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Pediatric Rounds

A newsletter from the physicians of Children's Specialty Group



Fall 2010

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John Thometz, MD, explains the new EOS scanner to a patient. Children's Hospital of Wisconsin is one of the first two pediatric hospitals in the country to obtain this imaging technology. See his article on Page 9.

Children's Specialty Group, a joint venture between Children's Hospital and Health System and The Medical College of Wisconsin, is a clinical group practice for pediatric specialists. This group practice includes more than 340 physicians and more than 145 nurse practitioners and physician assistants who provide care to infants, children and adolescents in more than 57 medical and surgical specialties.

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Children's Specialty Group and Children's Hospital of Wisconsin provide two free CME conferences a year. Our Best Practices in Pediatrics conferences provide the latest information about common problems encountered in pediatric practice and will benefit all health care providers who work with children including pediatricians, family practice physicians, nurse practitioners and physician assistants.

There is no cost to attend these conferences, so early registration is recommended. To register for either conference, visit chw.org/bestpractices.

BEST PRACTICES IN PEDIATRICS FALL 2010

LOCATION: Grand Geneva Resort & Spa, 7036 Grand Geneva Way, Lake Geneva, Wis.

WHEN: Friday, Oct. 22, 2010, and Saturday, Oct. 23, 2010

ROOM RESERVATIONS: (800) 558-3417 (Discounted rooms are available.)

TOPICS:

Friday

- Back pain.
- Dermatology.
- Eating disorders.
- Polycystic ovary syndrome.
- Scoliosis screening.

Saturday

- Asthma.
- Chronic cough.
- Depression and anxiety.
- Dermatology.
- Epilepsy care protocols.
- Obesity.
- Patient safety in the primary care setting.

BEST PRACTICES IN PEDIATRICS WINTER 2011

LOCATION: Glacier Canyon Lodge, 45 Hillman Road, Wisconsin Dells, Wis.

WHEN: Friday, March 11, 2011, and Saturday, March 12, 2011

ROOM RESERVATIONS: (800) 867-9453 (Discounted rooms are available.)

TOPICS: Conference topics are to be determined.

Pediatric Rounds is published by Children's Specialty Group. Comments should be directed to: Children's Specialty Group, PO Box 1997, Milwaukee, WI 53201 or e-mail csg@chw.org.

Craniopharyngioma Overview:

Example of Need for Comprehensive Long-term Management of Patients with Brain Tumors

By Patricia Donohoue, MD, Selim Firat, MD, Sachin Jugal, MD, and Marike Zwienenberg-Lee, MD

OVERVIEW

Craniopharyngioma is a histologically benign suprasellar tumor which constitutes 6 to 10 percent of intracranial tumors in children. It is thought to originate from the embryonic squamous epithelial remnants of the Rathke's pouch. In embryonic development, Rathke's pouch evolves into the anterior pituitary gland and the pituitary stalk. It is the most common tumor in the sella region in children, with peak incidence at 5 to 10 years of age. The incidence peaks again in adults at 60 to 65 years.

Although considered to be benign histologically, craniopharyngioma behaves in a clinically aggressive fashion. It tends to invade or displace surrounding critical intracranial structures such as the pituitary gland, hypothalamus, third ventricle, optic nerves and chiasm, as well as blood vessels, such as carotid arteries. (See Figure 1.) Craniopharyngioma is prone to contain solid and cystic components; these tumors may comprise of multiple cysts. Significant complications can occur as a result of uncontrolled growth of either of its components. These include visual symptoms, pituitary/hypothalamic deficiencies, hydrocephalus, increased intracranial pressure and even death. Therefore, local control of this disease is considered essential to reduce the risk of these complications.

THERAPEUTIC MANAGEMENT

Surgical resection has been the main intervention in the management of this tumor. However, there continues to be a controversy regarding the optimal surgical treatment of craniopharyngioma. While most would agree that radical excision of this histologically benign tumor is desirable, this often cannot be achieved without causing significant damage to the adjacent neural and vascular structures. Either initiation or exacerbation of existing panhypopituitarism, vision loss, hypothalamic injury resulting in morbid obesity, memory and behavioral problems, disturbance

Figure 1: T1 post-contrast image, prior to therapy, of a large suprasellar cystic craniopharyngioma displacing the optic chiasm.



Figures 2: Post-therapy image (patient from Figure 1) after limited surgery and cyst drainage followed by radiation therapy.



of the sleep-wake cycle and temperature regulation are common complications of aggressive craniopharyngioma surgery. For this reason, a limited resection or drainage of the craniopharyngioma cyst followed by focused radiation therapy has been advocated by some as an equally effective but less morbid intervention. (See Figure 2.) To minimize the size of the radiation field, the cyst can be stereotactically drained and a cyst-catheter attached to a subcutaneous reservoir placed, allowing for intermittent percutaneous fluid drainage while the patient undergoes radiation therapy. In some cases, the tumor is confined to the Sella Turcica; endoscopic transsphenoidal resection can be considered in these patients. Other treatment strategies for local tumor growth control include intracystic radiotherapy or intracystic chemotherapy. These involve instillation of either radioactive ^{32}P or agents such as bleomycin into the cysts of the tumors. These intracystic therapies have been considered mainly in patients who have tumors with large single cysts. Due to concern for spillage of these agents outside the tumor cyst, these treatments are not used as frequently.

The available medical evidence supporting any kind of surgical treatment consists mainly of institutional case series. In general, surgeons tend to favor a limited resection if there is hypothalamic attachment of the tumor and aggressive resection if the tumor is not attached. The postsurgical complications

Table 1 – The relative prevalence of pituitary hormone deficiencies at diagnosis and after treatment.

Deficient hormone: Clinical consequence	Present at diagnosis	Present after treatment
GH: Short stature or halted linear growth	35-95%	88-100%
LH/FSH: Delayed or arrested puberty; amenorrhea	38-82%	80-95%
ACTH: Cortisol deficiency	21-62%	55-88%
TSH: Hypothyroidism	21-42%	39-95%
VP or ADH: Diabetes insipidus	6-38%	25-86%

GH: Growth hormone
 LH: Luteinizing hormone
 FSH: Follicle stimulating hormone
 ACTH: Adrenocorticotrophic hormone
 TSH: Thyroid stimulating hormone
 VP or ADH: Vasopressin or antidiuretic hormone

such as endocrine deficits, optic chiasm or neurovascular complications are reported to be less common with limited surgery and radiation than with aggressive total resection.

Published series using radiation for craniopharyngiomas have shown superior, progression-free survival rates compared to subtotal surgical resection alone. Radiation therapy seems beneficial as adjunct therapy for tumor control when patients undergo less than total resection. Given the technological advances in radiation treatment planning and delivery systems, long-term complications related to radiation therapy potentially can be reduced. Image-guided radiation therapy and intensity-modulated radiation therapy, which uses “inverse planning,” are two important advances that may improve sparing of normal structures and treatment precision. In addition, CT imaging during radiation therapy provides surveillance of potential craniopharyngioma cyst growth, and this allows modification of radiation fields according to changes in target volumes. This improved precision helps to reduce the treatment volumes and to potentially reduce long-term toxicity.

