

Pediatric Mental Health Institute

2017 FACULTY YEAR IN REVIEW

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98



430PEDIATRIC MENTAL HEALTH STAFF



56 TRAINEES



MESSAGE FROM THE

Chair

The Pediatric Mental Health Institute is teamwork.

Collaborations allow us to provide the best in clinical care (e.g., a mental health counselor and a psychologist working with a child and family to address challenging behavior), training (e.g., psychologists and psychiatrists teaming up to provide interdisciplinary education), research (e.g., cognitive neuroscientists and treatment researchers exploring what interventions work and how they support healthy brain development), and advocacy (e.g., Pediatric Mental Health Institute team members collaborating with our colleagues in the Children's Hospital Colorado Advocacy Institute). Even our underlying organizational structure — blending the strengths of Children's Colorado and the University of Colorado School of Medicine — speaks to the centrality of teamwork to fulfilling our mission.

This annual report serves to highlight our team's accomplishments over the past year, which is indeed impressive. Our clinical program has continued to grow, innovate, and provide critical resources for caring for children's mental health in our state. Our training programs are now among the most competitive in the country to gain admission to, our research is published in the most respected journals in our field, and our advocacy and outreach efforts are helping to reshape children's mental health policy in Colorado. In these pages you will learn about some of our new team members and their accomplishments. Notably, Bruno Anthony, PhD, a nationally-recognized expert on advancing evidence-based children's mental health treatment, joined our department as the Chief of Psychology. You'll also learn about our new ENCOMPASS outpatient service, which is focused on helping adolescents struggling mental health challenges and substance misuse.

Our annual report is an essential reading because the Pediatric Mental Health Institute is an indispensable part of our hospital, University, and community. Thank you for taking the time to learn more about "PMHI."

Doyk L. Min

Douglas K. Novins, MD

The Cannon Y. and Lyndia K. Harvey Chair in Child and Adolescent Psychiatry

INTRODUCING

Bruno Anthony, PHD, **Chief of Psychology**

I am very excited about joining PMHI as Chief Psychologist. It was difficult to leave my position at Georgetown University; however, the opportunity to lead and support a dynamic group of accomplished and innovative Psychologists and be part of exciting developments at the PMHI and Children's Colorado was hard to turn down.

My background is as a clinical and developmental psychologist and I trained at Columbia University, University of Wisconsin and Yale Child Study Center. I worked on neurodevelopmental disorders at NIMH prior to joining the Department of Psychiatry at the University of Maryland where I led the Center for Attention and Developmental Disorders. Building on a five-year NIH Career Development Award in mental health services research, I focused my research and clinical work on developing family-focused and systemic approaches to help children with mental health challenges within community settings. This work continued at Georgetown where I was Professor of Pediatrics and Psychiatry. I was also Deputy Director of the Center for Child and Human Development which has been at the forefront of developing systems change strategies for children with disabilities nationally, championing culturally competent services and approaches.

I hope to help expand PMHI's focus to encompass prevention, service, policy and outcome research. My current health service research is focused on developing and testing interventions in primary care and the schools that identify behavioral, developmental and emotional concerns, implement feasible and effective treatments, foster integrative care and disseminate best practices. My work also aims to understand the factors and underlying differences in access to and quality of health services for underrepresented minority populations, with projects designed to understand and reduce disparities in health screening, health literacy and treatment outcomes. I also lead national efforts to evaluate the impact of anti-stigma and mental health literacy programs and parent and youth peer support services.

I look forward to providing leadership and guidance for current and future psychology programs. Within PMHI and across the hospital, psychologists are appreciated as robust members of interdisciplinary healthcare teams, cooperative and involved at all levels of care, partners in significant research endeavors and training efforts, and cooperative members of the administrative structure. I am committed to promoting strong and expanded roles for psychologists and to foster an environment that encourages collaboration with other disciplines.



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TACTICAL PLANNING AND PILLAR GOALS

A New Approach to Change

The PMHI engaged in active tactical planning among all of its services in 2017. The purpose of tactical planning was threefold. First, it brings a set of operational pillars that is used by Children's Colorado into our day-to-day operations, aligning the mission of PMHI to that of our hospital. Utilizing the pillars — team members, quality, services, growth, and finance — as a planning tool has enabled us to take a comprehensive look at all aspects of our operations. Second, tactical planning allows us to create alignment among Institute and program leadership and staff regarding our priorities.

With this approach, program leaders took ownership of both identifying and pursuing our operational priorities while team members were empowered to move key initiatives forward in a more focused and effective manner.

Third, we needed to create a management and accountability system that set our outstanding teams up for success. Through tactical planning, teams were guided through the development of detailed implementation plans with well-defined responsibilities and concrete deliverables. Monthly meetings facilitated the planning and implementation process and provided a mechanism for Institute leadership to help address emerging barriers. We saw a great deal of enthusiasm, engagement, and improvement through this effort.

2017 Goal Achievements



Improved faculty and staff engagement

Quality

Increased hand hygiene systematic screening for suicide

Reduced use of seclusion and restraint



Services

Decreased wait times Increased family and referring provider

satisfaction

Growth

Grew outpatient and partial hospitalization programs

Finance

Covered direct costs and contributed to covered indirect costs

Achieved fundraising targets

TOTAL PATIENTS SERVED

2016

2017

TOTAL # OF INPATIENT BEDS

1,602 Inpatient/PHP Outpatient 2,678



SERVICES

We are Growing

Dual Diagnosis Outpatient Service

In 2017, the Outpatient Psychiatry Clinic established a pilot program to provide care for youth with co-occurring mental health and substance use issues. Evaluation, treatment, and outcomes assessment are based on the ENCOMPASS model developed by Paula Riggs, MD, a professor of Psychiatry at the University of Colorado School of Medicine. This model uses an integrative evidence-based approach incorporating motivational enhancement, cognitive behavioral therapy, and psychiatric services. The clinic is staffed by a child and adolescent psychiatrist and behavioral health clinicians with the support of our outpatient program's administrative and nursing staff.

