



Fall 2003

M A T T E R S

The Newsletter of the Children's Hospital at Dartmouth



Circus Smirkus

And a Good Time Was Had by All



PainFree Program Recognized

Friends of CHaD

Pediatric Neuroscience

Makings of a Champion

Bringing Summer Camp to Kids

IT'S CALLED "FLUBBER," A GOOEY GREEN substance made from mixing water, Elmer's Glue, Borax, and food coloring. "It looks like my grandma's spaghetti," says one patient. "It looks like moldy eggnog," says another. Even the most ill-feeling patients can't resist touching the glop, which continues to harden to a consistency resembling silly putty.

Today is "mad scientist day" at Camp CHaD (Children's Hospital at Dartmouth), a program that offers "play breaks" twice a day for children staying in the hospital.

According to Jessica Laperle, child life specialist and interim coordinator of CHaD's child life team at Dartmouth-Hitchcock Medical Center (DHMC), the idea for Camp CHaD was conceived two years ago when a child was admitted after being badly injured in an automobile accident on his way to summer camp. "He was just a great kid," says Laperle. "We felt so bad for him, what he was missing out on, and about how special the first summer camp experience is for kids."

Originally slated to run for the month of July, the program has been so popular it's being extended into the fall. "We're very excited to see it continue," says Laperle. "We're looking for more volunteers and supplies." Alyssa Beaty, 16, who volunteers at CHaD as well as at DHMC's Child Care Center two days a week, is impressed with the program. "It's really nice to see the kids interacting with each other," says Beaty.

Whether it's playing with flubber, making "indoor fireworks" (a concoction made from mixing milk, dish washing detergent, and food coloring), or having a watermelon seed-spitting contest, the emphasis is on fun. "Kids in the hospital tend to feel isolated and it's easy for them to become withdrawn, especially if they're suffering from a chronic illness," says Laperle. "This gets

Child Life Specialist Jessica Laperle watches as Kristy Belliveau plays with "flubber."



them up and moving around." By spending time with their peers, children have the opportunity to connect and talk about their experiences, both inside the hospital and out. "It really helps to normalize their day," she says.

Calming Fears

Staying in a hospital can be a scary experience for children. "We've always done a good job comforting children by providing diversion and by making sure that they have a favorite blanket, toy, or stuffed animal to help them feel more safe and secure," says Laperle. Camp CHaD takes it a step further. Children often use play to gain mastery over objects. "For example, the other day we painted using syringes instead of brushes, and the kids used the syringes as squirt guns. An activity like that can help kids, especially those with diabetes, to be more comfortable with needles."

Often, visiting siblings want to get in on the fun, and it's not uncommon for nurses and physicians to stop and sit down with the kids for a few minutes. "The activities really help us to build trust with the kids and to establish a positive relationship with them," says Laperle. They can even be an effective bargaining tool. "When it comes time for me to prepare them for an MRI or other type of test, it really helps to motivate them and give them something to look forward to," she says.

Parents also like the idea of Camp CHaD. "It's nice to come back and find them out of their room and engaged in an activity rather than just sitting and watching TV," says Stacey Panoushek, whose son Eric, 10, has diabetes. "It's pretty cool," adds Eric. Alyssa Deline, 13, a patient admitted for surgery, agrees. "It's fun," she says. "Especially playing with the slimey stuff."

Student Art Brightens Hallways of CHaD

It all started with the inauguration of the Children's Hospital in 1992, when students from Lebanon High School were invited to submit artwork for the grand opening celebration. What they provided exceeded everyone's expectations. "The artwork was so fabulous, we thought, 'wouldn't it be great if we could find a way to display it on an ongoing basis?'" says Sharon Brown, director of community affairs for CHaD. "Perkins Foss, a CHaD volunteer who was very involved in the arts, got the project off the ground."

Foss purchased reusable frames, so that artwork from different schools in the area could be displayed on a rotating basis. Nancy Franklin, a local artist who had worked as a secretary in the intensive care nursery at Mary Hitchcock Memorial Hospital in Hanover, saw an ad in the Plainfield school newsletter. "They were looking for somebody to help with the project," Franklin remembers. "I had an interest in art and thought it would be fun to get involved."

Franklin assisted Foss with the first rotation, hanging 30 pieces of art from the Randolph School System in Vermont. Soon after, she assumed full responsibility and settled on a six-month rotation schedule. "We rotate the art twice a year, usually in the fall and in the spring," she says. With help, Franklin can complete the preparation and hanging of art—which now in-



volves more than 50 pieces per showing—in two days, a process that she still enjoys after all of these years. "It's like Christmas

eye and does an incredible job putting each show together," says Brown. "The quality is like a gallery showing."

With each new rotation, teachers, students and their families are invited in for a tour. "We take them around to show them the different art sites," says Brown. "We've tried to expand the shows, as more areas of the hospital have been designated to CHaD." Small signs are printed next to each painting or drawing, indicating the artist's name, age, and school. Often, kids will bring their parents and grandparents along to take pictures of the art and enjoy the healthy snacks. "They're very proud of their work and they



when I get to open up the artwork from each school," she says. "Nancy has a great artistic

Artwork From all Ages

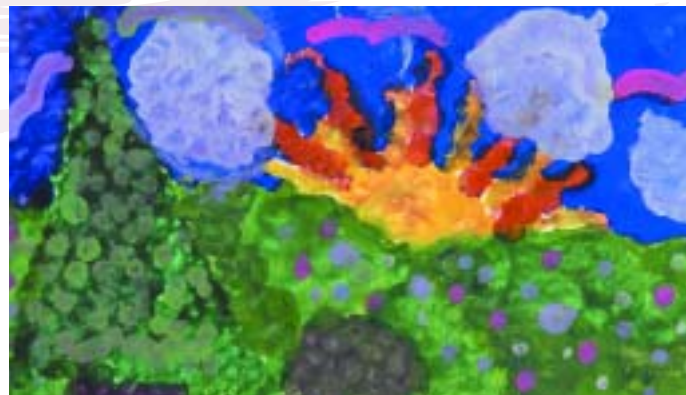
CHaD decided to approach local school districts from both New Hampshire and Vermont, so that all schools in the Upper Valley Region would have an opportunity to participate. The art teachers and their students, ranging from elementary to high school in age, have been only too happy to oblige. "We haven't run across two of the same school systems in over a decade," says Brown.



like knowing that they're helping to make CHaD a brighter place for the sick kids and families who are here," says Franklin.

"The shows are a wonderful way to create a sense of child at CHaD," says Brown. "They really help to make this a warm and friendly place." If anyone is interested in helping with the project, please contact Sarah Salo, CHaD Community Relations Office, 603-650-3431.

Artist contributors Grantham Village School, clockwise from top: Arianne - Grade 5; Erin - Grade 2; Madison - Grade 1; Taylor - unknown grade.



PainFree Program Rec

THE PAINFREE PROGRAM AT CHAD recently received the 2003 VHA Leadership Award for Clinical Effectiveness, in recognition of improvements made in the effectiveness and safety of pediatric procedural sedation care. VHA, a nationwide network of community-owned healthcare systems and their physicians, has more than 2,200 members including some of the nation's leading healthcare institutions. "We're very pleased," says Joe Cravero, MD, medical director of CHAD's PainFree Program. "The award reflects the hard work and commitment put forth by all of our team members."