RELATED ENDOCRINE PROBLEMS

In pediatric patients with craniopharyngioma, most have signs and symptoms of endocrine dysfunction at the time of presentation. For those whose tumors are diagnosed as part of an endocrine evaluation, the most common presenting complaint is linear

growth failure. In these patients, the brain imaging study obtained after the diagnosis of growth hormone (GH) deficiency is made, reveals the mass lesion. The GH deficiency can be isolated or combined with other pituitary hormone deficiencies.

In one series of 122 patients, at the time of diagnosis of the craniopharyngioma, 85 percent had one to three pituitary hormone deficiencies. In a review of a large number of studies, after treatment of the tumor, with or without radiation therapy, 54 to 100 percent had three or more hormone deficiencies. The relative prevalence of pituitary hormone deficiencies at diagnosis and after treatment is summarized in Table 1.

Another endocrine complication of treatment for craniopharyngioma is the development of hypothalamic obesity. This is associated with significant abnormalities of the hypothalamic anatomy on postsurgical imaging. This condition results from loss of satiety, reduced physical activity and lowered resting energy expenditure (REE). Possible mechanisms include disruption of leptin receptors (satiety), increased vagal tone (increased insulin secretion and calorie storage) and autonomic imbalance (decreased REE). Unfortunately, there is no specific or effective medical treatment for this condition, which causes significant morbidity and loss of quality of life. Intensive diet and activity intervention at the earliest sign of excessive weight gain is recommended.

Treatment of the pituitary hormone deficiencies usually is straightforward. This consists of the appropriate combination of growth hormone, thyroid hormone, cortisol, sex steroids and vasopressin. Growth hormone treatment traditionally has been delayed until one year after the end of tumor treatment. However, GH treatment does not increase the risk of tumor recurrence in these patients. Some patients grow normally despite a confirmed diagnosis of GH deficiency. The mechanism is unknown, but it may be related to the binding of excess insulin to the IGF-1 receptor.

In summary, craniopharyngioma is a histologically benign but clinically aggressive brain tumor. Even though long-term control of the tumor usually is achieved with surgery, with or without radiation therapy, children with these tumors are at risk of or have significant long-term consequences. These patients require frequent reassessments for tumor recurrence, cyst re-accumulation and subsequent hydrocephalus. They benefit from vigilant monitoring of their growth, vision, nutrition, neuropsychological variances, neurological deficiencies and quality of life assessments. Their optimal management consists of a consistent multidisciplinary provider approach from diagnosis.



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REFERENCES

For a list of references used in developing this article, go to chw.org/pediatricrounds and view the article online.

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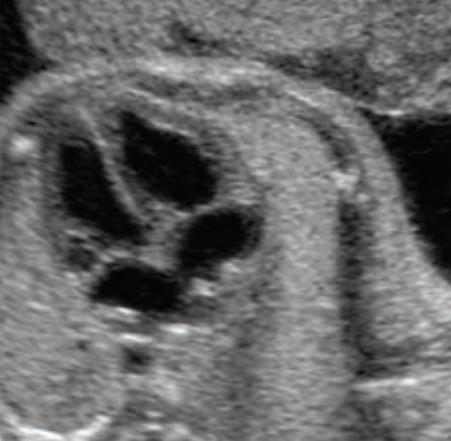
The Importance of Early Detection of Congenital Heart Disease: *Who Should Be Offered Fetal Echocardiography?*

By Huda Elshershari, MD

Figure 1: Assessment of fetal position.



Figure 2: Fetal heart four-chamber view.



INTRODUCTION

Congenital heart disease is the most common serious congenital anomaly found at birth, affecting nearly 1 percent of live born infants and occurring in a higher percentage of fetuses. While many affected children have mild cardiac lesions, severe congenital heart disease remains one of the leading causes of mortality among infants. Most infants born with congenital heart disease have no known risk factors and are delivered after an uncomplicated pregnancy.

Prenatal detection of congenital heart disease usually is the result of careful examination of the fetal heart during a routine obstetric screening ultrasound. Ultrasound imaging uses high-frequency sound waves to produce dynamic images (sonograms) of organs, tissues or blood flow inside the body. It has been proved to be very safe to both the mother and the fetus. Fetal echocardiography is the term used for ultrasound imaging of the fetal heart.

FETAL ECHOCARDIOGRAPHY

Fetal echocardiography became available in the early 1980s. However, recent advancements in technology have allowed for earlier and improved detection of all forms of congenital heart disease. Most routine studies are performed transabdominally between 16 and 20 weeks' gestation. The studies can be done as an outpatient, and no maternal preparation is needed. Most studies can be completed within one hour.

The examiner begins with the assessment of the fetal position to identify the right and left sides of the body. The stomach, descending aorta and the spleen typically are found on the left side; the liver and the inferior vena cava on the right side. (See Figure 1.) The ultrasound transducer then is moved slightly cranially to visualize the four-chamber view. (See Figure 2.) This view is the key for identification of many complex cardiac lesions, such as hypoplastic left heart syndrome or a complete

atrioventricular septal defect. Additional views to incorporate imaging of the outflow tracts are critical to identify the conotruncal abnormalities, such as transposition of the great arteries and tetralogy of Fallot. Improved detection of fetal cardiac anomalies has been shown to be related to the experience of the examiner and the ability of the examiner to obtain these multiple views. Fetal echocardiography also is useful for diagnosis, monitoring and management of fetal arrhythmias.

INDICATIONS

Indications for fetal echocardiography generally are divided into fetal, maternal and familial indications. (See Table 1 on Page 8.) The most common fetal indication for a high-risk study by a fetal cardiologist is the presence of an abnormal obstetric screening ultrasound, where the likelihood of finding significant congenital heart disease often is greater than 50 percent. Other fetal indications include the presence of extracardiac or chromosomal anomalies, or an increased nuchal translucency. Maternal indications for a high-risk study include the presence of diabetes mellitus or exposure to teratogens such as lithium or anticonvulsants. Also, with continued advances in the treatment of congenital heart disease, many children will survive to become adults and raise families. Infants of these parents have an increased incidence of congenital heart disease related to an underlying genetic tendency.

BENEFITS

The detection of a cardiac abnormality prior to birth can be devastating news to a family. Close collaboration with a fetal cardiologist will provide timely assessment and accurate diagnosis. Counseling is best provided by the fetal cardiologist who has continuous access to the changing outcomes of congenital heart disease. Parents have the opportunity to ask questions and learn about the type of heart disease and its long-term implications. There also is the ability to plan for management of the pregnancy and delivery. Delivery at a tertiary care hospital can lead to improved postnatal outcomes, especially in those patients with cardiac lesions predisposing them to severe hypoxia or ischemia at the time of birth. Lastly, in some patients, fetal echocardiography may identify a lesion that may be amenable to fetal intervention.



HUDA ELSHERSHARI, MD, is a pediatric cardiologist at Children's Hospital of Wisconsin and Children's Physician Group in Illinois.

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Table 1 – Indications for fetal echocardiography.

