycin for 24 hours. He developed pain around his mouth and eyes that made it difficult to open his mouth and eyes completely. The desquamation on his face and under his arms worsened, and his story and pictures were sent to the St. Louis Children’s Hospital Diagnostic Center. He remained afebrile during the entire course, and his story and pictures were sent to the St. Louis Children’s Hospital Diagnostic Center. He remained afebrile during the entire course, and maintained adequate enteral intake of solids and liquids.

**ROS:** He had one episode of dysuria, no hematuria, no wheezing or respiratory distress. No pain inside his mouth.

**SH:** He lives with his parents and two siblings. They have a pet dog. There is no recent travel. He had a tick attached on his right thigh about a week ago. The small seed tick was removed but was not identified.

**FH:** No history of skin infections or boils, blistering or photosensitivity. No hospital, prison or medical lab workers.

**PE:** (In the D.C.) Weight 21.3 kg (95th centile), height 116.5 cm (99th centile), BMI 15.7 (50th centile). BP 110/60.

**Skin:** His face had diffuse desquamation and a small amount of crusting around the corners of his mouth. He had crusting lesions with a small amount of erythema behind his ears. Dry, scaly skin under his arms, scattered areas of peeling skin on his chest with small red scabs, a small amount of desquamation in the periurethral area. Scab on dorsum of right thumb with mild surrounding erythema and desquamation.

**HEENT:** Conjunctiva clear. Oropharynx pink with no lesions on his tongue, buccal mucosa or soft palate. Neck: Shotty submandibular lymphadenopathy. Lungs: Clear to auscultation bilaterally. Heart: 2/6 systolic murmur at the left upper sternal border radiating to the right upper sternal border and left lower sternal border. The remainder of the exam was normal.

**Lab:**

- WBC: 8.2 Hbg12.1
- Plts297 56N, 31L, 11M
- UA: 1.006, pH 7.0, negative
- ESR: 5
- Crp: <0.012 mg/dL
- CMP: normal
- Rapid strep: neg
- Lyme antibody screen: negative
- ASO titer 200 (<200 IU/mL)
- Blood culture: negative

**Course:** The patient was given enteral clindamycin for an additional five days.

**Dx:** 1. Staphylococcal Scalded Skin Syndrome (SSSS)

**Discussion:** The progression of skin sensitivity, followed by edema, diffuse erythema, scarlatiniform rash and then superficial blistering is characteristic of Staphylococcal Scalded Skin Syndrome (SSSS). The desquamation usually occurs within 2-3 days of the onset of the rash in contrast to later desquamation in Kawasaki D., scarlet fever, toxic shock syndrome and rubeola. It can be clinically distinguished from Stevens-Johnson Syndrome (SJS) by the lack of mucous membrane involvement. As in this patient, SSSS is often preceded by a relatively minor staph aureus skin infection several days before the onset of systemic symptoms. Staphylococcal toxic shock syndrome (TSS) in prepubertal children also follows a trivial local infection and causes a diffuse sunburn-like rash. The desquamation is usually 1-2 weeks after onset of rash in survivors.

Most cases of SSSS are caused by methicillin sensitive staph aureus, although MRSA has been reported.1 Depending on local prevalence and clinical severity, antibiotic coverage for MRSA may be indicated unless antibiotic sensitivities from a positive blood culture are available. The desquamation in SSSS can be severe enough to require admission to an intensive care or burn unit. CRP levels are often low, and elevations in CRP may suggest a secondary infection.2 The mechanism of blistering in SSSS is the same as in bullous impetigo, which it looks like in localized areas, but SSSS is generalized. It is a sloughing of the superficial epidermis, just below the stratum corneum. It is caused by breakdown of desmosomes, protein complexes that mediate intercellular attachment. The attachment in desmosomes is mediated by proteins called desmogleins and desmocollins. Staph can produce three exfoliative toxins (ETA, ETB and ETD), which are glutamate-specific serine proteases that cleave a single peptide bond in the extracellular region of desmoglein 1.3 This leads to disruptions of the desmosomes where desmoglein 1 is the predominant form. In lower layers of the epidermis and mucous membranes, sufficient amounts of desmoglein...
3 are present, and these tissues remain intact. Pathologic specimens from SJS show a subepidermal split with full-thickness epidermal necrosis.

Although toxic shock syndrome (TSS) also is caused by staph aureus, it is the result of a different exotoxin, toxic shock syndrome toxin-1 (TSST-1). TSST-1 functions as a superantigen by binding directly to an invariant region of class II MHC, inducing massive release of pro-inflammatory cytokines. TSS is characterized clinically by fever, hypotension and multi-system organ dysfunction. It also features diffuse macular erythroderma that gives way to desquamation, typically of the palms and soles, late in the illness.