In addition, Ronald McDonald House Charities (RMHC) of Eastern New England received two awards for their support of the PainFree Program's Comfort Corner. "The awards were presented to us at an international conference in June," says Edie Stevenson, executive director of RMHC of Eastern New England. "We placed first in the world in the grant giving category, and also won the 'best bets' award for the best overall project worldwide. It's very gratifying to receive this recognition—the Comfort Corner is a concept that we wanted Ronald McDonald House Charities around the world to hear about and hopefully take back to their respective children's hospitals."

According to Cravero, the key to the PainFree unit's success is its team approach. "We have a group of highly-trained individuals who work very well together," he says. "Our sole function is to prevent pain and anxiety for children who need to undergo a procedure or test." The staff—which includes an anesthesiologist, a registered nurse, a patient care technician, a child life specialist, two business unit specialists and an administrative assistant—bring diverse areas of expertise together to form the essence of a team model. Staff members are as committed to each other as they are to their patients—all eight traveled to Boston to accept the VHA award on April 7.

An Innovative Approach

Cravero designed a centralized approach for pediatric sedation services at Dartmouth-Hitchcock. "Initially, George Blike and I received two grants and studied how services could be improved," he says. Prior to the program's launch two years ago, individual departments within the hospital were responsible for coordinating and administering sedation services to pediatric patients. "We decided to take the people who were already trained to do the job and create a dedicated unit, rather than try to go out and train individuals in all of the departments."

"Now, we can do it all for them—from patient preparation



to sedation to monitoring to recovery," Cravero says. One result is that the process is safer. "We've been able to show decreases in the number of problems that occur with patients that are sedated." Another is improved efficiency. "While it is logistically a little more challenging at times, we're able to get more patients through our process with a higher rate of success. For example, we've seen a 40 percent increase in the number of sedated MRIs done this year."

PainFree's innovative approach includes utilizing some of the most advanced medications available, says George Blike, the program's co-director and an anesthesiolo-



gist. "By using drugs like Propofol, which are very predictable and ultra fast-acting, we're able to get kids through the process much more quickly," says Blike. That means the drug is out of their system (with a very low nausea rate) in minutes rather than hours or days, as was often the case with traditional sedatives. "For example, a child who comes in for a CAT scan is in and out in an hour and can go downstairs and enjoy breakfast with their family."

Adapting to Each Child's Needs

Using medication is not always necessary. Sometimes, a child's attention just needs to be diverted away from scary-looking machinery. "Our process is to always start with the least invasive tool and then escalate from there if we need to," Blike says. "For instance, we have a portable DVD unit for kids that has been quite effective in keeping them still during some tests."

Understanding children is one of the things that makes the unit so unique. "One

ognized



of the things we've focused on is that kids are fundamentally unpredictable, so we've designed a highly-adaptive approach to manage that unpredictability," says Blike. The staff's child life specialist, for instance, works closely with the kids and their parents and she is attuned to their emotional status through the course of the process. "This allows us to better attend to the unique needs of each child and make adjustments as we go along," he says.

Bringing together the best people, environment, and tools requires considerable resources and funding. A partnership with RMHC—which established the Comfort Corner in October of 2001—and other local charities provided the financial support needed to jumpstart the program. "Our orientation has been to be a really good microsystem within the hospital," Cavero says. "Over the last two years, every section that needs to sedate children has chosen to use this service. It's very nice to have it work that way."

"Huggables" Calm Children's Fears

There's nothing like a soft and cuddly stuffed animal to ease a child's fear of having surgery. "It turns their whole personality around," says Lynn Cote, LPN, a nurse who works in the Same-Day Surgery Unit. "When a child is frightened, they can become quite agitated and the tears start flowing. But as soon as they receive a stuffed animal from one of our nurses, their faces light up and they're not quite so afraid." The idea for the project



started when Cote began talking to a patient last summer about the ways people contribute to the hospital.

"I told her about the Rainbow Girls of Nashua who brought in stuffed animals a few years ago and how the kids loved them. We had depleted our inventory and were looking for other people to get involved," says Cote. The patient, Kathy Nelson of Littleton, and her husband Jim are members of Eastern Star, a large Masonic-based organization. "We wanted to help," says Nelson, a speech pathologist who works with children. "As a child, you don't understand why things are happening to you and it's comforting to hold onto something of your own that's warm and cuddly—it's a great way to take the fear away."

The Nelsons reached out to their Eastern Star sisters and brothers in the 34 chapters across New Hampshire for support. The response was overwhelming. "Our Grand Family started out with a goal of collecting 400 by August of this year," Nelson says. "We've exceeded our wildest expectations by collecting a total 3,146." So far, supply of the animals has stayed ahead of demand and Eastern Star wants to keep it going—the organization has pledged to provide the animals or "huggables" as they're now known for four more years. "We've given out more than 1,600 in same-day alone," says Cote.

"As word of the project has spread, more requests have come in from other areas of the hospital, like the emergency unit."

"We've been giving the stuffed animals to sick or injured children who come into the ER since April," says John Markowitz, a patient care technician in the unit. "They

really help to pick up their spirits and they can also serve as a helpful diversion. We keep them in a wicker basket adjacent to the nurse's station,

so the nurses, technicians, house staff, and volunteers have easy access to them."

So far, the unit has given out more than 250 stuffed animals of different varieties and sizes including Annalee Dolls and Gund teddy bears. "We're finding that they can be comforting to siblings, teenagers and elderly patients, as well. They've also brought joy to the staff because of the way they help patients feel better and get their minds off procedures."

The "Bear Man"

Jack Lessard of Hampton took on the moniker "Bear Man" 21 years ago on a sad occasion that would end up giving joy to countless children. "That was the year I lost my daughter," says Lessard. "She was 28 years old and she died of a brain aneurism. She had been very active as a volunteer at Children's Hospital in Boston. Her favorite thing to do was giving teddy bears to sick kids, so in her honor I decided to pick up the activity where she left off."

Lessard makes five or six trips a year, delivering boxes of new teddy bears from the Seacoast to Lebanon. "I bring them whenever they need them," he says. "I gave more than 3,300 away last year between CHaD and Children's Hospital. I love to do it—there's nothing nicer than helping a child that's sick."

SALUTING the Friends of CHaD

THE FRIENDS OF CHaD IS A VOLUNTEER organization formed in 1995 to provide resources to support CHaD in its commitment to meet the special healthcare needs of children. “The idea came from some remarkable people like Dr. John Brooks, former medical director of CHaD, and community member Pat Goldman who foresaw the need to develop a closer connection between the children’s hospital and our community,” says Sharon Brown, community relations director for CHaD. “The Friends are absolutely vital to the work we do. They are a committed and talented group of people who are busy doing lots of other things in their lives. We’re very lucky to have them doing all that they do on our behalf.”

