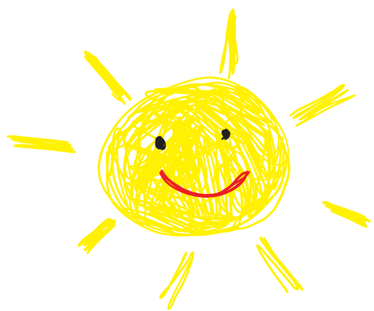
Two Larner College of Medicine alums in Vermont are breaking new ground in critical pediatric fields. James Metz, M.D.'06, returned to the state to lead an interdisciplinary child abuse prevention team. Nick Bonenfant, M.D.'17, has created a new program to provide mental health care for children and additional training for pediatricians.→



Supporting Vermont Kids

By Michelle Bookless

(Left to right): James Metz, M.D.'06, Tracey Wagner, R.N., MSCN, CPN, and Mary-Ellen Rafuse, MSW, are members of UVM Medical Center's Child Safe Program.

As a new medical graduate just beginning a pediatric residency at Seattle Children's Hospital in 2006, James Metz, M.D.'06, never imagined that 12 years later, he'd return to his alma mater and home state as one of only two board-certified child abuse pediatricians in Vermont.

Now a Larner assistant professor of pediatrics and the sole child abuse specialist at UVM Children's Hospital, Metz, along with his team at the UVM Medical Center's Child Safe Program, is making a positive impact on health care for mistreated children in the state. But Metz is quick to admit that, without a solid framework created by the medical professionals and mentors who came before him, that impact wouldn't be possible.

A New Field of Medicine

Child maltreatment—including neglect and physical, sexual, and psychological abuse—is not new, nor is the need for trained medical professionals to treat these victims, says Metz's mentor Joseph Hagan, M.D., a Vermont pediatrician, clinical professor of pediatrics and national pediatrics leader. Hagan notes that it wasn't until C. Henry Kempe, M.D.'s article, "The Battered-Child Syndrome," was published by the *Journal of the American Medical Association* in 1962, that the issue of child abuse was recognized by the medical community as one that needed to be clinically researched, diagnosed, and treated. At the time, this duty largely fell to primary care pediatricians.

It's a duty that Hagan and Karyn Patno, M.D., Metz's other role model, earnestly dove into early in their careers—Hagan in the early 80s and Patno in the early 90s. Over time, Hagan and Patno, who is Vermont's only other board-certified child abuse pediatrician, became the "go-to" doctors for Vermont clinicians, caregivers, and social workers who were seeking guidance in complex cases of suspected child abuse and neglect. For years, the two covered all calls for child abuse clinical specialists in the state. Patno, in St. Johnsbury, covered the east side of the state and Hagan, in Burlington, covered the west. It was Patno who first created Vermont's Child Safe Program in 2008. Until Metz's recent arrival, Patno ran the Child Safe clinics first from St. Johnsbury. She subsequently expanded the program to UVM Children's Hospital and later worked in tandem with Hagan in Burlington.

Over four decades following the publication of Kempe's JAMA article, a small group of clinicians around the country—including Patno and Hagan—unofficially surfaced as specialists in evaluating abuse cases and assisting child protective agencies with their medical point of view. In many states, there were none.

Finally, around the same time Metz was graduating from medical school, the field of child abuse pediatrics formally came into existence. In 2006, the American Board of Medical Specialties officially recognized child abuse pediatrics as a pediatric subspecialty. Three years later, the American Board of Pediatrics held the first board certification examination.

Looking to Science for Guidance

The creation of the subspecialty and relatively new availability of fellowship programs is one that Patno, Hagan, and Metz agree has pushed the field forward in necessary and ground-breaking ways. Most important, the three say, is the increase in field-specific research and literature.

"One of the biggest values of having a subspecialty is that it supports and encourages research in the field," says Patno. "Before, we knew how to evaluate injuries, but now we have so much more information—which leads to fewer mistakes in terms of under- or over-diagnosing of injuries."

It doesn't take long before the full weight of what Patno says next sinks in: "If you fail to recognize child abuse, you send a child into danger. If you over-call it, you destroy a family."

