

Larner College of Medicine Department of Pediatrics
The University of Vermont Children's Hospital



2016 Annual Report

It gives me great pleasure to introduce this year's annual report for the Department of Pediatrics at the Robert Larner, M.D. College of Medicine and the University of Vermont Children's Hospital.



Lewis First, M.D.

IT IS A PLEASURE AND privilege to introduce this year's annual report for the Department of Pediatrics at the Robert Larner, M.D. College of Medicine at the University of Vermont and for the University of Vermont Children's Hospital. This report summarizes my 22nd year as chair of the department, and highlights a myriad of programs, services, and people that have enabled us to keep the care to the children and families in our region local while also striving to keep it the best.

This report covers the period from January through December 2016, and captures a number of achievements by the remarkable group of people that make up our department and children's hospital. Due to page limits and restricted word counts, we can only share a sampling of all that we do to further our mission and vision to improve the health of children in our region (as well as of children nationally and internationally) through our clinical, educational, research and advocacy efforts.

This year, our report provides more photographs with narrative

to convey the heart of what we do, while also highlighting our outstanding array of activities, achievements and awards. We continue to grow in size so as to strengthen our mission and vision not just at our children's hospital and department in Burlington, but across our health network and region where pediatric care needs must be met. In addition, our increased philanthropic efforts over the past year have allowed us to expand programs, services and spaces that are child-friendly and family-centered in our inpatient, outpatient and emergency settings. We have accomplished this in part thanks to the close collaboration of more than 40 new patient and family advisors who assist us in the development and implementation of the many contributions to improving child health that you will read about in this report.

Most importantly this report, skillfully compiled and edited by our senior administrative coordinator Susan Victory, once again illustrates how we are all working together to further the legacy of the department's founder, the late Dr. R. James (Jim) McKay.

It is Dr. McKay's vision for us to be a children's hospital and department without walls, involving everyone in our region who has an interest in improving the health of children, that is carried forward by all of us through the work we share in this report. I am delighted and honored to be part of the extraordinary team of physicians, nurses, staff, and family advisors that make us the highest quality, and most collaborative patient and family-centered department and children's hospital possible.

LEWIS FIRST, M.D.

The University of Vermont
Department of Pediatrics,
Chairman and Professor
The University of Vermont
Children's Hospital,
Chief of Pediatrics
Children's Health Care Service,
The University of Vermont
Children's Hospital,
Physician Leader

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Pamela Puthoor, M.D.

FACTS & FIGURES

Inpatient Floor:
1,350 pediatric
admissions per year

More than 2,200 babies
born yearly

Neonatal Intensive Care
Unit: 625 admissions
per year

The Children's Specialty
Center serves about
25,000 patient visits
per year in more than
15 different subspecialty
programs.

Cystic Fibrosis:
Approximately 150
patients being followed
at the UVM Children's
Hospital and UVM Medical
Center.

Cardiology: Approximately
2,000 visits per year for
pediatric cardiovascular
related disease.

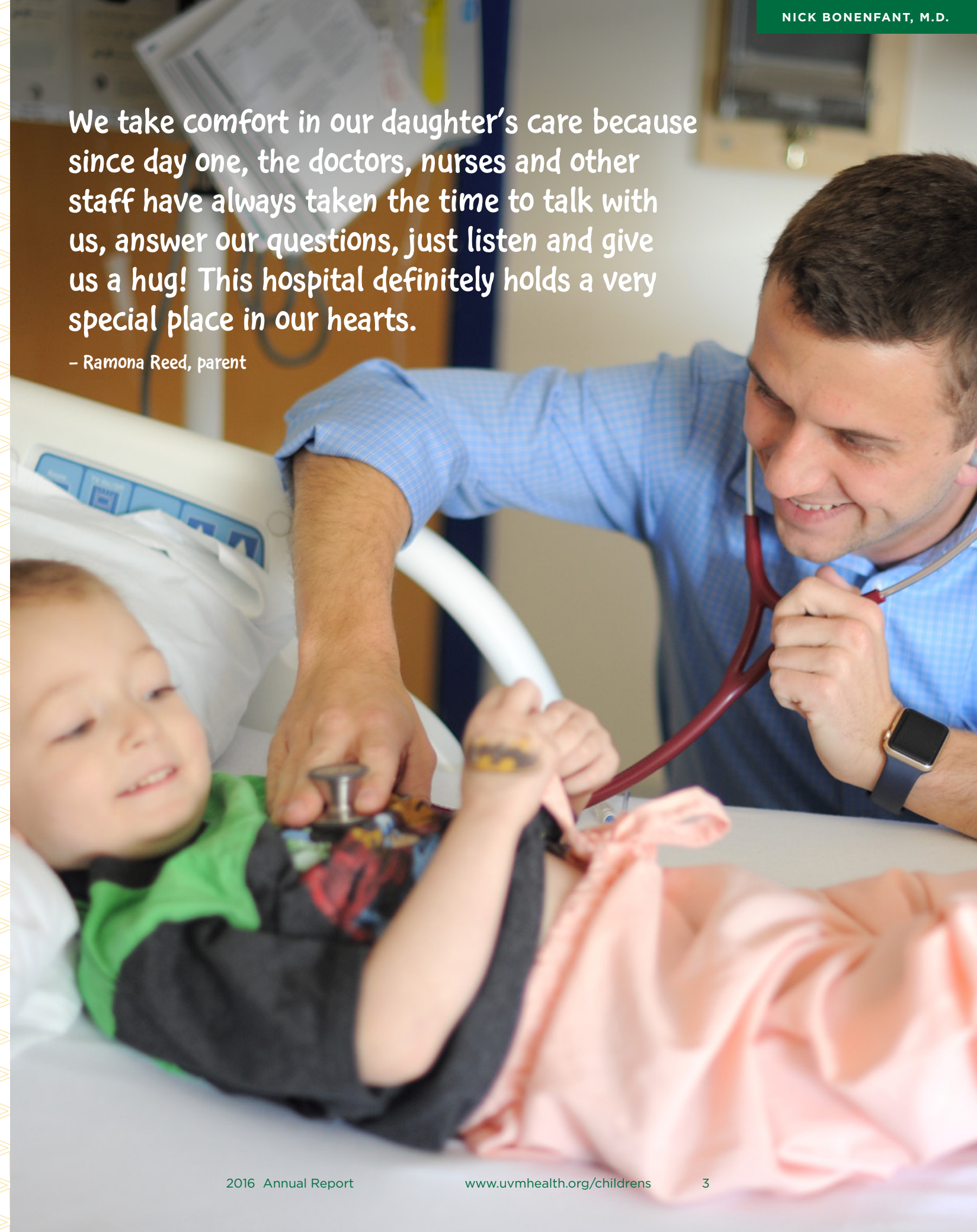
UVM Children's Hospital has
been named this year as a
"top performing hospital
nationally" for its excellence
in patient safety and quality
of care by the national
pediatric safety organization
Solutions for Patient Safety.

Oncology: 200 children are
currently being actively
treated and approximately
400 are being followed
long-term.

The pediatric Emergency
Room team sees 9,000
ED visits per year in
dedicated child-friendly
acute care space.

We take comfort in our daughter's care because since day one, the doctors, nurses and other staff have always taken the time to talk with us, answer our questions, just listen and give us a hug! This hospital definitely holds a very special place in our hearts.

– Ramona Reed, parent





Families Lead the Way at UVM Children's Hospital

Patient/family advisor and parent Rachel Wallace-Brodeur

WHEN IT COMES TO IMPROVING the delivery, quality, and safety of health care, families who are served by UVM Children's Hospital have a wealth of wisdom to offer. Now, thanks to a growing Patient and Family-Centered Care Program, they have robust opportunities to share their stories, make recommendations, and bring about positive change.

Charlotte Safran, patient and family-centered care coordinator at UVM Children's Hospital, says the program has expanded in recent years to include more than 45 volunteer advisors who serve on one of six councils. Advisors are drawn from the ranks of hospital staff – including physicians, nurses and child life specialists – as well as parents and family members. This allows for cross-pollination of ideas, and a valuable exchange of perspectives.

"It's exciting and far-reaching," she says. "The collaboration across the hospital has been incredible." The program currently supports the Patient and Family Advisory Council and five sub-councils: a Type I Diabetes Advisory Council, a Transgender Youth Program Advisory Council, a NICU Advisory Council, an Irritable Bowel Syndrome Advisory Council, and a Cystic Fibrosis Council.

These councils meet regularly and participate in a range of activities. Some highlights include community education nights hosted by the Type I Diabetes Advisory Council, and the Patient

and Family Advisory Council's participation in the redesign of the UVM Children's Hospital website. One initiative – the Children's Specialty Center Reimagining Project – invited advisors to a walk-through of this key area of the hospital to help identify issues that could be addressed by upcoming renovations.