FETAL

Abnormal obstetric screening examination and increased nuchal translucency

Presence of extracardiac anomalies

Omphalocele

Diaphragmatic hernia

Duodenal atresia

Tracheoesophageal fistula

VACTERL

Renal anomalies

Spina bifida

Single umbilical artery

Chromosomal abnormalities: Trisomies and microdeletions

Nonimmune hydrops

Arrhythmias including sustained tachyarrhythmia and heart block

MATERNAL

Maternal congenital heart disease

Maternal diabetes mellitus and phenylketonuria

Maternal connective tissue disease and/or autoantibodies (risk for fetal heart block)

Teratogen exposure in pregnancy such as alcohol, anticonvulsants, lithium, retinoic acid

Intrauterine infection: Rubella, cytomegalovirus, coxsackievirus, parvovirus

In vitro fertilization

FAMILIAL

Previous child with congenital heart disease

Paternal congenital heart disease

Inherited disorders

Marfan syndrome

Noonan syndrome

Velocardiofacial syndrome

Tuberous sclerosis

Hypertrophic cardiomyopathy

EOS scanner provides higher level of imaging with less radiation

By John Thometz, MD

Children's Hospital of Wisconsin is one of the first two pediatric hospitals in the country to obtain EOS X-ray imaging technology. This technology is a radical improvement over standard radiographic imaging of the spine and lower extremities in multiple ways. The EOS is able to obtain a standard PA and lateral scoliosis film with 1/10 the amount of radiographic exposure of standard low-dose films. The EOS is able to obtain 3-D visualization of the spine with 1/1,000 the dose of a CT scanner. In addition to providing a standard 2-D film, EOS also allows for 3-D reconstruction of individual bone position, rotation and orientation. Not only does the EOS capture a simultaneous PA and lateral radiograph of the spine, it also has the capability of whole body radiographs in the standing position. This comprehensive view of spine and joint alignment allows for a more accurate assessment of deformities.

It is well known that in children with scoliotic deformity, there is not only a progressive lateral deviation of the spine but this is associated with a progressive rotational deformity of the vertebral bodies themselves. The spine progressively rotates, creating the rib hump – over time, the ribs themselves become more deformed. The deformity is difficult to assess with the use of 2-D films. However, this rotational prominence is the problem most adolescents are concerned with. Many treatments have been devised to stabilize the curvature or reverse this cosmetic deformity. Until now, there have been very poor methods for accurately assessing the results of treatment. EOS provides a better handle on the correction of the deformity.

The EOS is based on a patented technology developed in France that received the Nobel Prize in physics. This technology eliminates the vertical distortion that is common with traditional radiographs. It enables long-length digital imaging without the need for “digital stitching,” which can

Images 1 and 2:

EOS image quality comparison.

Patient: Female, BMI 17.7, age 26.

Under Image 1: Film dose X10.



Under Image 2: EOS.



lead to inaccuracy in assessment of the spine or lower extremities.

Since the EOS has been in use at Children's Hospital, not only has the radiographic dose reduced drastically, the clarity of the radiographs also has improved greatly. (See Images 1 and 2.) The bony detail that can be seen, especially in the lumbar spine and pelvis, is much better than it was before. This allows more accurate assessment of bony pathology and bony landmarks, which are used to assess skeletal maturity. It is particularly

Image 3:

3-D evaluation of surgical correction of idiopathic scoliosis.



exciting to note that this allows for assessment of 3-D skeletal reconstruction. (See Image 3.)

Traditionally, treatment (either bracing or surgical intervention) is defined by 2-D X-ray assessing a 3-D deformity. The use of the EOS now allows accurate calculation of the change in the position of the individual bones and their displacements and rotational deformities, and this is critical in assessing the results of treatment interventions. With EOS, 3-D bone modeling is possible, which defines the relative positions of each vertebra, and therefore enables better preoperative surgical planning and better postoperative assessment of results. (See Images 4 and 5.)

SCANNING TECHNIQUE

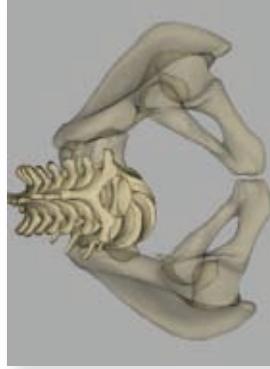
When the patient stands inside the EOS device (see Image 6), simultaneous AP and lateral X-ray images are acquired by a vertical scan from head to toe. The results are available within seconds and the fact that it is possible to take a simultaneous AP and lateral film from head to toe allows for much improved assessment of global posture and improved assessment of limb length discrepancies,

Images 4 and 5:

3-D postural assessment.
Weight-bearing 3-D reconstruction.



Preoperative.



Postoperative.

angular deformities or other pathology in the lower extremities. Three-D images of osseous deformities, which in the past could only be obtained from a CT scan, now can be assessed with the EOS. More than 100 clinically relevant angle and leg length measurements can be calculated automatically with this technology. This allows for better preoperative planning with drastically lower radiographic exposure. EOS provides a more precise measurement in children who have a leg length discrepancy since it eliminates the distortions seen with a standard radiograph.

RADIOGRAPHIC EXPOSURE REDUCTION

At Children's Hospital of Wisconsin, we have had a long-standing commitment to minimize radiographic exposure during scoliosis imaging. Young children with scoliosis who need to be followed through the years require multiple radiographs and, over time, the total radiograph exposure can increase the risk for breast carcinoma, thyroid carcinoma or other tumors. Our center has been a leader in use of surface topography for following children with mild curvatures to avoid the use of radiographs. The use of surface

Image 6:

Patient positioning in the EOS device.



topography has allowed us to avoid the use of thousands of radiographs in the assessment of our young patients with spinal deformity and in some cases has allowed patients to avoid 16 or 17 spinal radiographs. Currently, we are involved with new and improved technology for surface topography.

The EOS device is a fantastic advance for children with scoliotic and lower limb deformities. It also will allow us to conduct cutting-edge research to describe the results in conservative and surgical intervention for scoliotic patients. With the dramatic reduction of radiographic exposure, improvement in the quality of the radiographs and ability to assess the deformity in 3-D, the EOS enables a dramatic improvement in the quality of the care provided.

Features that set EOS apart from traditional X-ray or CT scan include:

1. Capturing a full or partial body image.
2. Large reduction in radiation dose.
3. Multiplanar images obtained in an upright weight bearing position (unavailable in CT scans).



JOHN THOMETZ, MD, is medical director of Orthopedic Surgery at Children's Hospital of Wisconsin, professor and chief of Pediatric Orthopaedics at The Medical College of Wisconsin and a member of Children's Specialty Group.

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Hyperhidrosis Diagnosis and Management

By Samantha Hill, MD

Hyperhidrosis is perspiration in excess of the physiologic amount necessary to maintain thermal homeostasis. It affects more than 3 percent of the population, but the prevalence is likely significantly higher than currently estimated because it is both underreported by patients and underdiagnosed by physicians. While early diagnosis and management can significantly improve a patient's quality of life, hyperhidrosis remains widely undertreated, particularly among pediatric patients.

BACKGROUND

Primary disease is usually focal, bilateral and relatively symmetric. Axillary disease is the most common location, affecting approximately half of patients. This is followed by palmoplantar disease, which affects up to one-third of patients. Patients with primary hyperhidrosis also can have generalized disease, affecting the axillae, palms, soles, face or scalp with varying degrees of severity. Secondary hyperhidrosis also can be generalized or focal and can be due to a large number of medications or medical conditions.

