

# New emergency department is more efficient, effective, and inviting



Claudia Hines, RN, patient care manager for the emergency department at Children's - Minneapolis, in front of the centrally located team spaces in the new ED.

Over several months, a team of Children's emergency department staff collaborated to identify an ideal model of care for the new emergency department (ED) at Children's - Minneapolis. The team employed "lean" concepts intended to eliminate inefficient processes and procedures to ultimately deliver better patient care. At one point, the group met with architects and industry consultants in a warehouse to mock up spaces, including a triage area and trauma room.

Their efforts came to fruition with the opening of the new ED at Children's - Minneapolis on Oct. 28. The new space includes 26 ED patient rooms, a triage area, resuscitation room, ortho room, safe room, EMS room, large waiting area, and an enclosed, climate-controlled ambulance bay.

The timing for the new space couldn't be better —

## Features of the new Children's - Minneapolis emergency department:

- Rapid-assessment rooms
- High-tech trauma rooms
- A separate and enclosed ambulance entrance
- A state-of-the-art decontamination area
- Safe rooms for at-risk patients
- Private meeting areas and a family counseling room
- An open, inviting waiting room
- Dedicated family parking



Melea Anderson, DNP, RN, CPNP, Children's director of trauma services, sutures a child's leg while Deb Crimmins, CCLS (child life specialist), distracts the patient from the procedure.



Children's, the sixth-largest pediatric emergency care provider in the nation — had more than 82,000 patient visits in 2008 and is expected to grow to about 90,000 visits in 2009 between its Minneapolis and St. Paul locations.

"The new ED is light and inviting — something children and families will really appreciate," said Robert Sicoli, MD, co-medical director of Children's emergency department. "And because it's a much more efficient space for our professional staff, it will translate into more effective care and a much more satisfying experience for families."

### New spaces and processes aid patient flow

Through patient-care simulations the ED team gained insights into issues like how big to design the rooms and where to locate supplies.

"It showed us where we had inefficiencies," said Claudia Hines, RN, patient care manager for the emergency department at Children's - Minneapolis. "For example, we learned that our nurses were walking incredible distances on each shift. We kept that in

mind as we created a new layout of the department to help our staff more efficiently deliver care and improve the patient experience."

The use of new spaces and new processes will efficiently move patients through the ED. Low- and high-acuity patients are treated in different areas which are specifically designed for their needs. While Children's goal is to see the sickest patients the fastest, it is a process that is intended to move both populations from registration to discharge as quickly and smoothly as possible. Rapid assessment rooms and processes are also designed to reduce wait times for patients and families.

"Every parent who brings an ill or injured child into the ED wants to see a physician as rapidly as possible," Sicoli said. "With our new triage area and process, we will be able to initiate treatment for those patients sooner. That's not only more satisfying for parents, it's also better quality care."

### Patient care teams increase responsiveness

"The expertise and resources here are amazing. And now our new facility will only enhance our ability to provide exceptional care," Hines said.

Access to Children's pediatric specialists and sub-specialists — the largest team in the state — enables the ED to provide a full spectrum of care to its patients. Children's ED team includes 37 pediatric emergency medicine physicians as well as 16 pediatric nurse practitioners with special training



in emergency medicine.

In the new facility, the ED staff is organized differently than in the past. Small groups of multidisciplinary patient care teams are located in close proximity to their patients in an effort to increase the team's responsiveness and efficiency.

More open spaces and fewer partitions ease the staff's movement through the department and help facilitate communication and coordination among team members.

"The team space is open so you can quickly scan the ED and get a sense for what's going on at any given time and manage resources better," said Hines.

#### **A space or tool for every need**

An advanced computer-based system allows staff members to locate and place a call to any staff member in the hospital — a tool envisioned to facilitate communication with referring physicians.

Other features of the new department include negative-pressure areas where patients with contagious illnesses can be assessed and treated, trauma rooms designed and organized specifically to aid the process of resuscitation, and safe rooms for patients who may be at risk for harming themselves.