The Transgender Youth Advisory Council is helping to break new ground for this group of patients and their families. "UVM Children's Hospital is at the forefront of recognizing that we need to support diverse families, and we need to do so in an intentional way," says Safran.

All of these success stories flow from the hospital's commitment to patient and family-centered care, which has been shown to increase quality of care and patient satisfaction, while lowering costs and decreasing length of stay. The program offers important, intangible rewards as well. When a family is faced with a child's illness or injury, the opportunity to connect with others goes a long way towards healing.

"When the big picture is overwhelming, it is hard to focus and retain information," says Toni Josey, a pediatric patient/family advisor, in one testimonial made available to families. "The providers in the [Children's Specialty Center] always have time for my questions, never make me feel rushed, and are available by phone if I forget to ask something during a visit." ■

National Recognition for Zero Infection Rate

A national network of children's hospitals recognized UVM Children's Hospital for the exceptional achievement of going one year without a single patient in its neonatal ICU, pediatric ICU, and pediatric inpatient unit contracting a central line associated bloodstream infections (CLABSI). Because of this success, the 100-member Solutions for Patient Safety National Children's Network selected the UVM Children's Hospital as a Top Performing Hospital for 2016. CLASBI causes thousands of deaths each year in the U.S., and cost billions of dollars to treat. Hospital leaders attribute the success to extensive training, consistent monitoring, standardizing procedures, empowering staff to flag potential problems, and educating patients and families.

New Mother Baby Unit Welcomes Patients

The new Glen and Rosemarie Wright Mother Baby Unit opened its doors to patients August 4, 2015, providing modern, spacious rooms for new mothers and loved ones. The project cost \$15.8 million and took 14 months to construct. Twenty-two single-bed rooms will dramatically reduce double occupancy and provide 44 percent more space per room for patients, families and caregivers. Other features include private bathrooms, "Murphy" beds in each room that pull out from the wall, and enhanced technology.



Improving Children's Health in Vermont and Around the Nation

AS THE PROVERB GOES, “IT takes a whole village to raise a child.” Professor of Pediatrics and Nursing Judith Shaw, Ed.D., M.P.H., R.N., has been working tirelessly for over 15 years to make sure Vermont — and the nation — has that village at the ready.

On behalf of the National Improvement Partnership Network (NIPN), a multi-state coalition of child health care programs that she leads, Shaw accepted the 2015 Health Care Delivery Award from the American Pediatric Association. And in the fall of 2016, she took on a leadership role in a \$13.4 million multicenter pediatric quality measures study funded by the Agency for Healthcare Research and Quality and the Centers for Medicare and Medicaid Services.

The National Improvement Partnership Network is housed at UVM. NIPN works to advance quality and transform healthcare for children and their families by establishing partnerships between public and private entities, focusing on issues like immunizations, obesity, asthma, and others. Since 1999, Shaw has been executive director of the Vermont Child Health Improvement Program (VCHIP), an organization that recently garnered the Outstanding Collaboration Award from the KidSafe Collaborative of Chittenden County. The collaborative noted VCHIP's varied efforts, including initiatives to prevent suicide, lead poisoning, and abusive head trauma, and to promote safe sleep, gun safety and a protective environment.

VCHIP has become the “go-to” resource for any efforts to improve pediatric care in Vermont, says Shaw. She spends much of her time bringing together various entities invested in the well-being of Vermont's youth — state health officials, physicians, UVM researchers and faculty, Medicaid representatives and potential funding sources — and figuring out ways to enhance their care of children.

“Doctors don't get paid to stop and measure how they're doing and think about how to improve it,” she explains. “What we do in VCHIP is help the physicians look at the systems obstacles that stand in the way.” ■

VCHIP helps Vermont pediatricians provide high quality, community-based practice while simultaneously measuring health outcomes for children and families, such as increasing immunization rates, developmental screening and effective care coordination.

— Jill Rinehart, M.D., Hagan, Rinehart, Connolly Pediatricians, Burlington



JUDITH SHAW, ED.D., M.P.H., R.N.

Vermont Oxford Network Improves Health Care for Newborns

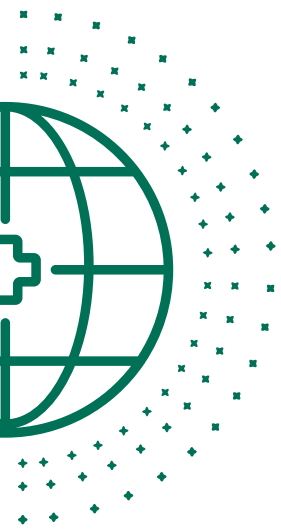
The Vermont Oxford Network is a collaboration of health professionals from over 1,000 hospitals around the world dedicated to improving the quality and safety of health care for newborn infants and their families. The network maintains a database for infants receiving neonatal intensive care for use in research and quality improvement. The database, which includes two million records over 69 million patients days, now enrolls more than 90 percent of all very low birth weight infants born in the United States each year, and a growing proportion worldwide. The Newborn Improvement

Collaborative for Quality and Internet-based Newborn Improvement Collaborative for Quality bring interdisciplinary teams together for immersion learning through virtual and in-person activities. Global health is also a focus, with an ongoing partnership with Tikur Anbessa Hospital, the teaching hospital for Addis Ababa University in Ethiopia.

Improve Care Now Wins Prestigious Drucker Prize

The ImproveCareNow Network, led by Executive Network Director Richard Colletti, M.D., was selected from among 495 applicants as the 2016 winner of the Drucker Prize from the Drucker Institute at Claremont Graduate University. Administered

annually since 1991, The Drucker Prize is given to a social-sector organization that demonstrates Drucker's definition of innovation — “change that creates a new dimension of performance.” The ImproveCareNow Network was recognized for its ability to transform health and care by enabling patients, families, clinicians and researchers to collaboratively improve knowledge and outcomes related to Crohn's disease and ulcerative colitis, engaging its stakeholders in a learning health network that provides real-time quality improvement, research and community-building for children with these conditions.



Learning to Advocate for the Community

AS A SOUGHT-AFTER

program with a national reputation for excellence, the pediatrics residency program at UVM Children's Hospital trains top notch physicians. They also send out into the field medical professionals who know how to advocate for children and work with organizations to create change.

Every resident who graduates from the three-year program completes a community-based project, either on their own or in small groups. A child advocacy curriculum helps to determine each resident's areas of interest, an important step to help hone in on what will become a long-term project, says Jerry Larrabee, M.D., professor of pediatrics and residency program director.

"It helps to identify what they're passionate about," he says. "I think that's why they're so successful." Then, residents partner with an agency or organization and conduct a gap analysis before getting started. The project, which usually comes together over the course of one year, happens in the space between the resident's interests and the organization's

needs. Students find their own mentors – usually one from the faculty and one from the community – and are strongly encouraged to build into their project a way to measure how it is improving care for children. Topics have run the gamut, from cyber bullying awareness and safe sleep practices to water safety and prevention of adverse childhood experiences.

For his project, chief resident Jamie Mehringer, M.D., focused on how to promote condom distribution through the adolescent medical home. He surveyed providers in Vermont and northern New York regarding their views on condom use and accessibility, and is using that information in follow-up to help motivate providers to consider offering condoms in their practices and connect them with resources for setting up this service.

He's also been very involved in the creation of the UVM Children's Hospital Transgender Youth Program that began to see patients in September of 2016, work that he says was made possible by the collaborative atmosphere and overwhelming support of faculty.

"There's no clear delineation between the hospital and the community," he says. "Faculty are teaching; they're testifying at the state legislature; they're involved with community advocacy groups. It's rigorous clinical training in a friendly, tight knit environment."

That enthusiasm spills over to the program's 21 residents. Larrabee says some of the community projects completed since the program's inception ten years ago have become self-sustaining. Free water safety/swim instruction lessons for New American children, conceived as a resident project six years ago, continues in collaboration with the YMCA. Another resident wrote a children's book with a goal to promote reading as well as strengthen the parent-child dyad. One 2016 graduate brought her work on cyber bullying to her position at Gifford Medical Center in Randolph, Vt., where she's partnering with the local high school.

"It's about social responsibility to the community," says Larrabee. "When you do projects like these, you reach so many more children." ■



L to R: Medical student Kenyon Bolton, resident Rebecca Condon Staub, M.D., Leigh Anne Cioffredi, M.D., and resident Calista Campbell, M.D., on morning rounds.