Tracey Wagner, R.N., MSCN, CPN, a forensic nurse who has worked in the UVM Department of Pediatrics since 1985, agrees. "In the past, decision-making was more subjective," she says, adding that the key change to the field has been a growing foundation of scientific knowledge and research-based evaluation, diagnosis, and recommendations.

"It's extremely high-stakes," Metz adds, emphasizing, "this is an area that should require additional specialized training, just like cardiology or gastroenterology. There are so many aspects of child abuse medicine that we don't learn very much of in medical school or residency—social, legal, medical, and forensic. The need for additional training is both necessary and apparent."

Standardization to Reduce and Eliminate Bias

Why are standardization and evidence-based protocols in the field of child abuse pediatrics so important? One reason, says Metz and his colleagues, is systemic inherent bias rooted deep in our society.

"As a team, we know that there is inherent bias, including systemic racism, built into the child welfare system," says Mary Ellen Rafuse, MSW, who was a social worker for the Vermont Department for Children and Families (DCF) for 10 years and now works full-time for the Child Safe Program. "We need to make sure we're not compounding that problem and are actively working to diminish it," Rafuse says. "That's why we're so focused on creating standardized guidelines and protocols."

So, what does standardization in the field look like and how do Metz and his team work to enact it within the program and throughout Vermont? First and foremost, says Metz, "every child needs to be assessed based on their injury, not their social context."

Child abuse pediatricians look at the biomechanics of injuries to understand, for instance, the type of head trauma that would occur as the result of shaking versus a car accident. By looking at the forensic evidence, clinicians like Metz and his team can train social workers, emergency medicine professionals, and primary care physicians how to identify sentinel injuries—injuries that are concerning for abuse, and therefore require what they refer to as "a work up."

An example of a sentinel injury, says Metz, could be a small bruise on a four-week old baby versus a broken femur in a four-year old child. One is much less likely to occur as an accidental injury in a non-ambulatory-versus-ambulatory child.

If a sentinel injury is identified using researched-based standardized assessment criteria, the child is treated, and further processes are enacted in a specifically prescribed way. Ensuring suspected abuse cases are evaluated and treated in a standardized manner limits the impact of social bias on decision-making among all providers.

Despite the disheartening upward trend in cases, Metz, Patno, Wagner, Hagan, and Rafuse all agree about the reason they were ultimately drawn to and remain committed to the field of child abuse medicine—hope.

Two Pandemics Converge

Unfortunately, child abuse cases have increased across the country and within the state over the last ten years, particularly among younger children, says Rafuse. Metz and his colleagues attribute the increase, in part, to the opioid crisis.

"We're seeing many more children in care of relatives and increased cases of accidental ingestions and neglect," says Rafuse.

It remains to be seen if the ongoing COVID-19 pandemic has contributed to the increase; the team at the Child Safe Program thinks that, based on the compelling evidence of the past, it probably will.

"We know that during times of economic stress, incidence of abuse goes up," says Metz. "Unfortunately, there's no reason to believe it will be different this time." Wagner notes that the increasingly individualistic nature of our society and the isolation created by necessary social distancing measures are additionally concerning factors.

Still, it will probably be another year, well into 2021 before reliable statistics show the true story of how COVID-19 has affected the field, says Patno.

A Hopeful Future

Despite the disheartening upward trend in cases, Metz, Patno, Wagner, Hagan, and Rafuse all agree about the reason they were ultimately drawn to and remain committed to the field of child abuse medicine—hope.

"There are so many opportunities and ways to tackle the problem," says Metz.

Hagan agrees and says that the formal creation of the subspecialty has contributed greatly to the current and future momentum of the field. "Now, we have a group of people whose full-time work is seeing these children and families, working with their peers around the country, developing policy, creating training programs, and actively advocating," he says. He stresses, however, that it remains the responsibility of every clinician to identify and report suspected child abuse and neglect.

Wagner adds that the field is becoming increasingly multi-disciplinary and collaborative, and Rafuse says the arrival of Metz has allowed the Child Safe Program to become a formal hub for consistent response and information delivery to child protective professionals around the state.

