

Pediatric Dentistry Center reaches beyond its walls to educate children



Ardisa Smalls and her stuffed friend, BJ, recently visited a Head Start classroom at John C. Daniels School in New Haven.

The Pediatric Dentistry Center, which opened in July 2004 at the Yale-New Haven Children's Hospital, has already provided preventive, comprehensive and urgent dental care to more than 4,400 patients up to age 20. Now the center is going beyond its walls to provide health information to children and parents throughout the community.

"When we go out into the community, we target very young children, explaining to them how they should take care of their teeth and what to expect when they visit the dentist's office," said Ardisa Smalls, dental hygienist and the center's community outreach coordinator.

Smalls makes regular visits to schools, daycare centers, health fairs and other community venues to talk with children and their parents about the importance of good dental hygiene, periodic dental check-ups, proper nutrition and how these things contribute to overall good health.

"We want them to develop healthy dental care habits early on," Smalls said. "We also try to help parents understand their role in their children's dental health. Many are surprised to hear they should bring their children in for dental check-ups as soon as baby teeth start to come in."

The Pediatric Dentistry Center focuses on meeting the needs of underserved children in the community and those with special health-care needs.

"Our doors are open and we have already provided dental care to thousands of young patients," pointed out Elise Cozzi, D.M.D., interim program director of the Pediatric Dentistry Center. "Through the center's outreach efforts, we are reaching many additional children. We hope to expand our outreach so we can reach more children and generate even more healthy, young smiles in our community which lead to healthy grown-up smiles in the future."

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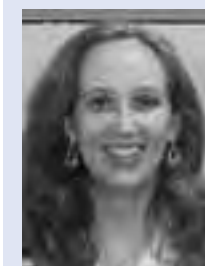
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Friends Annual Telethon hits a high mark



The Friends of Yale-New Haven Children's Hospital (YNHCH) 5th Annual Telethon on March 10 raised \$73,000, which will help the organization address health and safety issues that affect the well being of children. The hour-long event aired on WTNH News Channel 8 and simulcast on MyTV9, featuring Channel 8 anchors Keith Kountz and Jocelyn Maminta as hosts. Proceeds will support Friends of YNHCH programs. Among the YNHCH administrators, staff and friends who took turns answering the phones was Michael Apkon, MD, Ph.D. (center), vice president and executive director for YNHCH.

Welcome new faculty



Megan McCabe, MD, has been appointed assistant professor of pediatrics in critical care. Dr. McCabe was previously a fellow in pediatric critical care at Johns Hopkins Hospital and chief resident in pediatrics at the Yale-New Haven Children's Hospital. She completed her medical degree at Georgetown University School of Medicine after earning her bachelor's at the College of William and Mary. Dr. McCabe is currently working with an NIH-funded project to provide a basis for effective educational interventions for those who provide end-of-life care to children and their families.

Y A L E

pediatric UPDATE

The Yale-New Haven Children's Hospital Physician Letter

Sleep Center helps kids get a healthy slumber



Dr. Sumit Bhargava demonstrates proper use of a CPAP mask for Preasha Numan, a patient who was diagnosed with narcolepsy and sleep apnea.

At age 12, Preasha Numan of Bridgeport would nod off within minutes of getting in a car, did poorly in school and felt generally miserable. Her parents spent over a year trying to pinpoint the problem when a new pediatrician finally referred her to a sleep clinic.

The diagnosis: narcolepsy and sleep apnea. With treatment, Preasha lost 30 pounds, got an A plus in math, and says she is beginning to enjoy life.

Preasha, a patient at the Yale-New Haven Children's Hospital (YNHCH) Sleep Center, illustrates how important it is for pediatricians and parents to pay attention to their children's sleep. National Sleep Foundation surveys have shown an estimated 25 percent of children and teenagers in the United States have sleep problems, and an estimated 2 to 3 percent have obstructive sleep

apnea (OSA). Many of these children are undiagnosed.