Medical Student Education

Medical student education is a core mission of the Department of Pediatrics, with faculty participating in all levels of the Vermont Integrated Curriculum. In the Foundations level of the curriculum, faculty direct courses, lead active learning sessions, and facilitate groups in the Professionalism, Communication and Reflection course. The seven-week Pediatric Clerkship includes inpatient and outpatient experiences at UVM Children's Hospital and four affiliate sites. Graduating medical students have selected Pediatrics as Clinical Department of the Year on multiple occasions, and the clerkship is consistently ranked as one of the highest in the Clerkship

Year. During Advanced Integration, the department offers one-month acting internships at UVM Children's Hospital in neonatology and general inpatient pediatric medicine, as well as a host of electives.

Neonatal-Perinatal Medicine Fellowship Program

The Neonatal-Perinatal Medicine Fellowship Program is an integrated part of the Pediatric Residency Training Program, with a goal to foster the development of neonatologists for academic and clinical practice through an outstanding, evidence-based clinical education. An apprenticeship model is combined with active mentoring and immersion in attending-level

teaching and clinical activities. Fellows obtain experience with critical patients, including those requiring high frequency ventilation, therapeutic hypothermia, and surgical and subspecialty care. Experience with cardiac surgery and extracorporeal membrane oxygenation (ECMO) is provided during a one-month rotation at Boston Children's Hospital. Fellows tailor research to career goals; recent efforts have included clinical and outcomes research, quality improvement projects, and environmental and family-centered care-based research. Fellows have successfully applied for competitive attending positions nationwide.



Care that Connects with the Newest Americans

Andrea Green, M.D., above, treats patients and addresses barriers to health care through the New American Program.

WHEN ASSOCIATE PROFESSOR of Pediatrics Andrea Green, M.D., took over direction of the New American Program in 2004, it already had a goal to serve as a “one-stop shop” for refugee children’s primary care. Her patients come to see the doctor, but they get much more.

Green has moved the program beyond the focus on the individualized, single office visit and into a “community pediatric practice.” She networks with other service providers, schools and

government agencies. She builds relationships with elders in the refugee communities. She brought in funding for an in-house social worker to help families deal with household complications, such as trouble paying bills.

“The immigrant community can be used as a lesson in understanding barriers to care,” Green says. “The barriers are really obvious: You have the barriers of lower socioeconomic status. You have the barriers of communication and understanding. And I think if

you can work in this group and overcome those barriers, then you can take that model and extend it everywhere, because the barriers are with every patient population.”

Green is part of a cross-disciplinary Hatch Grant from the U.S. Department of Agriculture along with UVM Associate Professor of Geography Pablo Bose, Ph.D., and colleagues from the College of Agriculture and Life Sciences and the Department of Nutrition and Food Sciences, for a project related to food insecurity. With her own

First Garners Vermont Medical Society Award

Lewis First, M.D., professor and chair of pediatrics, was awarded the 2016 Distinguished Service Award – the highest award the Vermont Medical Society can bestow upon one of its members. The Distinguished Service Award recognizes meritorious service in the science and art of medicine and outstanding contributions to the medical profession, its organizations, and the welfare of the public. First was honored for his outstanding work as chair of the Department of Pediatrics and chief of the UVM Children’s Hospital, as well as his profound influence in encouraging a generation of University of Vermont medical students to pursue vocations as pediatricians.

Davis Elected to American Academy of Pediatrics Board of Directors

Wendy Davis, M.D., professor of pediatrics and associate director of the National Improvement Partnership Network, has been elected District 1 Chair for the American Academy of Pediatrics. She took office January 1, 2017. As District I chair, Dr. Davis has said she intends to “focus on the economic survival of primary care and specialty pediatric practice, addressing violence prevention and supporting members through the likely changes in federal and local administrations.”

Vermont Air National Guard Honors Children

UVM Children’s Hospital patients faced with life-threatening disease, illness or injury have a legion of military officers

cheering them on. The Young Heroes Award, sponsored by the Noncommissioned Officer Academy Graduates Association (NCOAGA), features a military ceremony hosted by uniformed members of the Vermont Air National Guard. In honor of the courage and bravery the child displays in the face of adversity, the officers give the child a commendation, a medal, and a heartfelt salute. Children are recommended by caregivers for the awards program, which has honored more than 60 children in the past 10 years.



interest in obesity and the social determinants of healthy eating, Green and the team will study refugee families’ food choices and “what’s in their cupboards,” to understand their views of food in the United States and whether those change over time.

Through her creative funding efforts, Green has launched several refugee-related programs: an annual bike helmet/car seat awareness day; smoke detectors for refugee families provided by the city fire department; swim and water safety lessons, including 80 slots

from the city Parks and Recreation department and “modest Muslim swimwear” that Green found so refugee women would feel covered and comfortable.

“You need to change the way you’re practicing to match the cultural values of the people you’re working with,” she says. Green goes to new Americans’ homes to check out their décor, so she can address any child-safety concerns. When asked about taking these extra steps on her own time, without compensation, she gets choked up.

“You go into pediatrics because you believe in the value of creating healthy children, supporting children so they can become healthy adults.”

Work with refugee patients takes problem-solving skills, open-mindedness and flexibility — sometimes just to deal with the logistics, Green says.

“You have to have some patience,” she says. “People are not always on time. But you have to remember what they’ve been through just to get here.” ■



2016 YEAR IN GIVING



Fiscal Year 2016
Total Giving

\$1,683,684

BIG CHANGE-BIG HEART

Community Rounds Up Coins for Kids

Monty (above), the UVM Children's Hospital's faithful mascot, at the kick-off for the Big Change Round-Up.

NOW A BELOVED ANNUAL event, the Big Change Round-Up for Kids is a rollicking whirlwind of a fundraiser, featuring poses of self-proclaimed "bandits" at schools and businesses across the region donning their "bandit" bandanas for the UVM Children's Hospital. The three-month round-up kicks off with a party featuring

guest speakers, games, snacks, and more, and concludes with a finale tour that includes an RV rolling up to events across Vermont and northern New York, with DJs from local radio station 98.9 WOKO in tow. In 2016, 75 schools and 45 businesses joined in the fun, hosting fundraisers and fun challenges. The coin collecting

campaign is the largest fundraiser of the year for UVM Children's Hospital, and relies on thousands of volunteers from across the region, including 19 medical center departments and 22 community organizations. The round-up set a record in 2016 netting over \$350,000. ■

Children's Miracle Network Hospitals

Children's Miracle Network Hospitals (CMNH), a non-profit organization that raises funds and awareness for 170 pediatric hospitals nationwide, helps to ensure that kids faced with pediatric illness or injury have the best care possible. One hundred percent of the funds raised stay local, making a real difference in the lives of children and families in Vermont and northern New York.

Children's Miracle Network Hospitals Champion

Eleanor Wallace-Brodeur, the 2016 Children's Miracle Network Champion for the state of

Vermont, has faced leukemia and diabetes with strength and grace, with the help of her family and a team of healthcare providers at the UVM Children's Hospital. She shares her story at CMNH events across the region, and meets with kids and families who are facing their own health challenges. Watch a video about Eleanor's story:

<https://vimeo.com/198076894/8e251f795b>



Corporate Partner Campaigns

More than **\$440,000** raised in 2016.

Miracle Network Dance Marathon

Raised over **\$84,870** in 2016. Partners include St. Michael's College, Johnson State College, Middlebury College, and UVM.

Extra Life & Cohen Family Support Teen Room

Thanks to the fundraising efforts of Noah Cohen, Vermont's 2015 Children's Miracle Network Hospitals champion, UVM Children's Hospital plans to renovate



the teen room in the pediatric inpatient unit. For the past several years Cohen has participated in Extra Life, a 24-hour gaming marathon. His parents, Matt and Amy Cohen – who own Fiddlehead Brew-

ing Company – formed Team Mastermind and raised over \$119,000 in 2016 through special can releases and donations. Out of 170 CMN hospitals participating in Extra Life, UVM Children's Hospital had the highest per capita fundraising, earning an additional \$30,000 from the ESA Foundation.

New Endowment Supports Reading Program for Kids

Thanks to a newly established \$250,000 endowment from Richard Parkoff, the UVM Children's Hospital will add a mobile library in the neonatal intensive care unit and Reach Out and Read programs focused on encouraging families to read aloud to their children. Parkoff established the Horbar Family Endowment in honor of several family members, including his cousin,

the late Stanley Horbar (below), and Rita Horbar, Stanley's wife. The gift also honors Stanley and Rita's sons, both physicians, and their daughter, Amy. Jeffrey Horbar, M.D., is the Jerold F. Lucey Professor of Neonatology at the Larner College of Medicine and the chief executive and scientific officer for the Vermont Oxford Network. Gary Horbar, M.D., is an internist in New York City.



Philanthropy Highlights

- Through lead sponsorship of a popular golf tournament and other donations, local company Farrington Construction has contributed over \$175,000 to UVM Children's Hospital in the past two decades.
- The National Fraternal Order of the Eagles continues their long-standing support with a \$30,000 gift to the new Glen and Rosemarie Wright Mother Baby Unit.
- Several local families and businesses have offered key support for new pediatric space in the emergency department. Party City contributed \$30,000 through its annual campaign. Local business owners Bill and Jane Shearer gave \$10,000 to the cause.