Primary hyperhidrosis usually presents at 14-25 years of age, although children with palmoplantar disease often are symptomatic as toddlers. Approximately half of all patients report a positive family history, and a family history is most likely in pediatric patients. An autosomal dominant inheritance pattern has been suggested.

IMPACT ON PATIENTS

Hyperhidrosis can be embarrassing, uncomfortable, anxiety-inducing and at times disabling and isolating. When compared using standardized and validated quality-of-life measures, the negative impact of hyperhidrosis is comparable to severe psoriasis, end-stage renal disease, rheumatoid arthritis and multiple sclerosis. Children and adolescents living with hyperhidrosis often experience this impact most profoundly. Growing up with this socially ostracizing disease can be

Minor starch-iodine test.

Figure 1

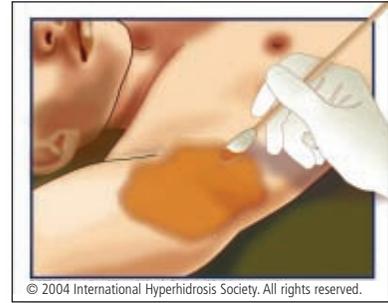


Figure 2

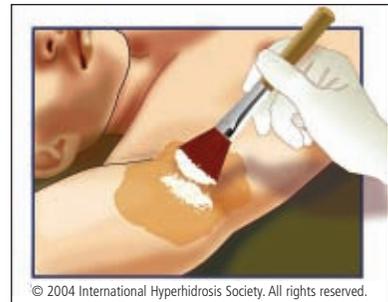
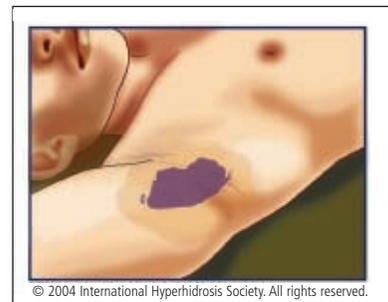


Figure 3



detrimental to a child's development of confidence and sense of self.

EVALUATION

A thorough history and physical must be performed to differentiate focal from generalized sweating and to confirm that the patient does not have secondary

Table 1 – Hyperhidrosis Disease Severity Scale

<input type="checkbox"/> My sweating is never noticeable and never interferes with my daily activities.	Score 1
<input type="checkbox"/> My sweating is tolerable but sometimes interferes with my daily activities.	Score 2
<input type="checkbox"/> My sweating is barely tolerable and frequently interferes with my daily activities.	Score 3
<input type="checkbox"/> My sweating is intolerable and always interferes with my daily activities.	Score 4

Reprinted with the permission of the International Hyperhidrosis Society.

hyperhidrosis, which may require a separate evaluation. Several quality-of-life tools and quantitative measurements of sweat production are available. The most commonly used and most helpful to practitioners is the Hyperhidrosis Disease Severity Scale (see Table 1), on which a score of a three or four indicates severe hyperhidrosis.

A Minor starch-iodine test can help evaluate specific areas of focal hyperhidrosis and is easily performed in any office. In this method, an iodine or betadine solution is applied to the area of interest and allowed to dry, and then cornstarch is brushed on the area. The light brown iodine color turns dark purple when sweat is present. Starch-iodine preparation also is very helpful before botulinum toxin injection to delineate the treatment area. (See Figures 1-3.)

MANAGEMENT

Treatment of hyperhidrosis is best selected based on the body site or sites affected and can be classified as nonsurgical and surgical. Nonsurgical therapies, which will be the focus of the remainder of this article, include topical antiperspirants, tap water iontophoresis, botulinum toxin injection and anticholinergic medications. Surgical treatments include focal curettage or liposuction of sweat gland-containing adipose tissue and thoracic sympathectomy. Given the risks of surgery, it is the opinion of this author that surgical intervention should only be considered after failure of standard nonsurgical therapies and should be approached with great caution in pediatric patients.

Topical therapies: Aluminum salts are the most common active ingredients in both over-the-counter and prescription antiperspirants. These salts are thought to mechanically obstruct the sweat pores and can be used on virtually any area of the body. Aluminum chloride hexahydrate 20 percent

solution (Drysol[®], Hypercare[®]) is the most commonly prescribed agent. These topical antiperspirants can be very effective but are limited by irritation that is caused by the formation of hydrochloric acid in a chemical reaction between the aluminum chloride and sweat present on the skin surface. Application on a very dry, nonoccluded skin surface can reduce this irritation substantially.

Iontophoresis: In a technique that has been used since the 1930s, tap water iontophoresis uses an electrical current to introduce ions into the skin through the sweat glands. The mechanism of action of iontophoresis in hyperhidrosis remains unknown. This is most effective for palmo-plantar hyperhidrosis and side effects generally are limited to mild stinging and redness. Treatments are started at three to five times per week until the patient achieves dryness, generally at two to four weeks, and then are spaced out to longer intervals to maintain dryness. Occasionally, anticholinergic medications are added to the water to increase the duration of dryness.

Botulinum toxin: Intradermal injection of botulinum toxin blocks the sympathetic innervation of sweat glands, thereby decreasing sweat production. While it is only FDA approved for axillary hyperhidrosis in adults, botulinum toxin can be used for any area of focal hyperhidrosis and also is commonly used in pediatric patients. The average duration of improvement is six to eight months for the axillae and four to five months for the palms and craniofacial region, with significant results as early as five to seven days postinjection. The main side effect is discomfort during injection, which is encountered most often when treating the palms. Transient small muscle weakness also occurs occasionally when treating the palms; however, compensatory sweating has not proved to be a problem for any treatment areas.

Anticholinergic medications: As competitive antagonists of acetylcholine, anticholinergic drugs block sweat secretion by blocking muscarinic receptors in the sympathetic pathway. Oral anticholinergics are a mainstay in the treatment of hyperhidrosis, especially generalized. Side effects of the medications, such as dry mouth, blurred vision, urinary retention, tachycardia and constipation, may limit their use. Although none are FDA-approved for hyperhidrosis, glycopyrrolate, propantheline bromide and oxybutynin all have been used.

CONCLUSION

Hyperhidrosis is a relatively common disorder that is a substantial burden to affected patients, interfering with daily activities and causing social embarrassment. Pediatric patients make up a significant portion of those affected and symptoms often are lifelong. With increased awareness of the diagnosis of hyperhidrosis and available treatment options, clinicians have the opportunity to change lives.

HYPERHIDROSIS CLINIC

The Dermatology Clinic at Children's Hospital of Wisconsin offers a Hyperhidrosis Clinic. The clinic offers medical solutions as well as everyday strategies for coping with excessive sweating. Special hyperhidrosis therapies include:

- Topical therapies.
- Iontophoresis.
- Botulinum toxin.
- Anticholinergic medications.

Services are available at Children's Hospital and Children's Hospital of Wisconsin Clinics-New Berlin. To make an appointment, call Central Scheduling at (414) 607-5280 or toll-free at (877) 607-5280.



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Leadership announcements



Dr. Ranta named director of Physician Affairs

MARYLYN RANTA, MD, has joined Children's Hospital of Wisconsin's administrative staff as director of Physician Affairs. In this new role, Dr. Ranta provides administrative input to several areas and functions, including the utilization management program, Medical/Dental Staff Services and Physician Support Services. She also provides support and leadership for the hospital's quality initiatives.