Two and a half years ago, YNHCH addressed the problem by expanding the Pediatric Sleep Center, which opened in 1989, to include a two-bed sleep laboratory with a state-of-the-art comprehensive polysomnographic monitoring system, five sleep technologists and the ability

to perform sleep studies six nights a week. A clinic is held twice a month to provide evaluations and follow-up for patients from newborns to 18-year-olds.

Sumit Bhargava, MD, co-director of the center and an assistant professor of pediatric respiratory medicine at the Yale University School of Medicine, believes the almost 200 children he has seen in the sleep center since he arrived in 2004 represent the "tip of the iceberg."

"It is our feeling that if we can detect and treat sleep problems early enough, we will prevent our patients from becoming adults with serious sleep-related illnesses such as hypertension and a propensity for diabetes," said Dr. Bhargava, a pediatric pulmonologist. "We need to diagnose and treat these [continued on page 2...](#)

in this issue:

Helping kids sleep

Better outlook for CF patients

New doctors

Routine questions for pediatricians to ask all patients and families

Excessive daytime sleepiness

Initial question:

Is your child difficult to wake in the morning? Does he or she act sleepy or seem overtired a lot?

Follow-up questions:

How does your child act when he or she is overtired?
Does your child fall asleep during the day? When and where?
Does anyone else in the family have a problem with excessive sleepiness?

Awakenings (nighttime)

Initial question:

Does your child wake up at night?

Follow-up questions:

What do you think awakens him?
How does your child behave when she awakens at night?
Does your child move to someone else's bed during the night?

Regularity and duration of sleep

Initial question:

What time does your child go to bed and get up on schooldays?
Weekends?

Follow-up questions:

Do you think your child is getting enough sleep?
How much sleep do you think your child needs?

Good night's sleep, continued

patients, make pediatricians more aware of the need to include questions about sleep in routine visits, and to teach parents about the symptoms of sleep disruption," he said.

Patients are referred to the YNHCH center for a myriad of symptoms, including snoring, noisy breathing, upper airway obstruction, excessive daytime sleepiness, nocturnal asthma, obesity hypoventilation syndrome, night terrors, difficulty falling asleep and staying asleep, sleep walking and sleep talking. While many of its patients are otherwise healthy children and teens, the center distinguishes itself by treating complex patients, including those with psychiatric disorders, other chronic illnesses and complex genetic syndromes. For these patients, Dr. Bhargava often draws upon the expertise of various other subspecialists at Yale.

Overnight polysomnograms, or "sleep studies," are usually required to aid in the diagnosis of sleep disorders such as OSA. Sleep studies are performed in the pediatric sleep laboratory on the 7th floor of the YNHCH. Families arrive between 5 and 7 p.m., and may bring their own blankets, pillows and stuffed toys. Patients may have one parent spend the night in a separate cot.

Some time between 8:30 and 10 p.m., a sleep technologist comes in to apply up to 26 electrodes from head to toe to monitor brain waves, heartbeat, eye movements, leg movements, breathing and blood oxygen levels, among other things. In some cases, a pH probe may be inserted to test for gastroesophageal reflux. Once the patient falls asleep, technologists monitor the child throughout the night. All the data that is collected is then analyzed and scored according to current standards. A formal report with recommendations for the referring physician is generated and sent to the physician promptly.

"Sometimes you have children who are so uncomfortable that you can't do the sleep study the first time around,

so we bring them back a second time," Dr. Bhargava said. "We are willing to do whatever it takes in order to do the sleep study in an appropriate and comfortable way."

OSA, the most common diagnosis

"Sleep is a skill that needs to be learned by a child, just like brushing their teeth, taking a shower or eating with a knife and fork." – Dr. Bhargava



Christine Bailey prepares a child-friendly room in the YNHCH Sleep Laboratory.

made, is found in the sleep laboratory in many as 34 of the 40 children a month, and is especially prevalent among children who are obese. While researchers have known for years that OSA leads to interrupted breathing and oxygen deprivation, and negatively impacts learning ability and school performance, it has also been linked to behavior and developmental problems.