GENERAL PEDIATRICS DIVISIONS AND PROGRAMS

Pediatric Primary Care

ACADEMIC
GENERAL PEDIATRIC
DIVISION DIRECTOR
JERRY LARRABEE,
M.D.

Pediatric Primary Care is a recognized comprehensive, family-centered medical home for a diverse population of children. A faculty of fifteen is situated across two sites, the 1 South Prospect Street campus in Burlington and the Blair Park campus in Williston. In addition to the UVM pediatric residency, all faculty engage in teaching and hosting family medicine and psychiatry residents and Larner College of Medicine clerkship students. Faculty are also active in research and advocacy.

PRIMARY CARE
MEDICAL DIRECTOR
STANLEY
WEINBERGER,
M.D.

Pediatric Primary Care recently expanded its partnership with the Burlington School District to include a new clinic at Edmunds Middle and Elementary schools. A Pediatric New American Clinic, directed by Andrea Green, M.D., provides care for all new refugees in Vermont. The scope of interdisciplinary care continues to expand with increased care coordination and social work services, and the addition of Logan Hegg, Psy.D., a co-located child psychologist.



In collaboration with OneCare Vermont, Pediatric Primary Care is working on increased care coordination for the Medicaid 2017 Next Generation Model, which provides for new funding for improved care of complex and high risk patients. Planning is underway for a pediatric weight clinic in collaboration with the Community Health Team. Finally, Eliot Nelson M.D., received the 2016 pediatric resident’s award for Community/Primary Care Attending of the Year.

Quality Initiatives

- Stanley Weinberger, M.D., is the VCHIP faculty lead for a VCHIP CHAMP quality improvement project around the ACO quality measures of developmental screening and adolescent well visits.
- Continued collaboration with the Vermont Department of Health, the Burlington School District, and Pediatric Pulmonary on using asthma action plans in schools.

- Screening for certain social determinants of health, including food and housing insecurity and parental well-being. We are partnering with the Vermont Department of Health and the USDA, offering prescriptions for free fruits and vegetables to families receiving 3SquaresVT.

Recent Presentations

- Green, Andrea, Weinberger, Stanley. “Yoga and Mindfulness Cards as a Brief Intervention in a Pediatric Refugee Health Clinic.” Oral Presentation at the North American Refugee Health Conference. June 12, 2016.
- Green, Andrea, et al. Panelist for Webinar. “Assisting Girls at Risk of Female Genital Mutilation/Cutting: What Child Abuse Professionals Need to Know.” U.S. Department of Justice. Aug 24, 2016.
- Nelson, Eliot, et al. Panelist. “Injury and Suicide Prevention in the Emergency Department.” Injury Control Special Interest Group Meeting. Pediatric Academic Societies. May, 2016.

Adolescent Medicine

PROGRAM
DIRECTOR
ERICA GIBSON,
M.D.

Erica Gibson, M.D., continues to provide clinical care while participating in a variety of state and national clinical, educational, advocacy and quality assurance projects. Some of the specialty consult topics she addresses include sexual and reproductive health, eating disorders, menstrual abnormalities, and the health care needs of LGBTQ youth. The goal is to respect the newly emerging independence of young adults while working within the supportive framework of family and community.

Dr. Gibson was awarded a new grant this year to provide technical assistance to the Personal Responsibility and Education Program (PREP) teen pregnancy prevention program at the Vermont Department of Health. She has also worked with other departments to create inpatient guidelines for managing abnormal uterine bleeding and eating disorders in adolescent patients. In addition, she is a member of the UVM Children’s Hospital Transgender Youth Clinic Advisory Committee and the Primary Care Suboxone Treatment Expansion Committee.

This year, Dr. Gibson worked with members of the Vermont State Legislature, Planned Parenthood New England, and Vermont Department of Health to pass Bill H.620 in support of equitable coverage of contraception in the state. In 2016, she was accepted as a Master Teacher to the Larner College of Medicine Teaching Academy, and had a commentary published in the journal *Pediatrics* entitled “All Adolescents Deserve Routine Conversation About Sexual Activity and Pregnancy Prevention.”

Child Abuse Program

PROGRAM
DIRECTOR
JOSEPH HAGAN,
M.D.

The Pediatric Sexual Abuse Nurse Examiners (SANE) and ChildSafe Programs coordinate to provide comprehensive medical services for child victims of physical abuse, sexual abuse, medical child abuse, emotional abuse and neglect. ChildSafe Clinic is on Thursdays throughout the year. Clinic directors are also available at any time for consultation through Provider Access Services. Pediatric SANE services are accessed via Provider Access Services or through the UVM Medical Center Emergency Department and are available at any time for consultation. The ChildSafe clinicians and SANE nurses work closely with community partners including children’s advocacy centers, law enforcement, the Vermont Department for Children and Families, and others to provide high-quality, compassionate, and coordinated care to children who have been victims of abuse, and their families.

Cardiology

DIVISION CHIEF
SCOTT YEAGER,
M.D.

The Division of Pediatric Cardiology provides a full range of clinical services, including fetal diagnosis, outpatient and inpatient management of congenital and acquired heart abnormalities, outreach clinics, and both diagnostic and interventional catheterization. In addition, the division is active in quality initiatives, research projects, and the education of students, residents, and fellows.

Starting in August, Jonathan Flyer, M.D., joined the division as our fourth pediatric cardiologist. A recent graduate of the fellowship program at Columbia University, he was a finalist for the Council for Cardiovascular Disease in the Young Early Career Investigator Award presented by the American Heart Association. He presented his fellowship research at the AHA meetings in November.

The division is actively participating in the Boston Children's Hospital-based Standardized Clinical Assessment and Management Plan (SCAMP) quality initiatives. Nancy Drucker, M.D., is working with the Vermont Child Health Improvement Program (VCHIP) on a project addressing assessment, documentation and intervention in childhood obesity. Additional VCHIP collaboration includes developing programs for transitioning adolescents from pediatric to adult services, and increasing the utilization of My Health Online portion of the EHR. We received IRB approval to participate in a regional clinical study titled "A cross-sectional study of dyslipidemia among adults with congenital heart disease," which is ongoing.

Scott Yeager, M.D., is co-founder and president of the New England Congenital Cardiac Research Foundation, dedicated to supporting multi-institutional research and education programs based in the six New England States, and to providing seed money to help young investigators become more competitive for national funding.



NANCY DRUCKER, M.D.

Developmental Behavioral Pediatrics

DIVISION CHIEF
STEPHEN
CONTOMPASIS,
M.D.

The division supports both clinical services and leadership training for health professionals. Statewide developmental pediatrics services are provided through a child development clinic supported by the Vermont Department of Health Children with Special Health Needs Program. The program also funds the Autism Assessment Clinic, led by Jeremiah Dickerson, M.D., at the Vermont Center for Children, Youth, and Families at UVM, as a diagnostic clinic for Vermont children covered by Medicaid. The division collaborates with Special Olympics Vermont to address the health of athletes with intellectual and developmental disabilities. The University of Vermont is now designated as a "Special Olympics College," offering a range of collaborative activities involving faculty, staff, and students.

Recent Publications & Presentations

- Leibowitz G, Contompasis S, Yoder J. "Working with Adolescents with Autistic Spectrum Disorders and Sexually Harmful Behavior: Case of Lewis" in *Very Different Voices: Perspectives and Case Studies in Treating Sexual Aggression*, Prescott and Wilson editors, Neari Press 2016.
- Contompasis SH, Rinehart J and DeNatale L. Pediatric Grand Rounds, University of Vermont Children's Hospital, Burlington. "Reducing Health Disparities through Special Olympic Programs, Improving the Health of Persons with Intellectual and Developmental Disabilities," November 9, 2016.

VT LEND PROGRAM

The Vermont Leadership Education in Neurodevelopmental Disabilities (VT LEND) program is one of 52 LEND programs across 44 states funded through the Maternal and Child Health Bureau. In 2016, the Vermont LEND program received \$2.65 million to continue the program's mission for another five years. Its goal is to improve the health status of infants, children, and adolescents with or at risk for neurodevelopmental and related disabilities through the development of culturally competent, family-centered, community-based, interdisciplinary leadership professionals.

Recent Highlights

- VT LEND trainee Vanessa Diambou received the 2016 Association of University Centers on Disabilities (AUCD) Anne Rudigier Award recognizing an outstanding trainee/student demonstrating a commitment to supporting people with developmental disabilities and their families.
- Maria Mercedes Avila, Ph.D., received UVM's ALANA's Outstanding Faculty Award and two national recognitions, the 2016 Child Mind Institute National Change Maker Local Hero Award, and the 2016 Association of University Centers on Disabilities National Multicultural Council Leadership in Diversity Award.