Dr. Ranta can be reached at (414) 266-1681.



Dr. Costakos leads Retinopathy of Prematurity Program

DEBORAH COSTAKOS, MD, has been named program director of Retinopathy of Prematurity at Children's Hospital of Wisconsin. She also is an assistant professor of Pediatrics (Ophthalmology) at The Medical College of Wisconsin and a member of Children's Specialty Group. In her new role, Dr. Costakos oversees retinopathy of prematurity prevention, detection and treatment activities in the Neonatal Intensive Care Unit.

Dr. Costakos can be reached at (414) 456-2058.



Dr. Kerschner expands leadership role

JOSEPH KERSCHNER, MD, FACS, FAAP, has been named executive vice president of Children's Hospital and Health System. He also is president and CEO of Children's Specialty Group, medical director of Otolaryngology at Children's Hospital of Wisconsin and a professor and interim chair of Otolaryngology at The Medical College of Wisconsin. In his new role, Dr. Kerschner facilitates collaboration in the physician community, creating synergies to help the health system better serve the needs of children.

Dr. Kerschner can be reached at (414) 266-6486.



Walczyk Joers appointed vice president of Surgical Services

BARBARA WALCZYK JOERS, MHA, CHE, has joined Children's Hospital of Wisconsin as vice president of Surgical Services. Walczyk Joers works in partnership with Keith Oldham, MD, surgeon-in-chief and The Marie Uihlein Chair in Pediatric Surgery at the hospital. They are responsible for developing the Surgical Services strategic plan, including opportunities for growth and further alignment with community needs.

Walczyk Joers can be reached at (414) 266-5630.



Duncan named executive vice president of Community Services

BOB DUNCAN has been appointed executive vice president of Community Services at Children's Hospital and Health System. He serves as president of Children's Service Society of Wisconsin as well as providing executive leadership for other community programs and services. In partnership with key stakeholders, he works to ensure child welfare programs meet all quality measures and standards and is responsible for improving the medical coordination, treatment and care of children in the community.

Duncan can be reached at (414) 337-8634.

Children's Specialty Group **NEW HIRES**

ADOLESCENT MEDICINE

SHEWANNA A. BROWN, MSN, FNP-BC, is a pediatric adolescent medicine nurse practitioner at Children's Hospital of Wisconsin and The Medical College of Wisconsin and a member of Children's Specialty Group.

Bachelor of Science: University of Wisconsin-Milwaukee, Nursing.

Master of Science: University of Wisconsin-Milwaukee, Nursing.

Board certification: Family Nurse Practitioner.

ANESTHESIOLOGY



ROSE CAMPISE-LUTHER, MD, is a pediatric anesthesiologist at Children's Hospital of Wisconsin, an assistant professor of Anesthesiology at The Medical College of Wisconsin and a member of Children's Specialty Group.

Medical degree: Johannes Gutenberg University, Mainz, Germany.

Residency: University of Illinois College of Medicine, Anesthesiology.

Fellowship: University of Illinois College of Medicine, Pediatric Anesthesiology.

Board certification: Anesthesiology.



HERODOTOS ELLINAS, MD, is a pediatric anesthesiologist at Children's Hospital of Wisconsin, an assistant professor of Anesthesiology at The Medical College of Wisconsin and a member of Children's Specialty Group.

Medical degree: University of Chicago Pritzker School of Medicine.

Residency: Duke University Medical Center, Durham, N.C., Medicine-Pediatrics.

Residency: The Medical College of Wisconsin, Anesthesiology.

Fellowship: Children's Hospital Boston, Pediatric Anesthesiology.

Board certifications: Anesthesiology, Internal Medicine and Pediatrics.



JENNIFER A. HICKMAN, MD, is a pediatric anesthesiologist at Children's Hospital of Wisconsin, an assistant professor of Anesthesiology at The Medical College of Wisconsin and a member of Children's Specialty Group.

Medical degree: The Medical College of Wisconsin.

Residency: The Medical

College of Wisconsin, Anesthesiology.

Fellowship: The Medical College of Wisconsin, Pediatric Anesthesiology and Pain Management.

ASTHMA/ALLERGY/ CLINICAL IMMUNOLOGY



DOROTHY S. CHEUNG, MD, is an asthma/allergy/clinical immunology specialist at Children's Hospital of Wisconsin, an assistant professor of Pediatrics (Allergy/Immunology) at The Medical College of Wisconsin and a member of Children's Specialty Group.

Medical degree: University

of Texas Southwestern Medical School, Dallas.

Residency: Washington University School of Medicine, St. Louis, Mo., Internal Medicine.

Fellowship: Washington University School of Medicine, Allergy/Immunology.

Board certifications: Allergy and Immunology and Internal Medicine.



KEVIN J. KELLY, MD, is an allergy/immunology specialist at Children's Hospital of Wisconsin, vice chair of Finance for Pediatrics and a professor of Pediatrics (Allergy/Immunology) at The Medical College of Wisconsin and a member of Children's Specialty Group.

Medical degree: Loyola University of Chicago Stritch

School of Medicine.

Residency: The Medical College of Wisconsin, Pediatrics.

Fellowship: Harvard Medical School, Boston, Critical Care.

Fellowship: The Medical College of Wisconsin, Allergy/Immunology.

Board certifications: Pediatrics, Allergy and Immunology and Pediatric Critical Care Medicine.



CARRIE M. LEE, MSN, CPNP, APNP, is a pediatric asthma, allergy and clinical immunology nurse practitioner at Children's Hospital of Wisconsin and The Medical College of Wisconsin and a member of Children's Specialty Group.

Bachelor of Science: Marquette University, Milwaukee, Nursing.

Master of Science: Marquette University, Nursing.
Board certification: Pediatric Nurse Practitioner Primary Care.

KRISTEN K. VOLKMAN, MD, is an asthma/allergy/clinical immunology specialist at Children's Hospital of Wisconsin, an assistant professor of Pediatrics (Allergy/Immunology) at The Medical College of Wisconsin and a member of Children's Specialty Group.

Medical degree: The Medical College of Wisconsin.

Residency: The Medical College of Wisconsin, Pediatrics.

Fellowship: The Medical College of Wisconsin, Allergy/Immunology.

Board certifications: Allergy and Immunology and Pediatric Medicine.

CARDIOLOGY



KATHLEEN A. TRIER, MSN, APNP, is a pediatric cardiology nurse practitioner at Children's Hospital of Wisconsin and The Medical College of Wisconsin and a member of Children's Specialty Group.

Bachelor of Science: University of Wisconsin-Madison, Nursing.

Master of Science: University

of Illinois-Chicago, Nursing.

Board certification: Pediatric Nurse Practitioner Primary Care.

CHILD DEVELOPMENT



SARA K. QUATES, MSN, RN, is a pediatric nurse practitioner at Children's Hospital of Wisconsin and The Medical College of Wisconsin and a member of Children's Specialty Group.

Bachelor of Science: University of Wisconsin-Madison, Psychology.

Master of Science: Marquette

University, Milwaukee, Nursing.

Board certification: Pediatric Nurse Practitioner Primary Care.