All rooms include access to the patient's electronic medical record and to electronic order entry so care providers can document their assessments while they are with patients. "The ability to access a patient's record in the presence of patients and their families

## **Children's - St. Paul emergency department opening 2011**

Expansion of the new ED in St. Paul is scheduled to be complete in August 2011. Children's - St. Paul ED will offer more space with enlarged private rooms for patients, including private bathrooms. Private rooms will enhance privacy and infection control and reduce transfers within the hospital.

reduces errors and miscommunications. It's a huge patient safety advantage," Hines said.

#### **A better patient and family experience**

"The open feel of the ED extends to the waiting room area," Hines said. "Yet there are several areas where families can find a quiet place for privacy too."

Patients and families will also benefit from dedicated ED parking and a separate, enclosed ambulance entrance.

"The new department, in ways both big and small, will result in a much better patient and family experience," said Sicoli. "Families will notice that every aspect of the new ED is much more inviting and family and kid friendly, which is really what Children's is all about." ✨

## Children's is region's only pediatric-specific hospital with trauma designation

Each year 20-25 percent of all children sustain an injury severe enough to require medical attention. Trauma admissions to Children's emergency department are primarily from children involved in falls, automobile accidents, non-accidental trauma (child physical abuse), and bicycle accidents.

"There is no better place for the care of a critically injured child than a pediatric trauma center and Children's is the only trauma program exclusively dedicated to meeting the needs of children," said David Hirschman, MD, medical director of pediatric trauma services and co-medical director of the emergency departments at Children's.

David Hirschman, MD, medical director of pediatric trauma services with Melea Anderson, DNP, RN, CPNP, director of trauma services, in the new resuscitation room designed to efficiently care for patients with easy access to equipment and medical gases including sedation and anesthesia.

With the introduction of Children's new emergency department in Minneapolis, Children's pediatric trauma services has a state-of-the-art facility consistent with its expertise and demand for its services.

"With broad pediatric expertise for the evaluation, treatment, and care of children who have experienced severe and life-threatening injuries, Children's treats two of every five children needing trauma care in the Twin Cities," Hirschman said. "We have the largest team of pediatric specialists in the state to provide trauma care at any hour, any day on both the Minneapolis and St. Paul campuses."

### By the numbers: Children's trauma/ED services

**82,000+** pediatric emergency department visits per year

**6<sup>th</sup>** rank among the busiest pediatric emergency departments in the nation

**37** pediatric emergency medicine physicians

**24/7** coverage of board-certified pediatric intensivists

**32** pediatric intensive care unit beds

**20** step-down pediatric intensive care unit beds

**127** neonatal intensive care unit beds

**20,000+** surgical cases per year



### Level III designation

The Minnesota Department of Health has an established hospital trauma network to match the needs of a trauma patient with the resources of a facility as quickly and efficiently as possible. The network assists hospitals to better assess, stabilize, and transfer those patients requiring greater resources. As the region's only pediatric-specific hospital to have a Level III trauma designation, Children's helps ensure continued access to all children requiring pediatric trauma care.

"The Level III designation acknowledges that our Minneapolis and St. Paul hospitals have the integral systems that allow us to effectively care for complex trauma patients," Hirschman added. "That includes systematic and predictable coordination among services

**"Children's treats two of every five children needing trauma care in the Twin Cities."**

such as the emergency department, pediatric ICU, surgeons, orthopedic surgeons, anesthesiologists, and the nursing staff in those units."

Children's pediatric trauma team is available to respond to injuries including intra-abdominal trauma, intra-thoracic trauma, neck trauma, head injuries, and skeletal trauma.

Manu Madhok, MD, Lois Suedbeck, RN, Fatima Molas, respiratory care practitioner and Cindy Anderson, RN, are part of the multi-disciplinary pediatric trauma team.

Children's offers continuity of care for injured children from admission through rehabilitation by a multidisciplinary pediatric trauma team of physicians, nurses, care coordinators, nurse practitioners, child life specialists, social workers, and rehabilitation specialists.

"We have an unmatched breadth and depth of pediatric specialty staff and that's a critical advantage for our patients — another important reason why we offer the best pediatric trauma program in the region," Hirschman said.

