

## Radiology chief named

Le Bonheur Children's has named Harris L. Cohen, MD, its new chief of Radiology.

Cohen has special interests in pediatric and fetal ultrasound, and has spent much of his career working with cross-sectional imaging. Among his 200 publications and eight written or edited texts, he established measurements and differences in imaging methods for assessing fetal kidneys, pediatric and adult ovaries and the neonatal anteroposterior region.

Cohen most recently served as vice chairman (Clinical Research), chief of Pediatric Body Imaging and chief of Ultrasound for SUNY-Stony Brook. He has also served as director of the Division of Pediatric Imaging at Johns Hopkins Medical Institutions.

In his new role, he'll also serve as professor and executive vice chairman of the Department of Radiology at the University of Tennessee Health Science Center.



Harris L. Cohen, MD

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Please submit comments or story ideas by calling 287-6030.

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## Study develops better ways to ID shunt blockages

A study at Le Bonheur Children's may change the evaluation of children with excessive fluid on their brain.

Dr. Rick Boop, chief of pediatric neurosurgery at Le Bonheur, has enrolled 10 of 20 children in a study to measure the accuracy of ShuntCheck® – an FDA-approved device that identifies shunt blockages in a less expensive and less invasive manner than current methods. The study at Le Bonheur will guide the product's further development before its full market release.

ShuntCheck was created by Neuro Diagnostic Devices. The device is the first of its kind to allow a quick non-invasive detection of cerebrospinal fluid (CSF) flow. A plastic-covered ice cube is placed over the shunt to measure temperature change, which indicates CSF flow.

Fred Fritz, president and CEO of Neuro Diagnostics, said Le Bonheur's work makes the hospital an ideal site to conduct this research. "Dr. Boop is a key opinion leader in pediatric neurosurgery and is a leading clinical researcher in hydrocephalus," he said.

ShuntCheck is an important advancement in the care of patients with hydrocephalus – a condition that occurs when CSF is not absorbed into the blood or is secreted in higher than normal volumes. To drain excess CSF and prevent serious complications, shunts must remain open, as blockages and malfunctions can cause brain damage and death. Current methods used to check shunt drainage – MRI, CT scan, tapping and isotope studies – are both invasive and expensive.

Using ShuntCheck, shunt function can be evaluated painlessly and accurately in a clinic, emergency department or operating room. A plastic-covered ice cube is placed over the shunt, and a disposable temperature sensor is placed on the skin. As the CSF flows past the ice cube, the fluid cools. A slight temperature change of 0.2 degree indicates that the shunt is working.

Michelle Ellis, research coordinator for Le Bonheur Neuroscience Institute, says the

device is an especially important advancement for children who don't speak. "Older children will tell you they have a headache and younger children will have a personality change, but it's really hard to understand if non-verbal children are in pain," Ellis said.

Specifically, Dr. Boop is studying patients who have Externalized Ventricular Drains to measure the fluid flowing out of the externalized drain compared to the results indicated by ShuntCheck. The results are blinded to the Le Bonheur staff and are submitted electronically to Neuro Diagnostics.

"If ShuntCheck proves to be accurate in assessing flow rate, it will be useful in monitoring shunt performance in hydrocephalus patients over time – and potentially provide an early warning for shunt failure," Fritz said.

Le Bonheur is also involved in a multi-center study of ShuntCheck – the ER Outcomes Study – which compares ShuntCheck results to the clinical outcomes of pediatric hydrocephalus patients presenting to the emergency department.



Le Bonheur Neurosurgical Coordinator Joe Brigance measures the cerebrospinal fluid flow of patient Steven Ayala using ShuntCheck, a device that measures shunt blockages less expensively and invasively than current methods.

## Spine stapling brings relief for scoliosis

A new spine stapling surgery at Le Bonheur has given new alternatives to children with scoliosis.

The procedure, which helps redirect the growth of the spine, is offered nationally at only 10-15 major pediatric spine centers.

"Spine stapling is another option for children with scoliosis, and broadens Le Bonheur Children's ability to care for these patients," said Orthopedic Surgeon Jeff Sawyer, MD. "Traditionally, options were limited to bracing and spinal fusion surgery, depending on the severity of the spinal curve."

Ideal candidates for the surgery are young patients with significant growth remaining, and those who have smaller curves. Typical patients have 20-30 degrees and are either not good candidates for, or who have failed the standard brace treatment.