CRITICAL CARE



GINA C. BANE, MD, is a hospital medicine specialist in Critical Care at Children's Hospital of Wisconsin, an assistant professor of Pediatrics (Critical Care) at The Medical College of Wisconsin and a member of Children's Specialty Group.

Medical degree: University of Michigan Medical School, Ann Arbor.

Residency: The Medical College of Wisconsin, Pediatrics.



SAMANTHA B. CHINDERLE, MSN, RN, is a pediatric critical care nurse practitioner at Children's Hospital of Wisconsin and The Medical College of Wisconsin and a member of Children's Specialty Group.

Bachelor of Science: University of Iowa, Nursing.

Master of Science: Rush University, Chicago, Nursing.

Board certification: Pediatric Nurse Practitioner Acute Care.



JENNIFER L. LIEDEL, MD, is a pediatric neonatologist and critical care specialist at Children's Hospital of Wisconsin, an assistant professor of Pediatrics (Neonatology) at The Medical College of Wisconsin and a member of Children's Specialty Group.

Medical degree: Northwestern University Feinberg School

of Medicine, Chicago.

Residency: University of Chicago Hospitals, Pediatrics.

Fellowship: University of Chicago Hospitals, Pediatric Critical Care and Neonatal-Perinatal Medicine.

Board certifications: Pediatrics, Pediatric Critical Care Medicine and Neonatal-Perinatal Medicine.



REBECCA A. RUSSELL, MD, is a pediatric critical care specialist at Children's Hospital of Wisconsin, an assistant professor of Pediatrics (Critical Care) at The Medical College of Wisconsin and a member of Children's Specialty Group.

Medical degree: University of Wisconsin-Madison, School of Medicine and Public Health.

Residency: University of Minnesota-Twin Cities, Pediatrics.

Fellowship: University of Minnesota-Twin Cities, Pediatrics.

Fellowship: The Medical College of Wisconsin, Critical Care.

Board certification: Pediatrics.



TERESA E. VANDENBERGH, MD, is a hospital medicine specialist in Critical Care at Children's Hospital of Wisconsin, an assistant professor of Pediatrics (Critical Care) at The Medical College of Wisconsin and a member of Children's Specialty Group.

Medical degree: Wayne State University School of Medicine,

Detroit.

Residency: The Medical College of Wisconsin, Pediatrics.



SHIHTIEN WANG, MD, is a hospital medicine specialist in Critical Care at Children's Hospital of Wisconsin, an assistant professor of Pediatrics (Critical Care) at The Medical College of Wisconsin and a member of Children's Specialty Group.

Medical degree: Northwestern University

Feinberg School of Medicine, Chicago.

Residency: The Medical College of Wisconsin, Pediatrics.



JESSICA M. WORKS, MSN, APNP, is a pediatric critical care nurse practitioner at Children's Hospital of Wisconsin and The Medical College of Wisconsin and a member of Children's Specialty Group.

Bachelor of Science: Baylor University, Waco, Texas, Nursing.
Master of Science: University of Washington, Nursing.

Board certification: Pediatric Nurse Practitioner Acute Care.



CASEY P. SITTON, MD, is an emergency medicine specialist at Children's Hospital of Wisconsin, an assistant professor of Pediatrics (Emergency Medicine) at The Medical College of Wisconsin and a member of Children's Specialty Group.

Medical degree: University of Mississippi School of

Medicine, Jackson.

Residency: The Medical College of Wisconsin, Pediatrics.

DERMATOLOGY



SAMANTHA E. HILL, MD, is a pediatric dermatologist at Children's Hospital of Wisconsin, an assistant professor of Pediatric Dermatology at The Medical College of Wisconsin and a member of Children's Specialty Group.

Medical degree: The Medical College of Wisconsin.

Residency: Nationwide Children's Hospital, Columbus, Ohio, Pediatrics.

Residency: St. Louis University School of Medicine, Mo., Dermatology.

Fellowship: The Medical College of Wisconsin, Pediatric Dermatology.



CHRISTOPHER D. SPAHR, MD, is an emergency medicine specialist at Children's Hospital of Wisconsin, an assistant professor of Pediatrics (Emergency Medicine) at The Medical College of Wisconsin and a member of Children's Specialty Group.

Medical degree: Jefferson Medical College, Philadelphia.

Residency: University of Chicago Hospitals, Pediatrics.

Fellowship: The Medical College of Wisconsin, Pediatric Emergency Medicine.

Board certifications: Pediatric Emergency Medicine and Pediatrics.

EMERGENCY MEDICINE



CHERYL M. CAMERON, MD, is a pediatric emergency medicine specialist at Children's Hospital of Wisconsin, an assistant professor of Pediatrics (Emergency Medicine) at The Medical College of Wisconsin and a member of Children's Specialty Group.

Medical degree: The Medical

College of Wisconsin.

Residency: The Medical College of Wisconsin, Pediatrics.

Board certification: Pediatrics.



CHRIS WALSH-KELLY, MD, is an emergency medicine specialist at Children's Hospital of Wisconsin, a professor of Pediatrics (Emergency Medicine) at The Medical College of Wisconsin and a member of Children's Specialty Group.

Medical degree: Loyola University of Chicago Stritch

School of Medicine.

Residency: The Medical College of Wisconsin, Pediatrics.

Board certifications: Pediatrics and Pediatric Emergency Medicine.



KIMBERLY A. CRONSELL, MD, is an emergency medicine specialist at Children's Hospital of Wisconsin, an assistant professor of Pediatrics (Emergency Medicine) at The Medical College of Wisconsin and a member of Children's Specialty Group.

Medical degree: Loyola University of Chicago, Stritch

School of Medicine.

Residency: The Medical College of Wisconsin, Pediatrics.

HEMATOLOGY/ONCOLOGY



KRISTEN J. TEWS, PA-C, is a pediatric hematology/ oncology physician assistant at Children's Hospital of Wisconsin and The Medical College of Wisconsin and a member of Children's Specialty Group.

Bachelor of Science: University of Wisconsin-Madison, Physician Assistant.

Bachelor of Science:

University of Wisconsin-Green Bay, Human Biology.

Master of Science: University of Wisconsin-La Crosse, Cellular and Molecular Biology.

Board certification: Physician Assistant.



MONICA S. THAKAR, MD, is a pediatric hematology/oncology specialist at Children's Hospital of Wisconsin, an assistant professor of Pediatrics (Hematology/Oncology) at The Medical College of Wisconsin and a member of Children's Specialty Group.
Medical degree: Medical

University of South Carolina, Charleston.

Residency: University of Chicago Hospitals, Pediatrics.

Fellowship: University of Washington School of Medicine, Seattle, Pediatric Hematology/Oncology.

Board certification: Pediatrics.

IMAGING



CRAIG M. JOHNSON, DO, is a pediatric interventional radiologist at Children's Hospital of Wisconsin, an assistant professor of Pediatric Radiology at The Medical College of Wisconsin and a member of Children's Specialty Group.

Doctor of Osteopathy: Des Moines University, College

of Osteopathic Medicine, Iowa.

Residency: Aultman Hospital, Canton, Ohio, Diagnostic Radiology.

Fellowship: Children's Hospital of Boston, Pediatric Radiology and Pediatric Interventional Radiology.