The autoimmune disease pemphigus foliaceus is caused by antibodies that attack desmoglein 1, and thus has a very similar clinical appearance to SSSS. In contrast, the autoimmune disease pemphigus vulgaris, is caused by antibodies that attack desmoglein 3, resulting in disruption of deeper layers of the epidermis and mucous membranes.

Sources:

And several books by Susan Bayliss and colleagues from Washington University and other centers.

Chief Resident Award
Stephanie Grissom, MD

Each month, St. Louis Children’s Hospitals chief residents honor a resident who shows exceptional dedication to his or her patients, colleagues or profession. In November, the SLCH Chief Resident Award was presented to Stephanie Grissom, MD, second-year pediatrics resident, in recognition of her exemplary dedication to a patient and his family during a time of crisis. After working a 30-hour shift, Dr. Grissom returned to work on a Saturday evening to be with the patient and his family.

SLCH News | Asthma Control Education (ACE) Class Schedule for 2011

St. Louis Children’s Hospital’s Asthma Education Committee has six Asthma Control Education (ACE) sessions scheduled in 2011.

Saturday, February 5
St. Louis Children’s Hospital
9-11 a.m.

Thursday, March 24, 2011
Alton Memorial Hospital
6:30-8:30 p.m.

Thursday, April 7, 2011
Progress West HealthCare Center
6:30-8:30 p.m.

Thursday, June 16, 2011
St. Louis Children’s Hospital
6:30-8:30 p.m.

Saturday, September 17, 2011
Barnes-Jewish West County Hospital
9-11 a.m.

Thursday, October 20, 2011
Northwest Healthcare
6:30-8:30 p.m.

Saturday, November 5, 2011
St. Louis Children’s Hospital
9-11 a.m.

The free sessions cover basic information about asthma including peak flow monitoring, action plans, triggers and environmental controls. Attendance at the sessions is kept small, and each session is individualized to participants’ personal asthma action plans.

The sessions are open to parents and caregivers of any child with asthma. Children may attend the sessions if they are 5 years of age or older and accompanied by at least one parent. Families may call 314.454.KIDS or 800.678.KIDS to register. Pre-registration is required. Room numbers and directions are mailed with registration confirmations.

To request ACE class schedule flyers for your office, contact Children’s Direct at 800.678.HELP (4357).
Influenza Vaccine Now Recommended for Anyone Over 6 Months of Age

The Advisory Committee on Immunization Practices of the Centers for Disease Control and Prevention (CDC) now recommends that anyone over the age of 6 months receive an influenza vaccination.

“As last year's H1N1 pandemic, in which severe cases were seen in children and young adults more than the elderly, it became evident that the risk for influenza can vary with the population,” says Alexis Elward, MD, infectious diseases attending physician and medical director of infection control at St. Louis Children's Hospital (SLCH). “In addition, there are now so many more immunocompromised people within the general population that it’s clear we really need to protect everyone.”

That includes pregnant women. “Some people have the misconception that women should not get an influenza shot during pregnancy, which is not true,” says Dr. Elward. “Pregnant women are at increased risk for serious complications of influenza and were in fact one of the groups dying with H1N1. In addition, they will be having babies who are too young to mount an immune response against influenza. If the mothers are vaccinated during pregnancy, there’s the potential for their antibody to cross the placenta during the last trimester, providing their babies with some protection.”

According to the CDC, this year's vaccine is formulated for the following influenza strains:

• A/California/7/2009 (H1N1)-like virus
• A/Perth/16/2009 (H3N2)-like virus
• B/Brisbane 60/2008-like antigens

“We know that all three of these strains have been circulating in South America, Asia and Africa. So far this fall, we haven’t as yet seen big numbers of influenza in the United States, so there is still plenty of time to vaccinate patients and have them develop immunity,” says Dr. Elward. “The vaccine is a good match this year, there is plenty available, and I would encourage physicians to vaccinate people throughout the influenza season.”

Although no visitation restrictions are currently in effect at Children’s Hospital, those arriving at the hospital are asked about any cold or flu symptoms at the visitors’ desks, and unit nurses are on the alert for symptoms of upper respiratory illness in visitors as well.

“A common cold is a nuisance for an older child or adult, but it can be life-threatening for many of our patients who have undergone or are waiting for organ or bone marrow transplantation or are in our intensive care units,” says Dr. Elward. “We are working together as a team to educate families about these dangers to our hospitalized patients.”