The procedure requires a multi-disciplinary team that uses a thoroscope (a small camera) inside the patient's chest. Through three to four half-inch incisions in the chest wall, temperature-sensitive staples are placed into the spine to help it grow straight. In the typical scoliosis curve, one side of the spine is longer than the other which causes it to bend. This procedure slows the growth on the long side of the spine and promotes the growth on the short side of the spine, in attempt to straighten it out. This requires a one-to-two day hospital stay and children usually resume normal activities within several months.

"Spinal growth modulation, through stapling, is a tremendous advance in the treatment," Sawyer said. "This technique continues to evolve and while not all children with scoliosis are candidates for stapling, it offers another treatment option that may allow children to avoid bracing and in some cases even spinal fusion. We are fortunate at Le Bonheur Children's to have the expertise and experience at all levels to provide this level of advanced surgical care."



Jeff Sawyer, MD

## FedExFamilyHouse to bring shelter for families

When a new FedExFamilyHouse opens in the summer of 2010, families who travel long distances for Le Bonheur care will have a home away from home. That's why, when it came to designing the 24-room facility, it only made sense that families would guide the way.

Le Bonheur families have helped design the home, which is a realization of a dream for many. When children are in Memphis for long spans of time, families are responsible for their own housing. Many stay in hotels which can get costly.

Patti Reed, a member of Le Bonheur's Family Partners Council, is part of the team that is designing the new residential facility. For Patti, it is a special way to share her experiences years ago, staying at a similar facility when her daughter needed surgery not offered in Memphis.

Patti's daughter, Jessica, was born without the left side of her heart – a condition called hypoplastic left heart syndrome. Twenty-one years ago, the surgery Jessica needed was experimental and only offered in Philadelphia. The family lived in a Ronald McDonald House for three months and returned for additional surgeries.

Patti offered insights in developing the FedExFamilyHouse that only a parent could provide.

"Sometimes you need quiet time and space and other times you need company to celebrate milestones happening in your child's life," she said.

Before the FedExFamilyHouse design began, a Le Bonheur team traveled to Ronald McDonald Houses across the country. In cities like Philadelphia, St. Louis and Chicago, the team talked to parents and the staff that run the homes.

As Le Bonheur's national reputation grows, so does the number of patients who travel a long distance to seek care in Memphis. In 2007, patients traveled from 47 states to Le Bonheur. Thanks to FedEx Corp., FedEx Chief Executive Officer Frederick W. Smith and his wife, Diane, and FedEx Chief Financial Officer Alan Graf and his wife, Susan, these families will have a comfortable, safe place to stay that is close to the hospital.

"We believe this donation will improve the lives of children and their families and reinforces Le Bonheur as one of the leading



The new FedExFamilyHouse – to be built across the street from the new Le Bonheur hospital – will provide housing for families who travel long distances for care at Le Bonheur

children's medical centers in the country," Alan Graf said.

The FedExFamilyHouse will be located in Legends Park at the corner of Poplar Avenue and Ayers Street – less than a block from the new hospital.

The facility will offer 24 private suites – each of which to include a private bathroom. In addition, each family will have access to living and family rooms, a teen lounge and indoor and outdoor children's play areas. The house will also include four separate kitchens, 24 refrigerators and individual pantry storage for each family. The dining area has booths and tables that can be moved to accommodate families that want to dine together.

The house's U-shape design takes into consideration how important outdoor space is to families who spend many hours in hospital rooms. The center of the "U" contains screened and covered porches, a fountain, children's play area and a grilling station. A dining terrace borders the indoor dining area.

### FedExFamilyHouse amenities

- Outdoor courtyard, dining terrace, children's play area, screened and covered porches
- Living and family rooms
- Children's play area and teen lounge
- Eating area that can be arranged for multiple families
- Four kitchens with pantry space, 24 refrigerators and storage
- Community conference room
- 24 rooms on the 2nd and 3rd floors with a lounge and laundry on each floor

# Trial studies treatment for ruptured appendicitis

Investigators at Le Bonheur Children's are studying the best surgical approach to caring for children with ruptured appendicitis.

The randomized trial compares two treatment options – immediate appendectomy versus appendectomy at a later time (interval appendectomy) – to determine which treatment gets children and their families back to their normal routines more quickly.

"A ruptured appendix is a pretty common diagnosis, but there's no real consensus among surgeons in the pediatric community on the best treatment," said Le Bonheur Pediatric Surgeon Martin Blakely. "This study compares the two, head-to-head, to determine the best option."

Children in the trial are randomly assigned to one of the two treatment options after coming to Le Bonheur with ruptured appendicitis. With early appendectomy, surgeons remove the ruptured appendix urgently, followed with an average five- to seven-day hospital stay. This method might lead to higher

complication rates that require future care.