"We are so fortunate to have James with us," says Lewis First, M.D., M.Sc., Larner College of Medicine professor and chair of pediatrics and UVM Children's Hospital chief. "He recognizes that we'll only succeed if we continue to connect and build partnerships with state agencies, organizations, schools, and all those interested in advocating for the health, safety, and well-being of children across Vermont and upstate New York. His efforts to build a truly collaborative program is helping our state become a national leader in child abuse prevention and treatment."

Currently, there are only 336 board-certified child abuse pediatricians in the United States. Metz and his colleagues agree that the field is in need of urgent growth.

"Ensuring children are empowered and raised to become healthy, happy, productive members of our communities is one of the most important things we can do," says Metz. "Child abuse needs to be brought out from the underbelly of society. It's easy for people to say 'the problem is too big; it's too difficult; it's too sad.' But that's when you need to step into a problem, not away from it."

Mind Body Buddy

As a new pediatric resident at UVM Children's Hospital, Nick Bonenfant, M.D.'17, found himself struggling with how to best support adolescents with mental health issues.

"During my first year of residency, I inherited a panel of primarily adolescent male patients," he says. "While treating them I felt this disconnect—questioning my ability to connect with them about things like anxiety and depression, worrying about not using the right words, and feeling like I lacked a comfort level and expertise that I needed."

He's not alone in this challenge—the number of children presenting with mental health issues is on the rise, and pediatricians are often the first to assess how best to offer support. They can have trouble finding help, as the number of mental and behavioral health specialists hasn't kept pace with need. As the COVID-19 pandemic continues to rage on, experts see that gap widening even further.

Vermont is experiencing these shortages first-hand. In a state with more than 118,000 children under the age of 18, there are only 32 board-certified child and adolescent psychiatrists, the majority of whom are 50-plus years old, according to the American Academy of Child and Adolescent Psychiatry. With a ratio of one psychiatrist to every 3,867 children, referrals from pediatric and primary care practices to these specialists can take upwards of six months. In the interim, and for those who do not meet the criteria for referral to psychiatric specialists, pediatricians become the first and sometimes only contact and support for caretakers and their children.

That's why it's crucial for primary care physicians and pediatricians to feel comfortable and be further trained in assessing children for mental, emotional, and behavioral health issues and providing initial care and support, says Bonenfant, now chief resident for the UVM Department of Pediatrics Residency Program. Yet, until now, that type of training is not heavily highlighted in an already jam-packed and rigorous pediatric residency curricula.

"You need to integrate the mental health of patients into all aspects of what you do to care for them," says UVM Professor and Chair of Pediatrics and UVM Children's Hospital Chief Lewis First, M.D. "You have to understand what it means to be able to recognize the signs of depression, anxiety, or stress as it impacts a child or teenager's ability to deal with whatever their physical illness is. Being able to diagnose and treat common mental health issues in our youth are essential attributes that every pediatric clinician must learn about during their training and then apply to whatever they do with that training."

Two New Programs Emerge

Spurred by his own experience as a teen who suffered from anxiety and now, as a pediatrician-in-training treating patients, Bonenfant set out to further his own education and that of the pediatric residents who would come after him. Just three years later, two new programs have emerged to enhance training for both pediatric and psychiatry residents.

Developed in collaboration with Assistant Professor and Director of the Child Psychiatry Fellowship Program Maya Strange, M.D., and Elizabeth Forbes, M.D., an assistant professor of pediatrics and division chief of the UVM Children's Hospital Children's Specialty Center, an elective psychiatry rotation gives second- and third-year pediatric residents a foundation for understanding and assessing child and adolescent mental health. The four-week rotation focuses on shadowing child and adolescent psychiatric physicians and fellows and working with UVM's Vermont Center for Children, Youth, and Families and community organizations such as the Howard Center, a mental health agency in Burlington. Now, six out of seven third-year pediatric residents are taking part in the optional elective.

The connections that Bonenfant made while creating and completing the elective, and his work with 2019-2020 UVM Pediatric Chief Resident Anna Zuckerman, M.D., ultimately led to the creation of a second new offering, the Mind Body Buddy program.