Board certification: Diagnostic Radiology.



MOHIT MAHESHWARI, MD, is a pediatric neuroradiologist at Children's Hospital of Wisconsin, an assistant professor of Pediatric Radiology at The Medical College of Wisconsin and a member of Children's Specialty Group.
Medical degree: Grant Medical College, Mumbai, India.

Fellowship: The Medical College of Wisconsin, Neuroradiology, Pediatric Radiology and Digital Imaging.

NEONATOLOGY



RUBY GUPTA, MD, is a neonatologist at Children's Hospital of Wisconsin, an assistant professor of Pediatrics (Neonatology) at The Medical College of Wisconsin and a member of Children's Specialty Group.
Medical degree: Lala Lajpat Memorial Medical College, Meerut, India.

Residency: Texas Tech University Health Sciences Center School of Medicine, Lubbock, Pediatrics.

Fellowship: The Medical College of Wisconsin, Neonatal-Perinatal Medicine.

Board certification: Pediatrics.



JEAN K. REX, MD, is a neonatologist at Children's Hospital of Wisconsin, an assistant professor of Pediatrics (Neonatology) at The Medical College of Wisconsin and a member of Children's Specialty Group.

Medical degree: University of Iowa Carver College of Medicine, Iowa City.

Residency: Barnes Jewish Hospital/Washington University, St. Louis, Pediatrics.

Board certification: Pediatrics.



REBECCA D. YUAN, MSN,

NNP, is a pediatric nurse practitioner at Children's Hospital of Wisconsin and The Medical College of Wisconsin and a member of Children's Specialty Group.

Bachelor of Science: Pennsylvania State University-Hershey, Nursing.

Master of Science: University

of California-San Francisco, Nursing.

Board certification: Neonatal Nurse Practitioner.

NEUROLOGY



JENNA PRIGGE, MSN, APNP,

is a pediatric neurology nurse practitioner at Children's Hospital of Wisconsin and The Medical College of Wisconsin and a member of Children's Specialty Group.

Bachelor of Science: University of Wisconsin-Madison, Psychology.

Master of Science: Marquette

University, Milwaukee, Nursing.

Board Certification: Certified Pediatric Nurse Practitioner-Primary Care.



KATIE A. WALKOWICZ, PA-C,

is a pediatric neurology physician assistant at Children's Hospital of Wisconsin and The Medical College of Wisconsin and a member of Children's Specialty Group.

Bachelor of Science: University of Wisconsin-Madison, Psychology.

Master of Science: Rosalind

Franklin University of Medicine and Science, Chicago, Physician Assistant.

Board certification: Physician Assistant.

PATHOLOGY



GABRIELA GHEORGHE, MD, is a pediatric pathologist at Children's Hospital of Wisconsin, an assistant professor of Pathology at The Medical College of Wisconsin and a member of Children's Specialty Group. **Medical degree:** Universitatea De Medicina Si Farmacie Timisoara, Romania.

Residency: University of Colorado School of Medicine, Aurora, Anatomic/Clinical Pathology.

Fellowship: Indiana University School of Medicine, Indianapolis, Hematopathology.

Fellowship: Children's Hospital of Pittsburgh, Pediatric Pathology.

Board certifications: Hematology Pathology, Anatomic Pathology and Clinical Pathology.

PHYSICAL MEDICINE AND REHABILITATION



JULIA J. KLUG, MSN, RN, is a pediatric physical medicine and rehabilitation nurse practitioner at Children's Hospital of Wisconsin and The Medical College of Wisconsin and a member of Children's Specialty Group. **Bachelor of Arts:** Marquette University, Milwaukee, Spanish. **Master of Science:** Marquette

University, Nursing.

Board certification: Pediatric Nurse Practitioner-Primary Care.

PSYCHIATRY



HEENA Y. DESAI, MD, is a pediatric psychiatrist at Children's Hospital of Wisconsin, an assistant professor of Psychiatry at The Medical College of Wisconsin and a member of Children's Specialty Group. **Medical degree:** University of Illinois at Chicago.

Residency: University of Washington School of Medicine, Seattle, Psychiatry.

Fellowship: The Medical College of Wisconsin, Child Psychiatry.

Board certification: Psychiatry.

PULMONARY



LOUELLA AMOS, MD, is a pulmonologist and sleep medicine specialist at Children's Hospital of Wisconsin, an assistant professor of Pediatrics (Pulmonary) at The Medical College of Wisconsin and a member of Children's Specialty Group.

Medical degree: University

of Wisconsin-Madison School of Medicine and Public Health. **Residency:** The Medical College of Wisconsin, Pediatrics.

Fellowship: The Medical College of Wisconsin, Pediatric Pulmonary and Sleep Medicine.

Board certification: Pediatrics.

UROLOGY



TRAVIS W. GROTH, MD, is a pediatric urologist at Children's Hospital of Wisconsin, an assistant professor of Pediatric Urology at The Medical College of Wisconsin and a member of Children's Specialty Group. **Medical degree:** University of Minnesota Medical School. **Residency:** The Medical College of Wisconsin, Urology.

Fellowship: The Medical College of Wisconsin, Pediatric Urology.

DEPARTURES

Children's Specialty Group thanks the following individuals for their contributions and wishes them well in their future endeavors:

Smita Bailey, MD, Pediatric Radiology

Florence Desrosiers, MD, Pediatrics (Adolescent Medicine)

Melissa A. Gagliano, MSN, APNP, Dermatology

Kimberly L. Gandy, MD, PhD, Pediatric Cardiothoracic Surgery

William Gershan, MD, Pediatrics (Pulmonary)

Richard D. Jacobson, MD, PhD, Pediatric Neurology

Gayle Kazmierczak, MSN, CCNS, Psychiatry

Eric Kroner, MD, Pediatric Emergency Medicine

Micheal Levy, MD, Pediatrics (Allergy/Asthma/Clinical Immunology)

Linda Rabinowitz, MD, FAAP, FAAD, Pediatrics (Dermatology)

Mary Saunders, MD, Pediatrics (Emergency Medicine)

Kristine C. Schaeuble, MSN, APNP, Pediatrics (Neonatology)

Margaret M. Schweitzer, MSN, APNP, Neurology

Elizabeth Silver, MD, Pediatrics (Emergency Medicine)

Pamela Swenerton, MSN, APNP, Pediatrics (Endocrinology)

Sally E. Tarbell, Pediatrics (Gastroenterology)

Sheryl L. Thomsen, MSN, FNP, APNP, Pediatrics (Adolescent Medicine)

Anne Warwick, MD, Pediatrics (Hematology/Oncology)

Children's Hospital of Wisconsin opens state's first pediatric hybrid catheterization lab

Children's Hospital of Wisconsin's Herma Heart Center opened Wisconsin's first and only pediatric hybrid catheterization lab earlier this year. The hybrid cath lab allows specialists to perform procedures that could require a combined catheter-based and surgical interventional approach – a capability that no other pediatric cath lab in the state has.



Cardiac catheterization is used to find and then repair heart abnormalities. This new state-of-the-art cath lab allows staff to provide safe heart repairs for infants and children in the most minimally invasive manner available.