The Friends is comprised of a 30-member board along with several hundred volunteers who work region-wide to help raise funds, promote public awareness, and encourage community support. The group works to ensure that the children of the region have access to the full range of CHaD services and programs. In eight short years, the Friends of CHaD has built upon its grassroots beginnings to become an organizational powerhouse, increasing its annual fundraising from a respectable \$10,000 in its first year to more than \$500,000 in 2002.

A Spirit of Volunteerism

“What I like most about being a Friend is knowing that the work we do makes a tremendous difference to sick children and their families,” says Marty Candon, board president of the Friends of CHaD in Lebanon and a member of the executive committee.

“My husband and I have one child, now in college, and we have been blessed that he has always been healthy. Volunteering is



David Leatherwood, former Friends of CHaD president, is one of dozens of volunteers who make the CHaD Ski and Ride Challenge a huge success.

one way for me to give back to my community. I have the added benefit of working with a tremendously talented group of very committed people.”

Candon first got involved in the Friends of CHaD when a friend asked her to help out with another event. “Penny Cunningham and I had served on another board together, and she approached me to help with fundraising for the Big Apple Circus project—now Circus Smirkus.” Candon helped with that project for a few years and then was asked to serve on the board. She has remained involved in Circus Smirkus fundraising and also helps out with the XL 92 radiothon event held just before Christmas each year.

“In the past few years, I’ve enjoyed being involved on a more strategic level, thinking about projects we want to focus on,” she

continues. “In particular, how we can get the word out about all of the things that CHaD does and offers that would simply not be available if the Friends did not do the work they do to provide the funds for them.”

Helping Families in Need

“Being a CHaD volunteer gives you a chance to work with dedicated people in your community,” says John Xiggoras who co-founded Friends of CHaD in Manchester two and a half years ago. The 15-member committee and its volunteers build awareness and community support for Dartmouth-Hitchcock’s services in the greater Manchester area through activities like Wednesday Night Bingo and a miniature golf event. “You know that your efforts are going to help local kids who are being cared for by CHaD—it’s neighbor helping neighbor,” he says.

Xiggoras is the founder of Kristen’s Gift, a restricted gift designed to provide financial support to CHaD’s Pediatric Oncology Center. “I saw what a lot of families have to go through emotionally and financially when my daughter Kristen was being treated for cancer a few years ago at CHaD,” he says. “When she died, I established the fund in her memory. Having a child who is sick or has a life-threatening illness is the most difficult thing for a parent and family to go through.”

The Friends of CHaD is comprised of people with an incredible variety of talents, experiences, and backgrounds. But one thing is the same—their commitment to the kids at CHaD. From flipping burgers to chairing an event, everyone contributes in their own way, but all are vital to CHaD’s success.

For information on how to join the Friends of CHaD, contact Sarah Salo at (603)650-3431 or Sarah.Salo@Hitchcock.org.

Building Community Support in Manchester



John Xiggoros, founder of the Friends of CHaD in Manchester and Kristen's Gift Fund, volunteers several times per month at bingo in Manchester.

Support for CHaD is growing by the week in Manchester, NH, thanks to the hard work and dedication of the Manchester Friends of CHaD, a group of committed volunteers who began meeting in the summer of 2001. Since May, the group has been actively involved in a new community based activity to help build awareness and funds for CHaD—BINGO. Every Wednesday evening, the Friends are at the Manchester Bingo Hall on John Devine Boulevard, running the weekly games. Proceeds from the games support CHaD as a component of Mary Hitchcock Memorial Hospital at DHMC. The funds are split between two funds at CHaD. Named in memory of Kristen Xiggoros, Kristen's Gift is one of the funds being supported by the activity. Kristen's Gift was started by her parents, John and Patty Xiggoros and represents Kristen's legacy to support the children with cancer and their families. The other is an unrestricted fund that helps all children at CHaD.

Bingo, a state recognized and licensed game, provides a community connection to CHaD for many Manchester residents who see Bingo as a social night out. Jodi Stewart, Friends volunteer says, "I love seeing the birthday parties and all the folks who come each week to catch up with their friends or family members. It's great seeing young and old enjoying themselves all to benefit CHaD." Some come with a very specific purpose; numerous bingo patrons want to give back to an organization that has helped their family. In accordance with state regulations, volunteers are completely responsible for running the games. Players have their favorite seats, their lucky charms, and their enthusiastic smiles.

Doors open at 4:30PM and games begin at 5:45PM. For information about volunteering or playing to help CHaD, contact Terri Paradis at (603)650-3435 or Terri.Paradis@Hitchcock.org.

PICU Expands

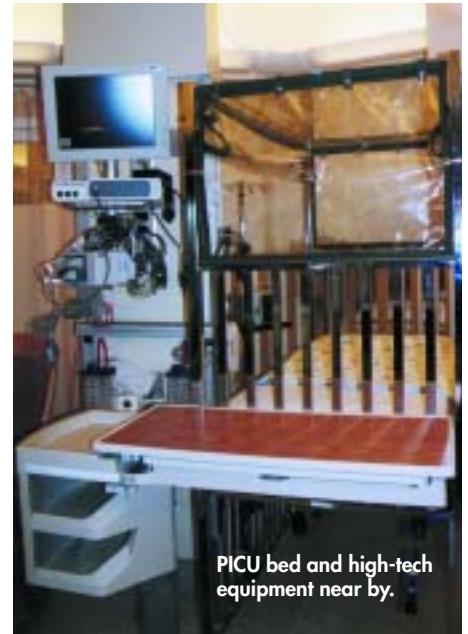
LAST WINTER, THE BUTLER PEDIATRIC Intensive Care Unit (PICU) at CHaD was experiencing greater patient demand than ever before. This didn't surprise Daniel Levin, MD, director of the PICU. "Pediatric intensive care is very seasonal," he explains. "Our busiest time is in the winter with the influx of patients we see with infectious disease, respiratory illnesses, and meningitis."

Historically, the demand for beds would lessen during the warmer months. "We originally designed the space for 10 beds, but had only set up six when we moved down here in March of '99 from the ward upstairs," Levin explains. "But we knew it wouldn't take long before we were busy on a year-round basis." The addition of several new specialists to the CHaD team, such as pediatric neurosurgeon Ann-Christine Duhaime, coupled with a greater awareness of CHaD and its expanding services hastened approval for the PICU to expand to its full capacity in April.

Working in the PICU has its own special set of challenges. Physicians, nurses, and medical support staff care for the most critically ill and injured patients. The fact that these patients are often young children can make the experience even more heart-breaking. "We see it all, from neurological and trauma cases to kidney and heart disorders to respiratory and lung cases to diabetes and cancer," says Levin. "It's a physically and emotionally tough place to work in at times, but we wouldn't have it any other way." The expansion of the unit has been designed with one thing in mind—to help patients and families cope with the serious nature of their illnesses and injuries.

Accommodating Patients, Families

CHaD provides the only pediatric intensive care unit in New Hampshire. "One big advantage we have here is



PICU bed and high-tech equipment near by.

the space and amount of privacy and quiet we can offer patients and their families," says Levin. Because parents and family members often stay in the unit, providing conveniences such as sleeping areas and showers helps to make their visit and the whole hospital experience more tolerable. "Our goal is to provide as pleasant an environment for them as possible."