"The cognitive effects of untreated apnea may be far more damaging in children than in adults because they occur during a critical period of brain development," Dr. Bhargava said.

At YNHCH, the sleep center staff has seen cases of OSA that are so serious they have admitted the patients to the hospital immediately for surgery to remove tonsils and adenoids. Even after surgery, some OSA patients are pre-

scribed a continuous positive airway pressure (CPAP) mask to relieve the obstruction and ease breathing during sleep. Some outgrow OSA; in obese children, it can ease considerably after weight loss.

"CPAP for children is very difficult," said Christine Bailey, lead sleep technologist at YNHCH, who searched diligently to find two companies that design child-sized masks. "The one thing that makes it easier to give CPAP to a child is having parents to back us up," she said.

Some other sleep disorders may be rare, but important to diagnose. Narcolepsy, for example, has a prevalence of about 1 percent in the United States and incidence peaks in adolescence. However, the majority of cases are not diagnosed until the fourth or fifth decade of life.

Meanwhile, Dr. Bhargava is concerned about poor sleep habits in general among children, adolescents and teenagers. Inappropriate sleep behaviors and poor sleep hygiene may often be due to a failure to instill appropriate sleep habits at a young age, he said.

"Sleep is a skill that needs to be learned by a child, just like brushing their teeth, taking a shower or eating with a knife and fork," Dr. Bhargava said. "As children grow older, sleep is something they are always cutting back on so they can have more time to play or study or do other things. Pediatricians need to include discussions about sleep in well-patient visits beginning in the first year of life. Sleep problems are easily treatable if detected early enough."

Direct referrals to the Yale-New Haven Children's Hospital Sleep Center can be made by calling the center at (203) 688-1240 and requesting a direct referral form.

Asthma Center provides careful management for young patients

While research has led to better techniques and treatments to help doctors diagnose and manage each new case of asthma, the number of new cases is on the rise.

"That's something we are desperately trying to understand," said Alia Bazy-Asaad, M.D., medical director of the pediatric respiratory care unit and sleep center; and director of the Pediatric Asthma Care Team (PACT) and Pediatric Asthma Program at the Yale-New Haven Children's Hospital (YNHCH). "Why are the numbers going up? Why are there still unfortunate children who die from asthma? This shouldn't be happening. The asthma scientific community is very invested in getting to the bottom of this," she said.

The Asthma Care Center and PACT provide a full-service program and are currently treating about 1,300 pediatric asthma patients.

The concept of PACT is to keep the lines of communication wide open among all of a child's healthcare providers. The team includes primary care providers, pulmonologists, allergists, emergency room physicians, intensivists and nurse practitioners.

"We believe that our role as asthma specialists is to primarily help with patients who have asthma that is difficult to control or asthma that isn't responding to the patient's medication," said Dr. Bazy-Asaad, an associate professor and chief of pediatric respiratory medicine at the Yale School of Medicine. She said while inhaled steroids are the mainstream therapy, some patients may find new medications helpful. "Another thing we can do is sort out if the patient really has asthma, or if the problem is some other disease with symptoms similar to asthma," she said.

An asthma consultation at YNHCH includes a clinical assessment, pulmonary function testing, a written asthma care plan, and patient and family education regarding the use of

inhaled medications, peak flow measurement, trigger avoidance and environmental control measures.

After the consultation with a physician, nurses dedicated to asthma education spend as much time as needed talking with the patient and family about their triggers and action plan. The pediatric respiratory medicine nurses also

offer asthma education classes three times a week for hospitalized patients and families.

"We want our families to be partners in asthma care because they are doing the management at home," said Dr. Bazy-Asaad. "Having everything reinforced and clear to the parent and child, if old enough, is very important."



Dr. Marie Egan; Tina Tolomeo, APRN, assistant director, Asthma Clinic; and Dr. Alia Bazy-Asaad are providing state-of-the-art care for pediatric patients in the YNHCH's asthma and cystic fibrosis programs.