“The hybrid cath lab enhances our commitment to providing the best and safest care for our patients,” said Stuart Berger, MD, medical director of Cardiology and The Leigh Gabrielle Herma Chair for Cardiology at Children's Hospital of Wisconsin. “The lab combines a surgical room environment with advanced imaging technology.” Dr. Berger also is a professor and chief of Pediatrics (Cardiology) at The Medical College of Wisconsin and a member of Children's Specialty Group.

Children's Hospital of Wisconsin specialties ranked in *U.S. News & World Report* America's Best Children's Hospitals

Six pediatric specialties at Children's Hospital of Wisconsin have been ranked in the 2010-11 edition of Best Children's Hospitals by *U.S. News & World Report*, published online at usnews.com/childrenshospitals and featured in the August issue of the magazine.

The rankings are: Heart and Heart Surgery, 8; Digestive Disorders, 14; Urology, 20; Respiratory Disorders, 28; Neurology and Neurosurgery, 28; and Neonatal care, 30.

The methodology behind this year's rankings weighed a three-part blend of hospital resources directly related to patient care, outcomes and care-related measures such as nursing care, advanced technology, credentialing and other factors. The hospitals were judged based on a combination of peer review from pediatric specialists about the hospitals they would recommend for the sickest children and data gathered in a survey covering important medical information ranging from surgical death rates to whether pediatric anesthesiologists and other subspecialists are on the staff.

Children's Hospital of Wisconsin re-verified as a Level I Pediatric Trauma Center

Children's Hospital of Wisconsin has been re-verified as a Level I Pediatric Trauma Center by the American College of Surgeons. This achievement recognizes the hospital's expertise in providing the highest level of care to injured patients, from newborns through adolescents. The hospital first became designated as a Level I Trauma Center in May 2001. Children's Hospital is one of only two Level I Pediatric Trauma Centers in Wisconsin.

Key elements of Level I Pediatric Trauma Center status include:

- Trauma surgeons, medical specialists and subspecialists must be in the hospital and available 24 hours per day, seven days per week.
- Specialized facilities, including emergency services and an operating room dedicated to and ready for trauma cases. Neurosurgeons, orthopedic surgeons, specially trained trauma nurses, anesthesia services, intensive care units, rehabilitation services, CT and other imaging facilities available for trauma patients at any time of the day or night.
- A trauma director, trauma registry, coordinator, outreach programs and organized research effort to help direct new innovations in trauma care.

Children's Hospital of Wisconsin physicians among first to receive Child Abuse Pediatrics certification

LYNN SHEETS, MD, medical director of the Child Protection Center at Children's Hospital of Wisconsin, and **JUDY GUINN, MD**, a pediatrician at the Child Protection Center, have completed board certification in Child Abuse Pediatrics. Dr. Sheets also is an associate professor of Pediatrics (Child Protection) at The Medical College of Wisconsin and a member of Children's Specialty Group.

The American Board of Medical Specialties approved the new Child Abuse Pediatrics specialty in 2006, and The American Board of Pediatrics issued the first certification exam in late 2009. Dr. Sheets and Dr. Guinn completed the exam and are among the first specialists nationwide, and the only pediatricians in Wisconsin, to receive this board certification.

Children's Hospital of Wisconsin earns national quality recognition for respiratory care

Children's Hospital of Wisconsin has earned Quality Respiratory Care Recognition from the American Association for Respiratory Care. This national program is aimed at helping patients and families make informed decisions about the quality of respiratory care services available in hospitals. Hospitals earning the designation ensure patient safety by agreeing to adhere to a strict set of criteria, consistent with national standards and guidelines, governing their respiratory care services.

To qualify for the recognition, Children's Hospital demonstrated:

- All respiratory therapists employed by the hospital to deliver bedside respiratory care services are recognized by the state as competent to provide respiratory care services or hold the Certified Respiratory Therapist or the Registered Respiratory Therapist credential.
- Respiratory therapists are available around the clock.
- A doctor of medicine or osteopathy is designated as medical director for respiratory care services.

Notification of multidrug-resistant organism results

Primary care providers with patients at Children's Hospital of Wisconsin now are being notified by fax of multidrug-resistant organism (MDRO) results.

Each time a patient is identified by laboratory culture as positive for a MDRO, such as MRSA or VRE, an infection alert is entered into Sunrise (an online clinic information tool) by the Infection Prevention and Control Department. For physicians on the medical staff who have access to Sunrise, the infection alert displays in red letters under the patient's name on all screens.

What does this mean for your patients?

- In the absence of clinical infection, a positive MRSA or VRE culture often represents only colonization. Attempted eradication of colonization by these organisms often is unsuccessful and usually is not indicated.
- Contact precautions are required during all inpatient hospitalizations and outpatient surgeries at Children's Hospital facilities until the infection alert no longer is necessary. Documentation of MDRO clearance should be sent to Infection Prevention and Control.
- Special isolation precautions may not be required during the care of MDRO colonized patients in the outpatient clinic setting. Routine Standard Precautions are required during all patient care.

Resources to assist health care providers with this issue can be found on the Children's Hospital website at chw.org. Click on the Physicians and Other Health Care Professionals button, then on Medical Guidelines. Under Infection Control, a MDRO link has been added. Information includes fact sheets, guidelines for the process of removing the infection alert and isolation precautions that are necessary during inpatient hospitalizations and outpatient surgeries.

For additional information on the Children's Hospital alert process, contact Infection Prevention and Control at (414) 266-3382. Information on MRSA can be found on cdc.gov/mrsa/. Information on VRE can be found on cdc.gov/ncidod/dhqp/ar_VRE_publicFAQ.html.



Children's Hospital
and Health System[™]
Children's Specialty Group[™]

Children's Hospital and Health System, Inc.
PO Box 1997, Milwaukee, WI 53201-1997

Children's Hospital and Health System **IMPORTANT PHONE NUMBERS**

Clinic appointments with pediatric specialists **(414) 607-5280 or toll-free (877) 607-5280**

Children's Transport **(414) 266-2460 or toll-free (800) 266-0366**

Physician Referral and Consultation **(414) 266-2460 or toll-free (800) 266-0366**

Children's Hospital of Wisconsin, Milwaukee area **(414) 266-2000**

Children's Hospital of Wisconsin, Toll-free **(877) 266-8989**

Children's Hospital of Wisconsin-Fox Valley **(920) 969-7900**

Children's Hospital of Wisconsin Clinics-Fox Valley **(920) 969-7970**

Children's Hospital of Wisconsin Clinics-Greenway **(414) 604-7500**

Children's Hospital of Wisconsin Clinics-Kenosha **(262) 653-2260**

Children's Hospital of Wisconsin Clinics-New Berlin **(262) 432-7702**

Children's Physician Group-Gurnee (Illinois) **(847) 662-4380**

Family Accommodations Program

(assistance for families in making travel arrangements to Milwaukee) **(800) 556-8090**

Children's Specialty Group **(414) 266-3456**

Wisconsin Poison Center **(800) 222-1222**

PHYSICIAN LIAISONS

Metro Milwaukee: Mary Walker **(414) 266-4743**

Northeast Wisconsin: Nancy Pontius **(920) 750-8975**

Southeast Wisconsin and northern Illinois: Kelly Broughton **(414) 208-9952**

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