Funding from the J.E. & Z.B Butler Foundation and from other significant contributors such as Johnson & Dix, WalMart and QLLA Charities is a major reason for the unit's success. "We couldn't do it without them," says Levin. "But you also need to have the commitment from your institution—we're fortunate to have it and to have this space. We have one of the most physically accommodating and well-designed units you'll see anywhere."

Community support through activities like the XL Wishing Wells for Kids is also too important to ignore, Levin says. "When you see a child drop a quarter into a wishing well, it seems inconsequential in the larger scheme of things. But it's that kind of gesture that really represents why we're able to do what we do."

Pediatric Neurology and Epilepsy Budding Center of Excellence for

THE PEDIATRIC NEUROLOGY AND EPILEPSY PROGRAM AT CHaD is fast becoming one of the most comprehensive in New England. “We’re very fortunate to have the collection of people we have here at DHMC,” says Richard Morse, MD, director of pediatric neurology at CHaD and a board-certified pediatric epileptologist. “We have the benefit of all of the knowledge and experience gained over the past 10 to 20 years in the treatment of epilepsy, led by pioneers like Drs. Dick Nordgren and Peter Williamson. At the same time, we’re attracting leading experts in the areas of epilepsy research such as Dr. Greg Holmes, and pediatric neurosurgery such as Dr. Tina Duhaime. We’ve got a great program in the making.”

This convergence of talent and experience along with state-of-the-art technologies has ushered in a new era in epilepsy management at CHaD, says Morse. “We’re applying what we’ve learned in the treatment of epilepsy in adults and turning the spotlight to a younger audience.” This includes treating even the most complex cases. “Using the new epilepsy modalities that are now available—such as digital EEG monitoring, invasive monitoring with implanted electrodes, and more sophisticated imaging techniques—we’re able to localize seizures and better understand where they are coming from in the brain.”

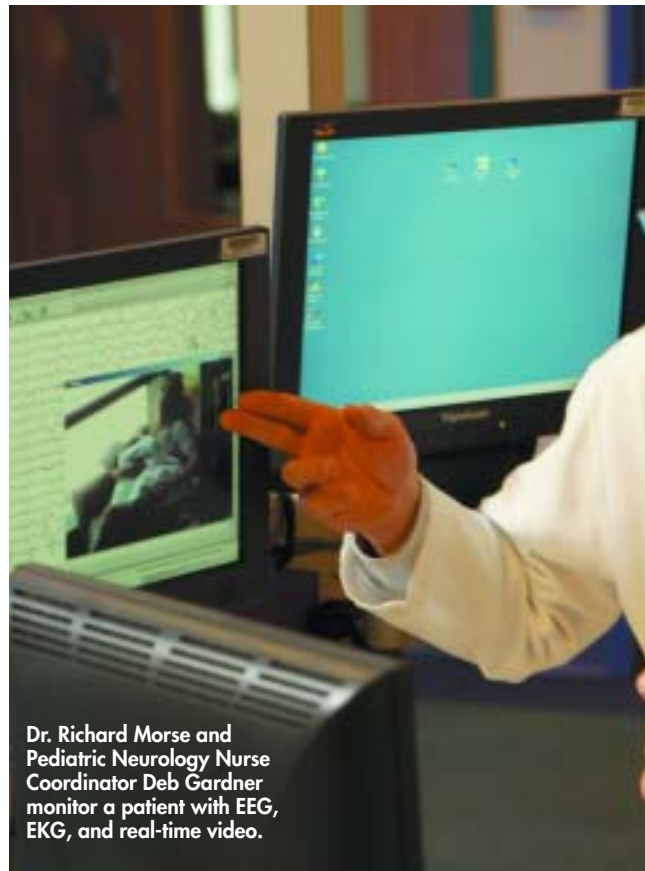
As a result, epilepsy surgery is increasingly being performed on children with excellent outcomes. “A child’s brain is more resilient and can develop around problems more easily,” Morse explains. “Recovery is often quicker, and the long-term outcomes are better.” For patients who are not surgical candidates, there are now a host of other medical options available. “In the past 10 years, a number of new anticonvulsants have been developed that are proving to be very effective in helping many patients. We’re also learning about the affects of diet on epilepsy and are designing special diets

that can help patients who don’t respond to medications and may not be candidates for surgery.”

An Interdisciplinary Approach

According to Morse, CHaD’s broadening scope of neurological services extends beyond its renowned epilepsy program. “Our areas of expertise cross many disciplines and are very well-integrated,” he says. “For example, the Pediatric Oncology Unit, led by Dr. Eugene Hug, is offering some of the most advanced treatments available to children with brain cancer.”

“A significant portion of patients we see suffer from brain tumors and require radiation therapy or surgery,” says Hug. “Through our interdisciplinary approach, we’re able to provide not just better care to patients, but care that results in fewer side effects and reduced long-term risks.” For instance, if a child requires surgery, Hug’s team of pediatric oncologists works very closely with pediatric neurosurgeon Dr. Tina Duhaime. “Or, if a child needs to come in every day for six weeks for radiation therapy, we work closely with the team of pediatric anesthesiologists to coordinate their care.”



Dr. Richard Morse and Pediatric Neurology Nurse Coordinator Deb Gardner monitor a patient with EEG, EKG, and real-time video.

This includes utilizing some of the most sophisticated equipment available today. “We have imaging technology that gives us a three-dimensional look at a child’s brain,” Hug explains. “This allows us to employ new techniques like stereotactic therapy to determine the optimal field for radiation and to be very precise with our treatment.”

A Flagship Case

Darcie Ingerson first came to CHaD in 1992 as a 16-month-old suffering from prolonged seizures. “She was treated with phenobarbital for about a year and that stopped the seizures,” says Morse. Then, at age nine her teachers started noticing what they thought was attention deficit disorder. “She was a bright child, but she had moments where she would stare off in the middle of class. The episodes became more frequent and Darcie’s mom began to notice lip

a CHaD



smacking and a tendency to look off to one side.” That’s when Darcie was referred to CHaD’s Pediatric Neurology Unit.

“She had an EEG and it showed spikes on her left temporal lobe,” says Morse. An MRI revealed a scar on the lobe. “She was treated with medication and the spells improved, but they didn’t go away completely,” says Morse. She was brought in again for monitoring and more testing. “During her third visit, she went through invasive monitoring with implanted electrodes and brain mapping,” Morse says. “We were able to capture the seizure and she went in for surgery—the anterior tip of her temporal lobe was removed and she’s been seizure-free for the last year. Darcie’s case is a great example of how treatment modalities have evolved, and how we’re able through early intervention to help more children live healthy, productive lives.”