Endocrinology

DIVISION CHIEF
PAUL J. ZIMAKAS,
M.D.

The Division of Pediatric Endocrinology provides both ambulatory and inpatient care for patients with a variety of complex endocrine disorders. Using a family-centered approach, patients receive the highest quality of care from a multidisciplinary team consisting of physicians, certified diabetes educators, an endocrine nurse, a pediatric nutritionist, a social worker and a pediatric psychologist.

In continuing collaboration with the Vermont Child Health Improvement Program (VCHIP), this program has developed a comprehensive database registry for patients with diabetes mellitus. This registry ensures that

quality of care standards for children with diabetes are being met. The collaboration has produced several quality improvement projects, such as improving influenza vaccination rates as well as adherence with the recommended complication-screening guidelines, and further improving the transition of patients from pediatric to adult endocrine care.

The division is also dedicated to providing clinical educational experiences for pediatric residents, adult endocrinology fellows, and reproductive-endocrinology fellows. Paul Zimakas, M.D., lectures in several courses in the Vermont Integrated Curriculum. Martina Drawdy, M.D., is on the Medical Student Admissions Committee.

Recent Highlights

- In 2016, Martina Drawdy, M.D., developed the UVM Children's Hospital Transgender Youth Program in order to support gender variant youth and their families.
- The division hosts a series of patient education nights for children with Type 1 diabetes and their families. These interactive sessions are designed to educate and empower patients and their families.



Gastroenterology, Hepatology and Nutrition

**DIVISION CHIEF
MICHAEL D'AMICO,
M.D.**

The Division of Pediatric Gastroenterology, Hepatology and Nutrition provides care for children with a variety of disorders of the GI tract, liver and pancreas, as well as problems with nutrition and growth, obesity, feeding, and lipid disorders. A childhood adolescent weight management clinic provides comprehensive evaluations and diagnosis and treatment of overweight children and adolescents. The department is very active in research and clinical of cystic fibrosis and inflammatory bowel disease, hunger prevention and medical student and resident training initiatives.

Jill Sullivan, M.D., continues work on a three-year grant from the Cystic Fibrosis Foundation as part of the Developing Innovative GastroEnterology Specialty Training (DIGEST). Pamela Puthoor, M.D., works with a consortium of providers and community leaders to improve the care of our local refugee population. She

is also very involved with local agencies working on preventing childhood and family hunger, as well as developing teaching curricula at the medical school.

The division is highly involved with ImproveCareNow, a program that has won the prestigious Drucker Prize. Founded and directed by Richard Colletti, M.D., the collaborative chronic care network focuses on Crohn's disease and ulcerative colitis in children and adolescents. It is one of the premiere quality improvement initiatives in the country.

Genetics and Dysmorphology

**DIVISION CHIEF
LEAH BURKE, M.D.**

The University of Vermont Medical Center Clinical Genetics Program provides genetic and metabolic services, and remains committed to staying abreast of the rapid changes in genetics and genomics. Our members are involved in the education of medical students, residents and fellows through formal lectures and clinical clerkships.

The UVM Medical Center Clinical Genetics Program continues to participate in a regional quality improvement project with the New England Genetics Consortium on the evaluation of children with developmental delay. We also participate in a UVM Children's Hospital project in collaboration with VCHIP looking at the transition of children with chronic conditions. We are beginning a new quality improvement project to establish standardized communication, documented in PRISM, regarding dietary and medication changes to our patients with metabolic conditions. This will help conform to standards that have been developed for children and adults with phenylketonuria (PKU).

As a member of an advisory council for the American Society of Human Genetics, Dr. Burke develops webinars for pediatricians on genetics and genomics. Through a 2015 Frymoyer Grant, she is working with the Department of Pathology to increase the presence of genetics and genomics in the Larner College of Medicine curriculum.

Under the auspices of the New England Genetics Collaborative, Dr. Burke continues to help develop the Genetics Education Materials for School Success (GEMSS) website to provide information about genetic conditions to teachers and school personnel. Ongoing activities include adapting the site for medical care providers.

Hematology/Oncology

**DIVISION CHIEF
ALAN HOMANS,
M.D.**

The Pediatric Hematology/Oncology Program provides comprehensive care in the inpatient and outpatient setting for a full range of pediatric oncologic and hematologic disorders. As an active member of the Children's Oncology Group — an international consortium of more than 150 pediatric oncology centers — patients and families have access to new, groundbreaking treatments and therapies before they become widely available. The division also helps to further education, research, and clinical care for children who have completed therapy through membership as one of the charter institutions in the regional Consortium for New England Childhood Cancer Survivors group.

Recent Grants

- American Cancer Society pilot project grant through the University of Vermont Cancer Center for the following project: "IKAROS regulates higher-order chromatin structure in pre-DBALL."
- Alex's Lemonade Stand Young Investigator Award for "Critical Contributions of CRM1 to CALM-AF10 Leukemias."

Education Initiatives

- The first annual Sickle Cell Day, hosted by Heather Bradeen, M.D., provided educational activities for families whose children have sickle cell anemia and related conditions.
- Jessica Heath, M.D., presented “Survivorship for the Long Haul: How to Survive and Thrive after a Childhood Cancer Diagnosis” at the Women’s Health Conference in Burlington. She also was a visiting professor at Bugando Medical Centre in Mwanza, Tanzania.
- Alan Homans, M.D., presented a workshop on achieving a balanced childhood in boys with severe bleeding disorders at the New England fall Family Hemophilia meeting.
- The division’s two pediatric oncology nurse practitioners provide education and training programs for chemotherapy administration.



BENJAMIN LEE, M.D

Infectious Disease

DIVISION CHIEF
WILLIAM RASZKA,
M.D.

The Division of Pediatric Immunology and Infectious Disease provides inpatient, outpatient, and telephone consultation services for acute and chronic infectious disease issues. The service is very active at all levels of medical student and resident education, as well as in infection control policy design, surveillance, and resource utilization. The service provides consultation to the state legislature and testifies on a variety of issues including vaccine safety and vaccine requirements for school entry.

Benjamin Lee, M.D. conducts vaccine research with the University of Vermont Vaccine Testing Center (VTC), where he has an active research program in rotavirus. Rotavirus is the leading cause of infectious diarrhea and resulting death due to dehydration among children worldwide. Oral rotavirus vaccines work remarkably well in high-income countries, but for unclear reasons they significantly underperform in resource-limited settings. Dr. Lee has recently been awarded several grants to conduct a clinical vaccine trial in Dhaka, Bangladesh to evaluate strategies to improve rotavirus vaccine performance in resource-limited settings. This trial will be performed in collaboration with the International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b). Closer to home, Dr. Lee is developing laboratory assays using simple blood tests to more accurately identify children who have become immune to rotavirus following vaccination, and is actively

evaluating the response of human lymphocytes to rotavirus vaccines. This work may ultimately lead to new strategies and tools to help reduce the burden of rotavirus diarrhea among children around the world.

Pediatric Critical Care Medicine

DIVISION CHIEF
AMELIA HOPKINS,
M.D.

The Pediatric Critical Care Medicine Division, staffed by five board-certified pediatric intensivists, provides care for children with life-threatening illnesses or injuries 24 hours a day. Division members participate in multi-center research projects, and engage in medical student and resident education, as well as Continuing Medical Education in local, national, and international venues. Barry Heath, M.D., PICU director for the past 20 years, has retired and transitioned the division directorship to Amelia Hopkins, M.D. This year, we welcomed Liz Ulano, M.D., who comes from Boston Children’s Hospital with a special interest in neurocritical care. She is working on pediatric traumatic brain injury and brain death protocols. The division continues to participate in NEAR4kids, a trial by the Pediatric Acute Lung Injury and Sepsis Investigators (PALISI) that aims to improve safety and standardization of pediatric intubations. In 2016, UVM Children’s Hospital was awarded the status of a top performing hospital with regards to central line-associated blood stream infection (CLABSI) prevention by the Solutions for Patient Safety Network, continuing the hospital’s national recognition for this work. Rebecca Bell, M.D., received the Subspecialist Teaching Award of the year from the residents. The division continues to provide outstanding care to the critically ill children and their families in our region. The Virtual PICU Systems, LLC (VPS) data base has continued to demonstrate that for a PICU our size, we consistently take excellent care of very ill children with a lower than expected mortality rate.

Pediatric Hospitalist Medicine

DIVISION CHIEF
KAREN LEONARD,
M.D.