Officially launched in October 2020, the program is the culmination of a joint effort between the UVM Department of Pediatrics and Department of Psychiatry, specifically Bonenfant, Zuckerman, Strange, Forbes, Associate Professor and Director of the Pediatric Residency Program Jill Rinehart, M.D., Assistant Professor of Psychiatry Haley McGowan, D.O., Clinical Professor of Pediatrics Marshall "Buzz" Land, M.D., Clinical Assistant Professor of Psychiatry Logan Hegg, M.D., and Clinical Instructor of Psychiatry and Child and Adolescent Psychiatry Fellow Aamani Chava, M.D.

Aligning with the State of Vermont

The creation of the program and the elective align with the collaborative care model being adopted by the health care system in Vermont and other states. When Rinehart became the new residency program director in September 2019, enhancing pediatric training in regard to mental and behavioral health was at the top of her list of goals. So, when she heard about the work that was already being done by Bonenfant, Strange, Zuckerman, Chava, McGowan, and others, it was a "no-brainer." Rinehart says she told the group: "Do it—all doors are open! I'll connect you with anyone you need to connect with and provide any support I can."

Structured similarly to a program at Maine Medical Center in Portland, Maine, Mind Body Buddy bolsters both the pediatric residency curriculum and the child and adolescent psychiatry fellow training program with real-time peer-to-peer support, cross-specialty lectures, and the opportunity for occasional patient appointments during which both a pediatric resident and a child and adolescent psychiatry fellow are present—something that would rarely happen outside of this environment.

Nick Bonenfant, M.D.'17, and Aamani Chava, M.D., collaborated with colleagues to create the Mind Body Buddy Program for pediatric residents and child/adolescent psychiatry fellows.

"We wanted to create a program that would not only be high-yield but practical in terms of how much we could offer within existing training structure to improve residents' preparation for the mental and behavioral health concerns they will encounter frequently with their child and adolescent patients and families," says Bonenfant. The curriculum grew from there.

Now, each July, when child and adolescent psychiatry fellows and residents start their training, one fellow is partnered with one first-year, one second-year, and one third-year pediatric resident. The third-year pediatric resident acts as the liaison between their fellow residents and their assigned child and adolescent psychiatry fellow "buddy." At least once each month, the pediatric and psychiatric buddy pairs meet to discuss cases and assessments they have questions about. In between monthly meetings, the buddies often text, call, or set up virtual meetings with one another for informal consults, or time-sensitive questions and concerns. The knowledge sharing and benefits are a two-way street, says Chava.

"As child psychiatrists, we can help answer questions about pharmacology, family approaches, and mental and behavioral health resources for our pediatric counterparts," Chava says. "At the same time, I may be treating a patient for anxiety who also has a chronic disease such as Crohns. I can ask my pediatric buddy about the facets and treatment of the disease I'm not familiar with and learn more about the history of that patient and their family's experience with it."

Safety and Security

Although the exchange of information alone is important, the way in which that exchange happens is particularly impactful. Because pediatricians are often with a family from the birth of their child through the time the child reaches adulthood, they often become the family's most trusted confidant in terms of any medical decisions.

"When you're bringing in a new provider such as a child psychiatrist, it helps to have the support of a trusted provider who you know is keeping you safe and secure," says Chava. "Knowing that your new provider is collaborating with your lifelong provider gives families a feeling of safety and security."

Bonenfant and Chava agree that prior to their training and, specifically, this program, they were not always confident in consulting with their respective psychiatric and pediatric counterparts.

Better Colleagues

Chava says that the program is enabling the residents and fellows to become better colleagues by teaching them one of the most important skills in their careers—interprofessional communication. "Oftentimes, the biggest mistakes in medicine are made because of something that's missed—errors in communication," says Chava. "The program brings us back to the basics and teaches us how to communicate effectively as specialists in our respective fields."

Pediatricians and child psychiatrists with this training are critical to the future health of children and adolescents in our community, says Lewis First, M.D., M.Sc., Larner College of Medicine professor and chair of pediatrics and UVM Children's Hospital chief. "It's part of treating the 'whole child'—attending to their mental health along with their physical wellbeing," says First. "There are not enough cavalry coming into the world of mental health to meet the myriad psychological needs that society has placed on our next generation. This program is an important step in remedying that problem." VM