### Better outcomes

Melea Anderson, DNP, RN, CPNP, Children's director of trauma services and critical care practice lead, said the benefits of using Children's trauma services lie not just in expertise, but in the kind of expertise.

"Most people recognize that injured pediatric patients have special needs that are optimally provided in the environment of a children's hospital," Anderson said. "Children have better outcomes in a hospital dedicated solely to them. From child life specialists to physicians trained in reducing anxiety and pediatric pain management, Children's is uniquely equipped to handle the special needs of pediatric trauma patients." ✨

# Practice Profiles



Barb Malone, MD

“We have the experience and expertise to handle everything from the simplest to the most complex ENT issues.”

**Clinic:** Midwest ENT Specialists

**Locations:** Eagan, Maplewood, St. Paul, Woodbury

[www.midwestentspecialists.com](http://www.midwestentspecialists.com)

“Our practice is almost 100 years old, so we know and have served our population well,” said Barb Malone, MD, a pediatric otolaryngologist and president of Midwest ENT Specialists. “We have strong referral patterns and interact very well with our referring primary care pediatricians and family practice doctors, as well as with other subspecialists. I think that’s an important factor in our ability to deliver the best care.”

The Midwest ENT Specialists staff includes six general ENT specialists, two pediatric ENT specialists, and two facial plastic surgeons. The four clinics handle approximately 55,000 patient visits a year. “We have the experience and expertise to handle everything from the simplest to the most complex ENT issues,” Malone said.

Malone said the clinic is also adept at serving the special needs population — patients with issues like syndromes and resulting birth abnormalities. “In the east metro, we care for the vast majority of Children’s NICU grads with complex airway problems and other ENT issues.”

While Midwest ENT Specialists is not a solely pediatric clinic, Malone said the clinic shares Children’s approach to caring for pediatric patients. “We know that kids are not just small adults and recognize the importance of taking children to a place where doctors are comfortable — a place where everything is geared toward kids.”



Vicki Oster, MD

“Pediatric registered nurses are available during and after hours to give over-the-phone advice and triage for patients.”

**Clinic:** Southdale Pediatric Associates

**Locations:** Burnsville, Eden Prairie, and Edina

[www.southdalepeds.com](http://www.southdalepeds.com)

“We offer a large and very diverse group of physicians, said Vicki Oster, MD, president of Southdale Pediatric Associates. “We have cultural and ethnic diversity as well as a mix of men and women physicians.”

Oster, who has been with Southdale Pediatric Associates for 15 years, is one of 32 pediatricians at the clinic. Its professional staff also includes three allergists and a pediatric nurse practitioner.

“Despite the large size and diversity of our practice, everyone on the staff shares a common goal of providing excellent care for our patients,” Oster said. “One of the ways we deliver on that promise is by making a large number of pediatric registered nurses available during and after office hours to give over-the-phone advice and triage for patients.”

The clinics also offer an on-site high-complexity lab, on-site X-ray, vision and hearing screenings, pediatric gynecologic examinations, and attention deficit disorder evaluation and treatment.

Oster said the fact that Southdale Pediatric Associates also offers allergists on-site is something many parents appreciate.

“It’s a convenient way for parents to address their children’s allergy and asthma needs and, because our allergists are both pediatric and adult board-certified, they’re also able to address the needs of parents.”

# New to Children's professional staff

The following providers have recently joined the professional staff at Children's of Minnesota.  
For information on credentialing opportunities, contact the credentialing department at  
(612) 813-6121 or (651) 220-6571.