The Pediatric Hospitalist Program provides hospital-based care to children from Vermont and northern New York. Two new pediatric hospitalists, Leigh-Anne Cioffredi, M.D., and Valerie Riss, M.D., joined the group over the past year. Nine full- and part-time pediatric hospitalists are available 24 hours a day, seven days a week to provide care for pediatric inpatients, newborns in the newborn nursery, pediatric patients in the emergency room, and inpatient consultations for surgical and sub-specialist services.

The division is involved in several quality improvement initiatives, including a national pediatric quality improvement collaborative aimed at improving and standardizing care for febrile infants with Abby Adler, M.D., as the site leader. A research project by Karin Gray, M.D., evaluates the benefits of donor breast milk for neonates in the newborn nursery.

Division members are also developing novel curricula, such as a Global Health Curriculum created by Molly Moore, M.D., for first year students seeking global health experiences, and a Pediatric Boot Camp created by Molly Rideout, M.D., for fourth year students going into pediatric residencies.

Recent Highlights

- A publication from Leigh-Anne Ciofreddi, M.D.: “Evaluation and Management of Febrile Children: A Review.” *JAMA Pediatrics*, 2016 Aug 1;170(8): 794-800.
- Karen Leonard, M.D., received a two-year Frymoyer Scholar grant to develop a multi-disciplinary curriculum for learners participating in Family-Centered Rounds.
- Several hospitalists presented workshops at national meetings, including the annual Pediatric Academic Societies Meeting and the Pediatric Hospital Medicine Meeting.

Neonatology

DIVISION CHIEF
CHARLES
MERCIER, M.D.

The Division of Neonatal Perinatal Medicine provides medical care to premature and sick newborns, including inpatient intensive and convalescent care, acute patient transport, and outpatient prenatal medical follow-up and developmental surveillance. The 29-bed NICU is the only level III unit in the state. The neonatal perinatal subspecialty fellowship training program is directed by Marie Berg, M.D. Charles Mercier, M.D., acts as the medical director of the Vermont Regional Perinatal Health Project, providing continuing education activities to physicians and hospital-based perinatal staff.

The division actively participates in VON NICQ and iNICQ quality improvement collaboratives. The multi-disciplinary VON NICQ quality collaborative work group aims to reduce the incidence of chronic lung disease, promote antibiotic stewardship, and improve the care of extremely low birth weight infants. In 2016, Charles Mercier, M.D., received the Living the Leadership Philosophy Award for his work in these areas. Leslie Young, M.D., and Marilyn Benis, N.N.P., co-chair the resuscitation committee, which promotes high reliability methods and collaborative team work during emergency care for our sickest infants.

Enhancing the experience for families of infants in the NICU is essential to our care. In 2016, Richard Parkoff established the Horbar Family Endowment, which creates a mobile library in the neonatal intensive care unit, as well as funds Reach Out and Read Programs.

Our focus on excellence and quality in health care does not end at hospital discharge. The NeoMedical and Developmental Follow-Up Clinics transition care from the inpatient setting to the outpatient setting. Jerilyn Metayer, R.N., Susan White, F.N.P., Carol Hassler, M.D., Deidre O'Reilly, M.D., and Anne Johnston, M.D., are the core team of follow-up professionals.



JACQUELINE GREV, M.D. (LEFT), AND MARILYN BENIS, NNP

Nephrology

DIVISION CHIEF
ANN GUILLOT, M.D.

The Division of Pediatric Nephrology continues to treat kidney disease, hypertension, incontinence, genitourinary malformations, and acute kidney injury, as well as manage pediatric kidney transplant

patients. The division has grown over the past several years and has expanded services. This year, we welcomed Sarah Twichell, M.D., who completed her fellowship at Boston Children's Hospital. Allison Fortuna, R.N., organizes the Spina Bifida Coordinated Care Clinic. Specialists include: urology, neurosurgery, physiatry, orthopedics, developmental pediatrics and nephrology. We continue to adjust the clinic based on patient and family feedback. We have also developed a healthy bladder and incontinence clinic in conjunction with pediatric urology.

The division's quality improvement projects include: continued participation in the North American Pediatric Renal Trials and Cooperative Studies group, a project to improve tracking of adherence with national recommendations for monitoring of patients with chronic kidney disease, and improving the process for transitioning from pediatric to adult care.

Palliative Medicine

DIVISION CHIEF
ROBERT
GRAMLING, M.D.

Palliative medicine is patient and family centered care that anticipates, prevents and reduces suffering. The Division of Palliative Medicine provides inpatient consultation for adults, children and their families at the University of Vermont Medical Center. A new, one-week Palliative Medicine course offered by the division is now required for all third year medical students.

Recent Publications

- Aslakson RA, Kweku J, Kinnison M, Singh S, Crowe TY, and the AAHPM Research Committee Writing Group (Gramling R). Operationalizing the Measuring What Matters Spirituality Quality Metric in a Population of Hospitalized, Critically Ill Patients and their Family Members. *Journal of Pain and Symptom Management* 2016; in press
- Whitney P, Chuang EJ. Relationship between insurance and 30-day readmission rates in patients 65 years and older discharged from an acute care hospital with hospice services. *J Hosp Med.* 2016 Oct;11(10):688-69
- Garner KK, Dubbert PM, Lensing SY, Sullivan DH and AAHPM Research Committee (Gramling R). Concordance between Veterans' Self-report and Documentation of Surrogate Decision Makers: Implications for Quality Measurement. *Journal of Pain & Symptom Management.* 2016. Nov 19 [epub ahead of print].
- Gramling R, Fiscella K, Xing G, Hoerger M, Duberstein P, Plumb S, Mohile S, Fenton JJ, Tancredi DJ, Kravitz RL, Epstein RM. Determinants of Patient-Oncologist Prognostic Discordance in Advanced Cancer. *JAMA Oncology.* 2016. 2016 Nov 1;2(11):1421-1426.
- Bartels J, Rodenbach R, Ciesinski K, Gramling R, Fiscella K, Epstein R. Eloquent silences: A musical and lexical analysis of conversation between oncologists and their patients. *Patient Education & Counseling.* 2016. Oct;99(10):1584-94.

Pulmonology

DIVISION CHIEF
THOMAS LAHIRI,
M.D.

The Pediatric Pulmonology Division provides outpatient and inpatient care to children with a variety of respiratory and airway disorders. The division supports a cystic fibrosis (CF) program that is accredited by the Cystic Fibrosis Foundation. It is also one of the top U.S. centers for pediatric lung function and for meeting recommended guidelines as reported in the national CF Foundation (CFF) Patient Registry. The division

participates in several multidisciplinary clinics to treat aerodigestive disorders, neuromuscular diseases, and patients with tracheostomies and those who require both non-invasive and invasive assisted mechanical ventilation. Several quality improvement initiatives to improve CF, asthma and tracheostomy care are in progress. Pulmonary faculty members actively contribute to medical student and pediatric resident education.

Recent Highlights

- Kelly Cowan, M.D., received a \$1.8 million NIH grant for UVM to be a clinical trials site in a 17-state network in the NIH Environmental Influences on Child Health Outcomes (ECHO) program.
- The division is the recipient of a Vermont Department of Health grant to provide support for asthma nurse educators to perform home evaluations, asthma education and outreach for patients with severe persistent asthma.

Publications & Abstracts

- Lahiri T, Hempstead SE, Brady C, et al. Clinical practice guidelines from the Cystic Fibrosis Foundation for preschoolers with cystic fibrosis. *Pediatrics* 2016 : 137(4): e20151784
- Filbrun A, Lahiri T, Ren C. *Handbook of Cystic Fibrosis*. Springer International Publishing 2016.
- May T, Black A, Gonzalez K, Trang J, Lahiri T, Duarte C, Sender L, Cornell A, Gifford A. Regional variation in complication rates of central venous catheters in CF patients. North American Cystic Fibrosis Conference, Orlando, FL, 2016, *Pediatr Pulmonol S45: 2016*



LESLIE ABRAMSON, M.D.

Rheumatology

The Division of Pediatric Rheumatology provides subspecialty care to children with a variety of rheumatic diseases, including juvenile idiopathic arthritis, juvenile dermatomyositis, lupus, scleroderma, vasculitis and other autoimmune disorders. Leslie Abramson, M.D., participates in national study groups and cohorts involving clinical research activities aimed at improving the care of children with rheumatic disease.

Recent Publications

- Habers GE, Huber AM, Mamyrova G, Targoff IN, O'Hanlon TP, Adams S, Pandey JP, Boonacker C, van Brussel

M, Miller FW, van Royen-Kerkhof A, Rider LG; Childhood Myositis Heterogeneity Study Group. Brief Report: Association of Myositis Autoantibodies, Clinical Features, and Environmental Exposures at Illness Onset With Disease Course in Juvenile Myositis. *Arthritis Rheumatol*. 2016 Mar;68(3):761-8. doi: 10.1002/art.39466.