New Unit Improves Epilepsy Monitoring

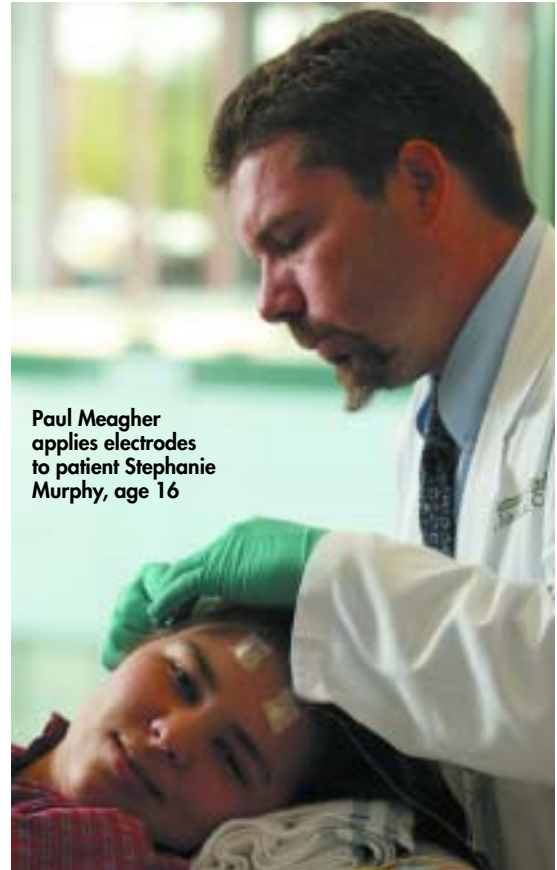
THE PEDIATRIC UNIT HAS A new facility that is changing the scope of pediatric epilepsy evaluation and management at CHaD. Newly opened this summer, the four-bed Pediatric Neuromonitoring Unit serves as a critical building block in the development of a comprehensive pediatric epilepsy program at DHMC.

At the central nursing desk in CHaD’s Pediatric Neuromonitoring Unit, a series of large computer screens display real-time video and digitized electroencephalogram (EEG) information simultaneously. The screens are part of a new state-of-the-art recording system set up to monitor seizure activity in pediatric patients suffering from epilepsy. According to Dr. Richard Morse, the head of Pediatric Neurology at CHaD, the

new equipment is helping clinicians to zero in on seizure activity more quickly and accurately.

“It’s a powerful tool for analyzing seizure events,” explains Morse. “It allows us to quickly pinpoint the exact moment that a seizure occurs in a child. We can see what’s going on electrically inside the brain and at the same time observe the physical symptoms the patient shows—such as how they move their eyes or posture their limbs. Where the seizure begins helps us to correlate the electrical information we obtain from the EEG. This correlation may help us to determine precisely where the seizure is coming from in the brain and whether the child may be a candidate for surgical resection of the epileptic area.”

One of the key features of the new system is its alarm component, says Mark Natola, the unit’s senior electroneurodiagnostic technologist. “The system monitors the child’s brain wave activity and



Paul Meagher
applies electrodes
to patient **Stephanie**
Murphy, age 16

looks for abnormal variations,” Natola says. “When it detects sudden bursts of oscillation, it automatically creates a ‘red flag’ or marker. Digital video and EEG information allows the physician to review seizure events instantly. It’s a much faster way for them to review patient cases compared to videotape, which is still the most common method used by hospitals.” In addition, physicians can review data or watch live recordings from networked PCs in their offices.

According to Natola, the new Pediatric Neuromonitoring Unit has four rooms which are hard-wired to transmit patient data—from cameras, microphones, and telemetry equipment—to recording units in a nearby control room. “The beauty of it is that the data is written to a hard drive and can be stored on DVDs versus thousands of videotapes. This makes the reviewing, editing, and archiving of data much more efficient and cost-effective.”

Delicate Surgery Offers Hope for Children

WHEN CHILDREN NEED NEUROSURGERY, IT'S either because their condition threatens their life or their brain function. "It's a very frightening and traumatic experience for both the child and the family," says Dr. Tina Duhaime, CHaD's pediatric neurosurgeon. One such case involved a child named Emma.

"In the middle of June, she started shaking and eventually started having trouble walking," says Emma's mom Mandy. "Her pediatrician recommended a neurology consult and directed her to DHMC's ED for a comprehensive assessment. The CT scan that night showed a mass, and a later test revealed the tumor had metastasized to her spine. My husband Tim and I were shocked as we listened to our daughter's immediate need for surgery."

"We were stunned by how kind and compassionate the physicians and staff at CHaD were."

Mandy and Tim met with pediatric neurologists Drs. Richard Morse and Helen Barkan, and then Duhaime. "I'm an occupational therapist and I've seen how cold and indifferent clinicians can be," she says. "We were stunned by how kind and compassionate the physicians and staff at CHaD were. Dr. Duhaime was wonderful—she spent a lot of time with us, directly describing Emma's condition and all of the pros, cons, and risks involved. She told us there were no guarantees and invited us to seek other opinions if we wanted to. I found her level of competence and calm demeanor to be very reassuring."

Still, Mandy consulted her aunt, who works in public relations at another hospital. "She said, 'where you are is the best place.' Then she told me we should try to get this great neurosurgeon she had heard about named Dr. Duhaime. That did it."

A Delicate Procedure

"Emma's tumor was very large and was attached to a number of structures that control vital functions such as breathing, swallowing, coordination, eye movements, and consciousness," explains Duhaime. "In some places the distinction between the tumor and normal tissue was clear, in others it was indistinct. The challenge in cases such as this is to remove as much tumor as possible from these delicate structures while minimizing permanent damage which may leave the child with lasting deficits."

During the procedure, Duhaime utilized high-tech equipment including tiny instruments, intraoperative ultrasound, and an ultrasonic aspirator which helped to dissolve parts of the tumor by rapid vibration. She was assisted by Drs. Terry Darcey and Barbara Jobst from Neurology who are specially trained in neurophysiologic



Dr. Tina Duhaime performs delicate brain surgery.

intraoperative monitoring techniques. "With the help of this team, I have a better idea when tumor removal is occurring close to vital areas of the brain and should be halted," Duhaime says.

"We still have a long way to go—we're beginning six, 12-week cycles of chemotherapy," says Mandy. Once a month, Emma stays overnight for treatment and goes in randomly for clinic visits. "She has really bonded with the CHaD staff. Kids don't ask to go back to the hospital, but Emma will ask me, 'when are we going back to the doctor's house, so I can have a tea party?'"

Emma's vivacious personality is coming back. "We've started with some medications to counteract the affects of the chemo. She's eating more and has more energy. She's not back to walking yet, but she's getting PT, OT, and speech therapy at home. She's a real trooper. I think she's doing her very best considering the circumstances. Rehabilitation is going to take a long time, but with the guidance of the oncology team and Dr. Duhaime we're hopeful."

Unlocking Mysteries Through Brain Research

DR. GREG HOLMES, THE NEW chief of Neurology at DHMC, had his first encounter with epilepsy as a high school student. “There was a girl in my class who suffered from epilepsy and she would often have seizures in the middle of class,” remembers Holmes. “She was a very nice person, but she was discriminated against because so little was known about epilepsy back then. Both the students and teachers were frightened of her seizures and therefore tried to avoid any type of interaction with her.” The experience helped to spark an interest Holmes had in becoming a physician. After attending medical school at the University of Virginia, he completed his residency in pediatrics at Yale. Holmes then returned to the University of Virginia for neurology training, beginning a distinguished career focused on neurology.