George Achett, MD  
Metro Pediatrics

Keith Cavanaugh, MD  
Children's Respiratory  
and Critical Care

Thomas Christenson, MD  
Ear, Nose, & Throat Specialist

Peter Clarine, RN, CNP  
Neurosurgical Associates

Inge De Becker, MD  
Ophthalmology  
University of Minnesota

Timothy Feyma, MD  
Pediatric Neurology  
Gillette Children's

Michael Healy, MD  
Gillette Children's

Melissa Hersey, MD  
Southdale Pediatric Associates

Amy Kebraie, DDS  
Children's Dental Care

Chandler Marietta, MD  
Paparella Ear Head Neck Institute

Neil Mulrooney, MD  
Minnesota Neonatal Physicians

Wafa Qureshi, DDS  
HealthPartners

Michael Rhodes, MD  
Hospitalists  
Abbott Northwestern

Patricia Scherrer, MD  
Children' Respiratory  
and Critical Care

M. Colin Turner, MD  
Pediatrics  
HealthPartners

Sue-Mi Tuttle, MD  
HealthPartners  
Regions

Heather Wade, MD  
Partners in Pediatrics

Timothy Wood, MD  
Hospitalists  
Abbott Northwestern

## Children's Hospitals and Clinics of Minnesota

Kolleen Amon, RN, CNP  
Neonatology

Sara Andrews, RN, CNP  
Neonatology

Fatima Jaffer, RN, CNP  
Emergency Department

Molly McLaughlin, RN, CNP  
Endocrinology

Kirsten Morse, RN, CNP  
Hospitalists

Lynda Stuber RN, CNP  
Pediatric Clinic



Sarah Dugan, MD  
Genetics



Sonia Wright, MD  
Radiology



# Outpatient emergency preparedness

By Gigi Chawla, MD

**W**ith our collective focus on seasonal and H1N1 influenza, and the potential serious medical sequelae in children, all of us need to effectively recognize and manage emergencies related to these illnesses.

Although emergency-management skills are infrequently used in clinics, it is important to maintain those skills through recertification, including PALS or APLS courses, and through practice.

## Expected emergencies related to seasonal and H1N1 influenza

Additional preparation should be dedicated to the following medical emergencies directly related to seasonal influenza and H1N1 influenza:

- **Respiratory distress** is the most common emergency seen in pediatric clinics. This flu season, we should expect to care for patients tenuously ill with wheezing, pneumonia, laryngotracheobronchitis, and possibly even emergencies related to pulmonary edema from myocarditis.

For office personnel, recognizing breathing difficulties among ill-appearing children with a cough and fever can be challenging. Training staff to look for accessory muscle use, nasal flaring, and labored speech when patients check in, as well as obtaining a full set of vital signs, including pulse oximetry, when patients are being roomed, can help to expedite the care of ill patients.

Access to albuterol and epinephrine nebulizations, oxygen, suctioning, and bag-mask-ventilation are critical in stabilizing and preventing deterioration in emergency situations for patients with influenza-like illnesses.

- **Seizures**, although rarely occurring in clinic, require strategic planning for optimal management. The etiology of seizures associated with influenza-like illnesses may be hypoglycemic, febrile, or evolving encephalitis/meningitis. Access to fingerstick blood glucose via glucometer, suction equipment, and oxygen are necessary first steps to stabilize a patient.

Comfort with obtaining fingerstick blood glucose, all

the way through delivering appropriate treatment with IV/IO dextrose solutions for hypoglycemia, requires practice through advanced life-support courses. Storage of the necessary equipment to facilitate quick response requires support-staff involvement.

Febrile seizures often need no intervention, but access to rectal acetaminophen can easily prevent further seizures. For non-febrile, non-hypoglycemic seizures greater than three minutes in duration, use of rectal diazepam should be strongly considered, as well as IM ceftriaxone for treatment of meningitis. Early treatment with antibiotics with subsequent lumbar puncture for cell counts, gram stain, and possibly culture, may be life-saving.

- **Dehydration** can frequently cause rapid deterioration in patients with influenza-like-illness. Dehydration emergency management in clinic also involves opportunities for defining roles and coordination of care. Access to fingerstick blood glucose, anti-emetics, oral rehydration solutions, a variety of bottles/nipples/cups, and staff able to deliver and monitor oral challenges are necessary to prevent deterioration.

This management can be quite time-consuming but can prevent hospitalization. However, use of normal saline IV solution and placement of IV/IO lines may be necessary life-saving steps in managing hypovolemic shock secondary to dehydration and of utmost importance in stabilizing a critically-ill patient.

*For information on pediatric life support courses, including initial and recertification, contact Camille Vanderwal, PALS coordinator at (612) 813-6880. ★*

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