For more information on the Pediatric Respiratory Medicine Asthma Program at YNHCH, call (203) 785-2480.

Cystic fibrosis patients look forward to promising futures

While 1,000 new cases of cystic fibrosis (CF) are diagnosed each year, early detection and better treatments are allowing patients to live longer and enjoy better quality of life. The oldest patient currently treated at Yale-New Haven Hospital is older than 60, and many pediatric patients are making it well into adulthood without being hospitalized for the disease.

Strategies for managing these patients are also changing, with stricter protocols and frequent data collection. The Cystic Fibrosis Care Center at the Yale-New Haven Children's Hospital (YNHCH) has responded by providing comprehensive multidisciplinary care which is delivered in two separate clinics

– one for adults, another for pediatric patients. They have also intensified efforts to educate patients, families and health care providers on management of the disease.

"We've learned one way to extend life expectancy for these patients is to provide comprehensive care and lifestyle management from the earliest stages of the disease," said Marie Egan, MD, director of the center, and associate professor of pediatrics and cellular and molecular physiology at the Yale University School of Medicine. More than 70 percent of cystic fibrosis patients are diagnosed by the age of 2. "It's most important that we empower our patients continued on page 4...

Cystic fibrosis, continued

about their care and make sure they understand they are active members of their care team," Dr. Egan said.

The Cystic Fibrosis Center at YNHCH sees patients five days a week for urgent visits and follow-up care. The majority of routine patient care, delivered by a multidisciplinary team, takes place on Tuesday mornings and afternoons. Patients transition into the adult clinic sometime between the ages of 18 to 21, depending on their readiness. The care group includes five pediatric pulmonologists, three pediatric pulmonary fellows, a nurse practitioner, a social worker, a respiratory therapist and a nutritionist, and collaborates with pediatric gastroenterologists, endocrinologists and surgeons.

Each patient receives a personal action plan and a folder for saving information about their care such as lab results. In addition, the staff has devel-

oped education modules including teaching sheets on such topics as airway clearance, nutrition and complications of cystic fibrosis. An exercise clinic, scheduled to open this summer, will teach cystic fibrosis patients to maximize their lung health.

The outlook for cystic fibrosis is expected to improve even more as researchers pursue phase 3 clinical trials on new therapies designed to rectify the genetic mutation and/or its faulty protein product that are the causes of CF.

Meanwhile, pediatricians are an essential piece of the puzzle and can help families to understand that patients with cystic fibrosis need different directives than persons without CF. "We know there are lots of kids who need to be drinking skim milk; but kids with cystic fibrosis need to drink whole milk," Dr. Egan said.

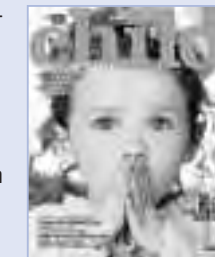
For more information on the Cystic Fibrosis Center at YNHCH,



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Child magazine names YNHCH among best

Child magazine recognized Yale-New Haven Children's Hospital as the top children's hospital in the state and among the best in the nation, according to a national survey published in the magazine's February issue. The 247-question survey examined such information as survival rates, the number of complex procedures and intricate surgeries conducted, national support for clinical research studies, efforts to reduce medical errors, and the quality and training of the doctors and nurses.



HealthLINK focuses on pediatric trauma centers

A study last year in the *Journal of Pediatric Surgery* concluded that the risk of death for injured children is significantly lower when care is provided in pediatric trauma centers, like Yale-New Haven Children's Hospital, than in non-pediatric trauma centers. An edition of Yale-New Haven Hospital's Pediatric HealthLINK covers the topic with commentary from Kimberly A. Davis, MD, director of trauma services at Yale-New Haven Hospital, and chief of the section of trauma, surgical critical care and surgical emergencies at the Yale School of Medicine. **To order free copies for your office, call Yale-New Haven Hospital at (203) 688-2488.**

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