Holmes comes to DHMC from the Children’s Hospital in Boston, where he was director of the Center for Research in Pediatric Epilepsy and a professor of neurology at Harvard Medical School. Here he oversees a team of 17 neurologists, three nurse practitioners, and six residents who work in concert with CHaD’s growing areas of speciality—including pediatric neurology, neurosurgery, psychiatry, and electroencephalography—and coordinate expertise through the Neuroscience Center at Dartmouth. “We have a team approach that allows us to coalesce the expertise on both the adult and pediatric sides of neurology. As a result, we’re able to offer a comprehensive program to evaluate and treat neurological problems in patients ranging from young children to adults.”



Dr. Gregory Holmes

Making Inroads Through Research

This team approach, along with the combination of research, teaching and clinical care is what drew Holmes to Lebanon. “I was hired to improve and develop the research program within the section of Neurology and work closely with the new Neuroscience Center at Dartmouth,” he says.

Holmes spends about 50 percent of his time in his lab in the Borwell Research Building studying animal models of epilepsy. He is also heading up a major clinical research project funded by the National Institute of Health. “We’re going to be comparing the effectiveness of some of the newer anti-epileptic medications that have not been adequately tested in children,” he explains. To Holmes, this is an exciting prospect. “When I was a resident, there were only three drugs we could use to treat epilepsy—now there about twenty, ten of which have been developed in the last ten years.

“The perception in the past was that the brain was like a black box—no one knew much about it,” Holmes continues. Now, with a greater understanding of the mechanisms responsible for neurological disorders, more ef-

fective and varied treatment options are possible through the use of new drugs and surgical approaches. “A significant number of children with epilepsy suffer from mental disabilities or learning problems,” says Holmes. “However, the immature brain

is more plastic and more adaptable to changes. If we can intervene early on, we can influence brain development in a very positive way, and that’s exciting. “Treatment of many disorders has improved dramatically,” he says. “We’ve made great advances in treatment of brain cancer, we’re beginning to understand autism, we’re making progress with muscular dystrophy, and we’ve made great strides in the treatment of attention deficit disorder. Many neurological disorders still do not have a cure, but our progress has been phenomenal.”

“I believe the nervous system—the brain, spinal cord, and peripheral nerves—represents the area of greatest potential in medicine,” he says.

 A photograph showing three people walking together in a grassy field. On the left is an older woman in a light-colored shirt and pants. In the center is a young girl in a pink shirt and blue pants, holding hands with the woman on the left. On the right is a younger woman in a green shirt and light-colored pants, also holding hands with the girl. The background is a soft-focus green field. Overlaid on the image is the text: "Medicine Learning Discovery Hope".

Call us today to learn how gift planning can support the future of children's care at CHaD.

Fred Moore, Director, Office of Gift Planning
Phone toll free: 1-866-272-1955
E-mail: Gift.Planning@Hitchcock.org

Meet Dr. Reece

CHAD WELCOMES DR. ROBERT REECE, a PEDIATRICIAN INTERNATIONALLY recognized as an expert in child abuse. Reece joined CHaD's clinical staff in July and is working as a medical consultant for its Child Advocacy and Protection Program (CAPP). He is also a visiting professor of pediatrics at Dartmouth Medical School. "My wife and I moved up from Cape Cod to Norwich, Vermont in June and we're really enjoying the area," he says. "I'm very impressed with CHaD and the quality of its people."

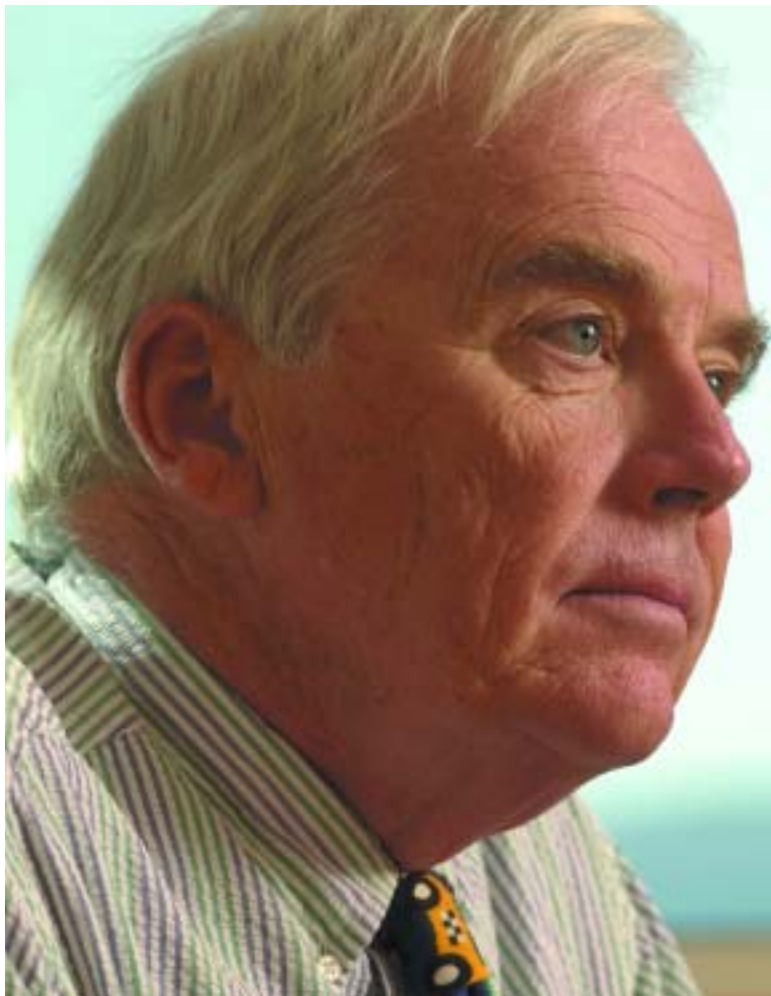
In addition to his duties at CHaD, Reece is director of the Institute for Professional Education for the Massachusetts Society for the Prevention of Cruelty to Children and a clinical professor of pediatrics at Tufts University School of Medicine. "I spend a fair amount of my time traveling internationally and educating physicians, social workers, and various people about the medical aspects of child abuse," he says. Reece has authored many papers and articles on the subject and is Executive Editor of *The Quarterly Child Abuse Medical Update*.

He is also active on the research front. "A lot of the work we're doing now involves looking at how the brain is affected by head injuries," Reece says. "Children are subjected to many kinds of

abuse, whether it's the physical abuse they receive or the violent behaviors they observe. Even in cases of witnessed violence, we're finding that their brains go through structural changes that can contribute to cognitive and behavioral problems they have later on in life."

"The affects of child abuse manifest themselves in many different ways, some that people don't think of," Reece says. "Often, we see it come out through substance abuse and criminal behavior—for example, we know that almost 90 percent of people who are incarcerated have a history of child abuse. But even issues like obesity and smoking can be linked to child abuse."