- Cabral DA, Canter DL, Muscal E, Nanda K, Wahezi DM, Spalding SJ, Twilt M, Benseler SM, Campillo S, Charuvani S, Dancey P, Eberhard BA, Elder ME, Hersh A, Higgins GC, Huber AM, Khubchandani R, Kim S, Klein-Gitelman M, Kostik MM, Lawson EF, Lee T, Lubieniecka JM, McCurdy D, Moorthy LN, Morishita KA, Nielsen SM, O'Neil KM, Reiff A, Ristic G, Robinson AB, Sarmiento A, Shenoi S, Toth MB, Van Mater HA, Wagner-Weiner L, Weiss JE, White AJ, Yeung RS; ARChiVe Investigators Network within the PedVas Initiative. Comparing Presenting Clinical Features in 48 Children With Microscopic Polyangiitis to 183 Children Who Have Granulomatosis With Polyangiitis (Wegener's): An ARChiVe Cohort Study. *Arthritis Rheumatol*. 2016 Oct;68(10):2514-26. doi: 10.1002/art.39729.

OTHER PEDIATRIC SPECIALTIES

Anesthesiology

The Department of Anesthesiology, Division of Pediatrics provides anesthetic care to children of all ages and medical complexities. Our department is composed of many anesthesiologists with pediatric expertise, as well as specialty trained pediatric anesthesiologists qualified to handle our more complex pediatric population.

We welcomed Lisa Emerson, R.N., as our new nurse manager for the Comfort Zone, with pediatric anesthesiologist Monika Modlinski, M.D., continuing to serve as medical director. A rapidly growing phlebotomy service for infants and children with special needs has generated interest in developing a pediatric phlebotomy lab outside the Comfort Zone.

Research continues to delineate the effects of anesthesia on the developing brain. It remains our goal to provide the safest care based on current empirical evidence. In this spirit, we continue to join with our radiology colleagues to reduce MRI scan times without compromising imaging results. We have enjoyed a very successful infant, "Feed and Sleep" program, as well as a non-anesthesia MRI program for more emotionally mature children.

As a division, we remain focused on research and education. This year, Emily L. Stebbins, M.D., joined the Teaching Academy, adding to the growing number of anesthesiologists who are now members, including Distinguished Educator and pediatric anesthesiologist, Melissa Davidson, M.D.

Recent Highlights

- Several faculty members – including Melissa Davidson, M.D., Ann Lawrence, D.O., Emily Stebbins, M.D., and Robert Williams, M.D. – presented at conferences locally and nationally in 2016, including the Society for Pediatric Anesthesia, Society for Ambulatory Anesthesia, and the Society for Education in Anesthesia national conferences.
- Kevin Abnet, M.D., Melissa Davidson, M.D., Ann Lawrence, D.O., and Robert Williams, M.D., published multiple abstracts.
- Emily Stebbins, M.D., became co-residency director of anesthesiology.
- Joseph Kreutz, M.D., published *Anesthesia at the House*, a history of anesthesiology at the University of Vermont Medical Center.

**DIVISION CHIEF
LESLIE
ABRAMSON, M.D.**

Emergency Medicine

DIVISION CHIEF
PETER
WEIMERSHEIMER,
M.D.

The Pediatric Emergency Department (ED), a newly formed section within the Division of Emergency Medicine, provides a dedicated space for children, as well as specialized equipment, treatment protocols, and staff focused on child-centered care. A new, larger pediatric-centered space is being developed to provide a welcoming and comfortable environment for children of all ages.

Clinical and educational initiatives for physicians and staff promote the latest paradigms of pediatric emergency care, with input from peer reviewed literature, experts in emergency and pediatric medicine, family advocates, child life services, and pediatric specialists.

Multiple quality improvement projects have been developed in association with the pediatric residency program. Metrics tracked include adherence to the most recent standards of pediatric emergency medical care, the quality of resident and medical education, and assessment of the family experience at the pediatric ED. There has also been a focus on working with community physicians and those at referring medical centers to improve communication and access to appropriate outpatient follow up.

The development of the pediatric ED has included improving the educational experience of residents, medical students, and ED providers. Pediatric and family medicine residents have the opportunity to focus solely on pediatric emergency medical care during month long rotations, exposing them to a wide variety of acute cases from initial presentation to disposition, as well as training from emergency medicine specialists, pediatric hospitalists and specialists, and regular didactics on pediatric emergency care.

Neurology

DIVISION CHIEF
PETER BINGHAM,
M.D.

The Division of Neurology provides comprehensive care for the full scope of neurological problems in children from birth through adolescence, including headache, seizure, developmental delay, movement disorders, autism, and more. The division trains regional high school students and UVM undergraduate students, as well as medical students and residents.



RODNEY SCOTT, PH.D.

Deborah Hirtz, M.D., a former project manager at the National Institute of Neurological Disorders and Stroke, has joined Peter Bingham, M.D., Rodney Scott, M.D., and Gregory Holmes, M.D., at the Children's Specialty Center. Bradley Clopton, CNP, focuses his clinical work on headache and tic disorders.

Our NIH-supported summer research program in neuroscience for UVM undergraduates continues, as well as outreach education in Vermont. The neuromuscular clinic now serves over 70 children in northern New York with muscular dystrophy and other neuromuscular conditions. Laboratory research from Dr. Scott and Dr. Holmes has shown how medication for seizures arising early in life may improve long term behavioral and cognitive outcomes. Quality improvement efforts focus on improving pediatric neuroradiological referral, and improving headache interview skills in trainees. Advocacy opportunities include participation in the LetsGrowKids advocacy organization, and advocating against stigma associated with chronic pain and epilepsy in our state.

In addition to laboratory and clinic-based research into epilepsy, other research focuses on symptom recognition via neurosensory training in children with asthma, so that they can better recognize and manage their condition. In total, our section published over 20 reports in medical journals in 2016.

Orthopedics

DIVISION CHIEF
JENNIFER LISLE,
M.D.

The Division of Pediatric Orthopedics provides advanced care for children and adolescents with all types of musculoskeletal problems, including scoliosis, bone tumors, upper and lower extremity problems, neuromuscular disorders and other orthopedic conditions. The division treats children with cerebral palsy, myelomeningocele, muscular dystrophy and other neuromuscular disorders through the Vermont Department of Health. Faculty are involved in research and in the education of medical students and orthopedic surgery residents. As a university hospital, our treatments are backed by research-based expertise, and patients have access to the latest pediatric orthopedic treatments and therapies available. Our physicians are board certified orthopedic surgeons with additional specialty training in pediatrics.

Pathology

DIVISION CHIEF
SUZANNE TUCKER,
M.D.

The spectrum of diseases in children is significantly different than those affecting adults. Complications of preterm delivery, as well as developmental and metabolic derangements, all require a unique approach to diagnosis, treatment and predictions for recurrence in the family. Pediatric Pathology contributes to these efforts both in the chemistry laboratory, with reference ranges specific for children, as well as in the surgical pathology laboratory, where understanding of human embryology helps to explain anatomic malformations of multiple organs.

Using state of the art molecular testing, we can render a diagnosis specific to the molecular features of a tumor, leading to personalized and innovative therapies. A new Genomic Medicine Laboratory at UVM Medical Center, opened in the first quarter of 2017, advances our molecular testing capabilities.

After final diagnosis of a malignant tumor, portions are submitted for special studies performed for the Children's Oncology Group. This group, a National Cancer Institute, is the world's largest organization devoted exclusively to childhood and adolescent cancer research. The Children's Oncology Group has turned children's cancer from a virtually incurable disease 50 years ago to one that now has a combined five-year survival rate of 80 percent. Not only has survival improved, but treatments have been modified such that

good response of the tumor is achieved, but with fewer side effects.

Recent Publications

- Tucker SM & Alexandrescu S. Updates and review of neoplastic paediatric neuropathology *Diagnostic Histopathology*, 2016; Nov, 22 , (11): 431 – 438.
- Alexandrescu, S & Tucker, SM. A review of molecular alterations with clinical impact in adult and paediatric gliomas. *Diagnostic Histopathology*, 2016; Nov, 22, (11): 439-446.

Psychology

The Pediatric Psychology Service cares for children, adolescents, adults and families referred through pediatric specialty clinics, inpatient general and intensive care pediatric units, and community providers. Division members provide a full range of services, including cognitive-behavioral therapies; trauma focused, interpersonal, family, and psychodynamically informed interventions; parent training and guidance; parent-child interaction therapy; mindfulness-based interventions; and psychological intervention for pain management. The department also trains child psychiatry fellows and clinical psychology practicum students.