With interval appendectomy, children are given intravenous antibiotics in the hospital, and usually are sent home to continue the IV antibiotics for a short time. Six to eight weeks later, those children come back to the hospital, and the surgeon removes the appendix.

After enrollment into the study, investigators then monitor the treatment to determine how long it takes to get back to normal activities. So far, Le Bonheur has enrolled about 100 children in the study, with plans to enroll another 28.

"We know that both of these surgical treatments allow recovery in children with ruptured appendicitis," Blakely said. "We wanted to take a patient- and family-centered care approach to the problem to determine which treatment option helps children return to normal activities most quickly. We believe this outcome measure is what parents are interested in."

Our pediatric surgeons are also

performing two secondary studies related to the trial. The first looks at the costs associated with each treatment, while the second studies the patient's quality of life while undergoing each of the two treatments.

The ideal outcome of the trial would be to identify that one of the two surgical treatment strategies is associated with a significantly improved patient outcome. If the trial finds no significant difference in clinical outcomes, Blakely hopes the secondary studies might identify other important differences between the two treatments.

The results from this trial have the potential to change the way children with ruptured appendicitis are treated throughout the United States.



Martin Blakely, MD

## SHORT SCRIPTS

### Le Bonheur to offer free parent seminars

Le Bonheur Community Outreach will continue its work of reaching the region's children with a series of free monthly parent education seminars in Jackson, Tenn., beginning in January.

Lessons from Le Bonheur features regional experts on pediatric health topics such as eating disorders, sex education, mental health, lead poisoning, asthma, ADHD, diabetes and obesity. For more information, call Amy McLean at 731-984-9953.

### Hospital gets OK to expand NICU

Le Bonheur Children's has won permission from the Tennessee Health Services and Development Agency to expand its neonatal intensive care services by 30 beds. The hospital is expanding its neonatal services and will need additional neonatal beds for those services in the new facility.

"We are very pleased to be getting these additional beds to care for the most critically ill babies in our region," said Le Bonheur President and CEO Meri Armour. "Our neonatal program is growing as we perform more complex surgeries. The 30 additional beds will allow us to ensure that these neonates can be treated locally and that their families won't have to travel out of the region for care."

### National epilepsy conference featured Le Bonheur neuroscientists

Five members of Le Bonheur Children's Neuroscience Institute recently represented the hospital at the annual meeting of the American Epilepsy Society.

Dave Clarke, MD, Mark McManis, PhD, Fred Perkins, MD and James Wheless, MD, all presented at the conference.

Additionally, Vickie Brewer, PhD, and Wheless served as faculty on a symposium titled "PEC 2- The Evaluation of Treatment

of the Patient with Developmental Delay and Epilepsy: A Multidisciplinary Approach."



Dave Clarke, MD



Fred Perkins, MD



Mark McManis, PhD



James Wheless, MD



Vickie Brewer, PhD

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## Gift to help expand research facilities

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A recent \$2.5 million gift toward the new Le Bonheur Children's Medical Center will enable the hospital to double the number of active clinical studies within five years.

The gift, given by the Children's Foundation of Memphis, will help Le Bonheur investigators continue to make contributions to the field of pediatrics. The hospital will name the new inpatient research area the Children's Foundation Pediatric Clinical Research Unit in honor of the gift.

The Children's Foundation announced its contribution at the hospital's recent Research Day, which showcased the work Le Bonheur investigators are doing to change the face of pediatrics. The day featured keynote speaker Dr. Robert Lustig, who spoke on "The Trouble with Fructose."

The day also featured oral and poster presentations on basic science, clinical and translational programs, along with patient care and community educational programs conducted at Le Bonheur. Plans are already in the works for next year's Research Day.

"Research in pediatrics is important because children have been largely excluded

from many therapeutic advances that have marked the last 75 years of medical research," said Dr. Dennis Black, director of the Children's Foundation Research Center and vice president of research at Le Bonheur Children's Medical Center.

Black and his colleagues look forward to continuing that work in expanded research facilities of the new Le Bonheur. The \$327 million new hospital will open in the summer of 2010.

The new Children's Foundation Pediatric Clinical Research Unit will feature 12,000 square feet of research space and will consolidate all pediatric clinical research currently done at Le Bonheur Children's into the new unit. Researchers will perform clinical and translational research studies, including Phase 1 clinical trials, or tests of the first dose of new drugs for children.

Le Bonheur will hire additional research nurses and assistants to help physician investigators with research protocols. The \$2.5 million gift will also allow the current research unit to immediately expand by 600 square feet before moving to the new facility in 2010.