CAPP provides 24-hour consultation for hospital system cases in which concern about abuse or neglect have been voiced by the healthcare team. "We are planning to expand the professional educational activities of the program as well as the research agenda in the area of child maltreatment."



Bill Boyle Honored

Dr. William E. Boyle, Jr., Professor of Pediatrics and of Community and Family Medicine, was recently honored with the 2003 Pediatrician of the Year award presented by the New Hampshire Pediatric Society.

Boyle has practiced his brand of family-centered, community-centered care at CHaD since 1970. As both a general pediatrician and a subspecialist in long-term and chronic illnesses—like cancer, diabetes, and cystic fibrosis—he has seen a spectrum of conditions far beyond those of the average pediatric practice.

In 1997, Dr. Boyle began a community pediatrics program. The program teaches doctors in training about our community and the need for family-centered care. The William E. Boyle, Jr., MD, Community Pediatrics Program helps young doctors connect on a compassionate level with children and their families. The Boyle Program advocates a more comprehensive approach to care—an approach in which pediatricians look beyond the disease and see the whole child and family.

"Dr. Boyle is respectful, compassionate, curious, and has a tremendous capacity to keep the big picture in mind while providing family-centered care," says Toni Lamonica, Boyle Program Manager. "He is passionate about education and his actions remind me constantly of what this program is all about: How to provide better care for kids and families...especially kids with chronic illness."

The Makings of a Champion

WHAT'S THE DEFINITION OF A CHaD Champion? "It's a company or civic group that supports CHaD, helping to build awareness and raise funds for the children's hospital," says Sharon Brown, director of community relations at CHaD. "What makes them unique is their ability to motivate and encourage large groups of people to get more directly involved with CHaD."

Often, this ability to inspire participation extends beyond a company's own walls. "A CHaD Champion will use the influence it has not just with its employees, but also with its customers and suppliers to create a broad base of support for CHaD," adds David McWilliams, who coordinates corporate and community relations activities for CHaD.

Wal-Mart is a CHaD Champion

"The Wal-Mart associates have become champions for the kids through their network of vendors and customers," Brown explains. "For some, it's adding pocket change to the CHaD-a-saurus. For others, it's hard work to organize and host a golf tournament."

Wal-Mart displays CHaD-a-saurus coin banks in 30 different store locations year-round to promote its commitment to CHaD. Taking part in the annual "Help a Child Smile" golf tournament has prompted Wal-Mart vendors such as Coca-Cola to get more directly involved in supporting CHaD. "As a result of their relationship with Wal-Mart, Coke is now helping with other CHaD events such as arranging for a NASCAR Driver to visit CHaD kids at our 'Race to Victory' event at NH International Speedway this summer," says McWilliams.

Wal-Mart is also helping CHaD's Dr. James Filiano and the Colegrove family raise awareness of a rare genetic disorder called dopa-responsive dystonia (DRD) which struck siblings Harrison and Gracie Colegrove. The disorder, caused by an inadequate supply of dopamine to the brain, progressively steals all mobility and has of-

ten been misdiagnosed as cerebral palsy because of its rareness. Wal-Mart's 2002 gift to the children's hospital was \$150,000, and a large portion of these unrestricted funds has supported the hiring of a nurse coordinator who will research other potential patients throughout the region.

"Current estimates indicate there may be as many as ten people in the region and a few thousand people across the country

with undiagnosed DRD," says Filiano, a pediatric neurologist and intensivist. "DRD is a rare disease and it won't be the answer for every parent, but if we can help a few more Harrison and Gracies the rewards will be great."

Wal-Mart is Ace in the Hole

MUCH TO OUR ASTONISHMENT AND ABSOLUTE DELIGHT, WAL-MART passed a \$250,000 check to CHaD on September 18 at their annual *Help a Child Smile Golf Tournament* in Hudson, NH. As the culmination of their yearlong CHaD Champion Campaign, their fundraising significantly exceeded a very ambitious goal by nearly \$40,000. It was an amazing day for everyone who was present. Their committed generosity and passion for CHaD is overwhelming.

There is no other way to describe it.

It is also quite remarkable how Wal-Mart staff—specifically Skip Dykstra, chair of the tournament—is able to bring together major business competitors such as Coke and Pepsi, Keebler and Nabisco, Kraft and Hershey Foods, and have them all behave as friends and partners for the day. As their mantra says: "It's all about the kids."



Fun & Activities at

CHaD Gala



Drs. John and Christy Brooks (center), who greeted all the Gala guests, enjoyed time with John and Leslie VonBargen who generously donated the diamond.

The home of **Byron and Scooter Hathorn** served as a lovely setting for the **Second Annual CHaD Gala—An Evening in VerMonte Carlo**. Held on May 30, the event raised nearly \$40,000—all to benefit the kids at CHaD! Dancing the night away to the Al Alessi Band and playing their favorite games at the Casino, over 230 guests enjoyed a gorgeous spring evening on the banks of the Connecticut River. **Ledyard National Bank** and **Can-Do Special Events** provided significant support for the event. The highlight of the evening was the diamond raffle in champagne glasses—a \$7,000 ideal cut diamond was up for grabs for a \$50 chance! The diamond, generously donated by **VonBargen's Jewelers**, helped make the evening especially glamorous! A fantastic time was had by all!

CHaD Classic Record Set

This year's CHaD Classic Golf Tournament broke all records as Co-Chairs **Sharin Lufi** and **Lisa Lacasse** delivered a \$90,000 check to Mary Oseid and Kevin Donovan from CHaD. The two day event started off on June 7 with "Rock for Kids," an evening of excellent food, auctions, great music and dancing and the raffle of an Indian Scout Motorcycle. The golf tournament hosted a sold out crowd on the two prestigious Quechee golf courses, sponsored by **Lateran Group** and **Centurion Corporation**. Dinner, awards, and prizes preceded the biggest prize of all, the generous check presented by **Quechee Lakes Landowners Association Charities for CHaD**. All totaled, QLLA Charities has raised close to \$1 million for CHaD in their 23 years of running the CHaD Classic. Support from the tournament will help build the new CHaD Ambulatory Care Center.



C&S Supports Children's Cancer Fund

The **C&S Charity Golf Tournament** took over both Mt. Snow and Haystack Golf Courses in Wilmington, VT, as well as the Hermitage Inn's fishing and skeet shooting facilities, and brought together hundreds of grocery store owners, food vendors, and C&S staff from all over the east coast—all with the goal of supporting kids by raise money for CHaD. The day's events culminated with C&S' **Ron Wright**, President, and **Phil Crowley**, Assistant Treasurer, presenting Dr. Larsen with a check for \$75,000. C&S also donated all the food for the Pediatric Oncology family picnic before the Circus Smirkus performances this summer. Thanks C&S for all your support!



Rubin Harris, Vice Chair of C&S Wholesale Grocers, and CHaD's Pediatric Oncologist, Eric Larsen, MD, rests after a hard day of golf, auctions and excellent food, all in support of children with cancer at CHaD.