Recent Highlights

- In 2016, Marlene Maron, Ph.D., became board certified in clinical psychology, and Courtney Fleisher, Ph.D., attained board certification in child and adolescent clinical psychology. Kimberlee Roy, Ph.D., has completed the first two phases of the board certification process.
- Dr. Maron was awarded the 2016 Child Psychiatry Fellowship Faculty Appreciation Award.
- Psychosocial distress screening of families served by the pediatric hematology-oncology service is now operational, under the tutelage of Dr. Fleisher and Adam Fortune.
- Dr. Maron has collaborated with Martina Drawdy, M.D., and Jamie Mehringer, M.D., to develop a clinic for transgendered youth. Dr. Maron serves as a mental health coordinator to facilitate referrals for assessment and intervention for transgendered and questioning youth.
- Dr. Maron and Tara McCuin, Ph.D., are developing programming to address psychological factors in addiction in medically hospitalized patients. Behavioral and treatment guidelines specifically address transitional aged young adults admitted for infections presumed to be related to IV drug use.
- In 2016, Logan Hegg, Psy.D., joined the division as a co-located psychologist in Pediatric Primary Care – Burlington. Dr. Hegg has worked closely with Erica Gibson, M.D., on developing programming for children and adolescents with eating disorders. Along with Dr. Maron, Dr. Hegg served on a committee to develop a study guide for Bess O'Brien's film, *All of Me*, a documentary about eating disorders.

Psychiatry

The Vermont Center for Children, Youth, and Families (VCCYF), under the direction of Jim Hudziak M.D., is an internationally known Division of Child and Adolescent Psychiatry, and serves the Department of Pediatrics through patient care, training, teaching and research efforts. The center welcomed two additional child psychiatrists this year in order to increase access for children and families who struggle with emotional behavioral illness. The VCCYF has robust academic research programs in the genetics and neuroplasticity of trauma, Adverse Child Experience research, psychophysiology, multicultural assessment, temperament, epidemiology, and public health. The VCCYF, in partnership with VCHIP, has a novel health promotion, illness prevention, family based program that serves children from conception to adulthood. The programs exist in

**DIVISION CHIEF
MARLENE MARON,
PH.D.**

**DIVISION CHIEF
JAMES HUDZIAK,
M.D.**

JAMES HUDZIAK, M.D.



the Division of Pediatric Primary Care as well as in the OB clinic to help expectant mothers and families with children achieve optimal health. The VCCYF is also the home of the UVM Wellness Environment, a health promotion and illness prevention program for transitional age youth (college students). The center had over 30 publications in peer reviewed journals this past academic year.

Radiology

Pediatric Radiology uses state of the art imaging technology to obtain the highest possible image quality, while maintaining safety for the child. Whenever possible, ultrasound and magnetic resonance imaging are used. Education of radiology residents, medical students and residents from other specialties is an important function of the department, as is collaboration in research with other specialties. Teleradiology support for the hospital continues.

PEDIATRIC SURGICAL SPECIALTIES

General Surgery

The spectrum of conditions treated by pediatric surgery range from surgical disorders in the smallest of premature infants to correction of chest wall deformities in teens, and also includes treatment of congenital anomalies of the head and neck, chest, and abdomen; care of acute surgical problems throughout childhood; surgical management of pediatric tumors; and coordination of trauma care for children. The division performs around 600 operative procedures each year, and oversees the care provided to over 100 pediatric trauma admissions each year.

Neurological Surgery

Pediatric neurosurgery provides comprehensive, family-centered care in collaboration with specialists in virtually every field of pediatrics. State-of-the-art operative equipment including image guidance systems,

**DIVISION CHIEF
TIMOTHY HIGGINS,
M.D.**

**DIVISION CHIEF
KENNETH
SARTORELLI, M.D.**

**DIVISION CHIEF
SUSAN DURHAM, M.D.**

intraoperative neurophysiologic monitoring, and the latest technologic advances found in major academic medical centers enhance the safety and effectiveness of neurosurgical treatments.

During the past academic year, pediatric neurosurgery co-authored the Guidelines for Management of Positional Plagiocephaly, endorsed by the American Academy of Pediatrics and the American Association of Neurological Surgeons. UVM Pediatric Neurosurgery is also participating in a multi-center clinical trial on the surgical treatment of Chiari malformation in children.



RICHARD HUBBELL, M.D.

Otolaryngology

DIVISION CHIEF
RICHARD
HUBBELL, M.D.

The section of Pediatric Otolaryngology in the Division of Otolaryngology provides comprehensive pediatric otolaryngology care. The section is comprised of Vermont's only two fellowship-trained pediatric otolaryngologists, Richard Hubbell, M.D., who trained under the renowned Dr. Robin Cotton at Cincinnati Children's Hospital, and Heather Herrington, M.D., who recently completed her training at Boston Children's Hospital. The section is involved in several quality projects, including a multidisciplinary UVM Medical Center initiative to improve the care of children with tracheostomies both in and out of the hospital. The section is also advocating at the state level for universal newborn cytomegalovirus (CMV) screening, which would allow for accurate diagnosis of CMV-related hearing loss, estimated to be about 30 percent of non-syndromic hearing loss in children, and provide opportunity for treatment in infancy.

Recent Publications

- Strychowsky JE, Roberson DW, Martin T, Smithers J, Herrington H. Proximal bronchial balloon dilation for embedded distal airway foreign bodies. *Laryngoscope*. 2016 Jul;126(7):1693-5. doi: 10.1002/lary.25680. No abstract available. PMID:26422679
- Herrington H, Adil E, Moritz E, Robson C, Perez-Atayde A, Proctor M, Rahbar R. Update on current evaluation and management of pediatric nasal dermoid. *Laryngoscope*. 2016 Sep;126(9):2151-60. doi: 10.1002/lary.25860.PMID:26891409

Pediatric Plastic Surgery

DIVISION CHIEF
DONALD LAUB,
M.D.

The Division of Pediatric Plastic Surgery treats children with craniofacial congenital anomalies, upper extremity congenital anomalies and spasticity from cerebral palsy, as well as skin lesions such as congenital nevi. The division also treats traumatic injuries, such as facial trauma and lawnmower injuries. Donald Laub, M.D., is medical director of the Vermont State Children with Special Health Needs (CSHN) Cleft Palate/Craniofacial Center, and the University of Vermont Children's Upper Extremity Center. The Vermont State CSHN Cleft Palate/Craniofacial Clinic is officially certified by the American Cleft Palate-Craniofacial Association.

Recent Publications

- Tranmer AI, Laub DR Jr. "Madelung's Deformity" *ePlasty*, 1: ic34: Aug 8, 2016
- Jerome MA, Gillenwater J, Laub DR, Osler T, Allan AY, Restrepo C, Campbell A. "Primary Cleft Lip and Palate Repair in Assam, India: Does Preoperative Anthropometric Analysis Help Identify Patients With Increased Surgical Risk in a Clinically Prescreened Population?" *Cleft Palate Craniofac J*. 2016 May 31.
- Sayadi L, Chopan M, Laub DR Jr. "Thumb Hypoplasia" *ePlasty*, 15: ic62: Dec 21, 2015
- Laub DR Jr, Williams RK. "Neonatal Anesthesia Neurotoxicity: a Review for Cleft and Craniofacial Surgeons." *Cleft Palate Craniofacial J* 52(4): 494-498, July, 2015.
- Chopan M, Sayadi L, Laub DR Jr. "Mobius Syndrome and Poland Syndrome Presenting Together in a Single Patient" *ePlasty*, 15: ic12: Feb19, 2015
- Burke LW, Laub DR Jr.: "Incidence and Syndromes Associated with Congenital Anomalies of the Upper Limb" in *Congenital Anomalies of the Upper Extremity: Etiology and Treatment*, Laub, DR Jr. ed. (Springer: Heidelberg) January 2015.

Urology

DIVISION CHIEF
GERALD MINGIN,
M.D.

Pediatric Urology diagnoses and treats children with a wide range of congenital and acquired conditions involving the genitourinary tracts. The team includes a fully-qualified, fellowship-trained, board certified (pediatric urology) pediatric urologist supported by the full range of pediatric specialists available to consult as needed. Services include a multi-specialty voiding dysfunction, active participation in the multidisciplinary myelomeningocele clinic, and robotic minimally invasive surgical treatment allowing for complex reconstructive procedures, such as bladder augmentation and bladder neck reconstruction.

Over the past year we have forged a closer relationship with Children's Hospital of Philadelphia, including participation in clinical care conferences and the ability to offer our patients access to world class expertise for patients with the most complex of urologic conditions.

Recent Publication

- Mingin GC, Heppner TJ, Tykocki NR, Erickson CS, Vizzard MA, Nelson MT. Social stress in mice induces urinary bladder overactivity and increases TRPV1 channel-dependent afferent nerve activity. *Am J Physiol Regul Integr Comp Physiol*.

Faculty

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Eva Fraser-Harris, M.D.
Joseph Kreutz, M.D.
Ann Lawrence, M.D.
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Cardiology

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Child Abuse

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