Racing to Victory at the Governor's Breakfast

On July 18, **Governor Craig Benson** presided at the 11th Annual Governor's Breakfast at New Hampshire International Speedway. Nascar team owner and featured speaker, **Ray Evernham**, spoke to approximately 300 race fans and distinguished guests about his family's personal experience and his son's battle with childhood cancer. Ray's appearance at the breakfast helped to raise nearly \$20,000 for CHaD and David's House through ticket sales and corporate sponsorships. Many thanks to **Morgan Stanley**, **Ford Motor Corporation**, **KPMG**, **NH Auto Dealers Association**, **Fleet Bank**, **Hinckley, Allen & Snyder**, **Hawkins, DeLafield & Wood**, and **TK Sports** for their generosity to this event. As part of the day's festivities, the Speedway also sponsored 150 CHaD and David's House children and families in VIP Suites during the day's races and practice rounds for Sunday's Sylvania 300. A visit to the families by 2002 NASCAR champion **Tony Stewart** capped off the day's excitement.



During the breakfast, Governor Craig Benson took time to support the kids at CHaD, signing an autograph for Jeffrey Linton, age 11.

2003 APEX awards

In the category "Writing," *CHaD Nurses: Caring & Compassion* in last fall's **CHaD Matters** received a 2003 APEX award from Communications Concepts, a professional communicators organization in Virginia.



CHaD

Health and Safety Fair

Prevention, healthy living, and fun were the focus at the **12th Annual CHaD Health and Safety Fair**. Offered in collaboration with media partner **KIXX radio**, over 2,300 people visited 20 interactive exhibits during the day long event. In addition, CHaD's Injury Prevention Center and **NH SAFEKIDS** offered a car seat safety check where dozens of car seats were replaced free of charge. Fair goers enjoyed entertainment, clowns, and characters of all sorts all while learning to be healthy and safe.



These two young surgeons are intensely involved in a game of "Operation" at the "Dress Like a Doctor" booth sponsored by the Child Life Program.



The JUMP program at River Valley Club was just one of the interactive displays featuring fitness at this year's fair.

Circus Magic

Sponsored by the Friends of CHaD and NCCC, Circus Smirkus troupes brought magic and excitement to "sold out shows" in August. Over 3,000 kids and families crowded into the big top, staked on the fields donated by the Lebanon Elks, to watch this excellent group of young international performers. The Smirkus Troupers ranged in age from 12 to 18, and boasted juggling, clowning, and acrobatic skills equal to any circus in the country. Their delight, energy, and enthusiasm was contagious as could be seen as the audience left the tent with kids attempting hand stands and cart wheels. In addition to the event's supporting Pediatric Oncology, over 150 oncology patients and their families came as guests to a pre-show cookout with the Circus Smirkus performers and feasted on food supplied by C&S Wholesale Grocers. Then all were escorted under the big top to reserved seats for the fun, fast-paced circus.



Circus Smirkus comes to CHaD

On August 12, members of the Circus Smirkus troupe came to CHaD to visit with young patients unable to come to their performances. They visited patients in the Pediatric In-Patient Unit, siblings of babies in the Intensive Care Nursery, and made a special trip to the CHaD Pad, the children's chemotherapy room at NCCC, where they entertained young cancer patients, parents and nursing staff with hand stands, juggling, and feather balancing. It is hard to say who was more moved and excited, the young patients or the talented young performers who said their visit to the hospital was a high point of their summer tour.

XL92 Wishing Well For Kids

The XL 92 Wishing Well for Kids Campaign is November 28 through December 19. Proceeds will benefit the new CHaD Outpatient Care Center. Make a wish to make kids well and pledge today. All pledges received by December 15 will be read on the air during the XL 92 Wishing Well for Kids Radiothon.

YES I want to make a pledge to help the CHaD Outpatient Care Center

Enclosed is my gift of:

\$100 \$50 \$25 \$10 Other _____

I would like my gift made *in memory of*, or

in honor of _____.

Please make checks payable to the Children's Hospital at Dartmouth.

Thank you for your gift!

Name _____

Address _____

City _____ State _____ Zip _____

Phone _____

Email _____

Credit card information: Visa Mastercard American Express

Credit Card number _____ Expiration date _____

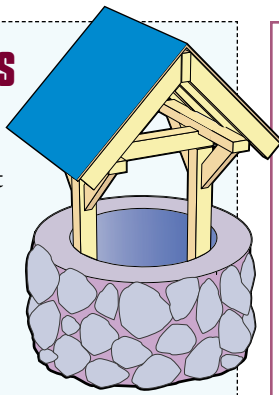
Your name as it appears on the card

Please clip and send to:

CHaD, Attn: Sarah Salo, CHaD Community Relations, Dartmouth-Hitchcock Medical Center, One Medical Center Drive, Lebanon, NH 03756.

For more information, call (603)650-3431.

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SHARE THE LOVE

Deborah and Lawrence Holt shared their love by asking their wedding guests to make donations to CHaD in honor of Deborah's daughter, Jackie Booth. Jackie, a frequent PICU visitor, presented the gifts to Dr. Dan Levin, PICU Medical Director, asking him to buy a Nintendo and tools to aid staff communicate with deaf children.

CHaD Events Schedule

BINGO every Wednesday night: Join us any Wednesday night to support Kristen's Gift and other programs at CHaD. Doors open 4:30PM; Games start at 6:45PM. Manchester Bingo Center, 165 John Devine Boulevard, Manchester, NH. For information, contact Terri Paradis at Terri.P.Paradis@hitchcock.org or (603)650-3435.

November 28–December 19: XL 92 Wishing Well for Kids Campaign. Listen to XL 92 for campaign details including Radiothon dates, where you can buy your paper well, and other exciting new features. To make an early pledge, use the sheet on this page. Please help us build our new CHaD Outpatient Care Center. For details, please contact Sarah Salo at Sarah.Salo@hitchcock.org or (603)650-3431.

January–May 2004: CHaD Readathon. Kids helping kids; children read for pledges. Sign up your school or church

group today. All proceeds go toward toys, books, and children's supplies at CHaD. Contact Sarah Salo at (603)650-3431 or Sarah.Salo@hitchcock.org.

February 28, 2004: CHaD Ski and Ride Challenge at Dartmouth Skiway. Think SNOW! Gather friends for the team challenge or bring the whole family for a fun-filled day at the mountain. Food and great prizes. Contact Terri Paradis at (603)650-3435 or Terri.P.Paradis@hitchcock.org.

June 12, 2004: Rock for the Kids, Quechee, VT. A great evening of music, fine food, and the best silent and live auction anywhere around. Call Sharin Luti at (802)295-9201.

June 14, 2004: CHaD Classic Golf Tournament, Quechee, VT. Join us on the prestigious Quechee Lakes Golf courses for a day of hitting them long and straight for the kids at CHaD. For details, call Sharin Luti at (802)295-9201.

CHaD Matters is published by the Children's Hospital at Dartmouth. Please address correspondence to: Sharon Brown, CHaD, Dartmouth-Hitchcock Medical Center, One Medical Center Drive, Lebanon, NH 03756.



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