Expanding Outpatient Services

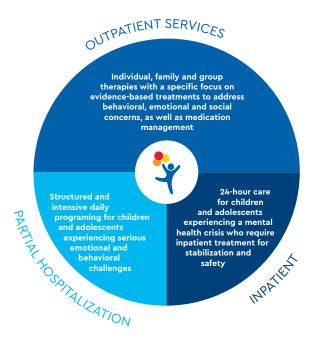
We are actively working to expand its psychotherapy services for children with autism, developmental delay, and intellectual disability who are struggling with mental health issues in our outpatient clinic. Robin Gabriels, PsyD, and Laura Anthony, PhD, nationally-recognized experts in working with children with Autism Spectrum Disorders (ASD) and their families, have joined our outpatient team. They are guiding the development of services to provide individual psychotherapy, parent support and education, and one-time consultations to help determine the appropriate supports for these children and their families. In addition to Drs. Gabriels and Anthony, the team includes Julia Barnes, PhD, Carol Beresford, MD, Monique Germone, PhD, James Murphy, MD, Patrick Romani, PhD, and Elise Sannar, MD.

TRANSDIAGNOSTIC

A New Approach, Expanding and Growing Research

A transdiagnostic approach to pediatric behavioral health aims to comprehensively address the complex behavioral health needs of children and adolescents. It is an approach that draws from a unifying theoretical model that explains disparate conditions via common mechanisms, rather than distinct diagnostic categories. Thus, treatment is guided by a targeted assessment of the underlying mechanisms that drive and maintain identified behavioral, emotional, and social concerns. For example, rather than focusing on a diagnosis of major depression, a transdiagnostic approach would instead focus on pertinent mechanisms such as difficulties with emotion regulation, distress tolerance, and interpersonal effectiveness. With this mindset, we started the PMHI Transdiagnostic Team in 2015 with the goal of developing a transdiagnostic intake process in PMHI's outpatient program. By the end of 2016, we conducted 35 transdiagnostic interviews, established a comprehensive intake process, and trained two outpatient clinicians in this approach.

In 2017 we developed a protocol for a transdiagnostic therapeutic assessment process, which was subsequently piloted in the clinic (led by, Clio Pitula, PhD, and Jenna Glover, PhD). We presented key findings from the pilot study at the Spring Pediatrics Research Poster Session, an annual symposium organized by the University of Colorado and Children's Colorado. At the end of the year, we began piloting the use of the transdiagnostic approach in a specialty pediatric outpatient setting for children with behavior problems, and those with autonomic dysfunction. Additional pilot studies focusing on transdiagnostic mechanisms are forthcoming.



Higher Levels of Care

INPATIENT

General, Eating Disorders, Neuropsychiatric Special Care

PARTIAL HOSPITALIZATION

General, Eating Disorders, Neuropsychiatric Special Care, Medical Day Treatment

INTENSIVE OUTPATIENT PROGRAM

General, Eating Disorders

Psychiatric Pharmacist

When medications play a role in a child's care, psychiatric pharmacists are an important resource to patients, families, and other health care providers. Psychiatric pharmacists teach children and families on taking medications, anticipating and managing side effects, and optimizing medication choices using current clinical evidence. Thus, the role of a psychiatric pharmacist helps to ensure pediatric patients being cared for at the PMHI receive appropriate psychotropic mediations and guidance to address their health needs.

Given this, we were thrilled when Danielle Stutzman, PharmD, joined us in 2017 as our psychiatric pharmacist. Dr. Stutzman provides pharmacy consultations across PMHI. Her daily activities also include making formulary updates, advocating for policy or procedure changes, and assisting patients and their families navigate complex medication regimens.

As part of Dr. Stutzman's efforts to teach patients and families about medication, she started a weekly medication education group with active attendance by adolescent patients and their parents.

This group is a platform where patients can ask questions and share their worries about their psychotropic medications, which may subsequently destignatize their medical conditions. She also teaches our medical student, advance practice provider, and psychiatry and child and adolescent psychiatry residents.

A New Vision for Intensive Services

The Intensive Services team, which includes our general psychiatric inpatient units and partial hospitalization programs, is committed to implementing a Trauma-Informed Model of Care. This family-centered and strengths-based approach acknowledges how adverse experiences can affect a child and their family, including their response to treatment. The multi-year project already contributed to improving the day-to-day operation of the these services. For example, we are training our staff to better appreciate and recognize the impact of trauma. We are also focusing on better support for the families of the children we serve and now we offer daily parent check-in groups and a parent education series (five weekly groups designed to promote and enhance parent involvement and engagement in their child's treatment).





MULTIDISCIPLINARY COLLABORATIONS

Transforming Care

First 1,000 Days: More Important Than We Realize

The First 1,000 Days Initiative is designed to focus our attention on a critical phase of child development: conception through age 3. This collaborative effort merges the expertise of Ayelet Talmi, PhD, with our hospital's Child Health Advocacy Institute. Under this initiative, policy and advocacy efforts are advancing family-friendly workplaces, particularly those that impact the caregivers of young children. Training efforts provide comprehensive (but impactful) guidance to health professionals and community partners working with young children and their families. Screenings using a standardized psychosocial tool enable a more effective identification of children at risk or already facing adversity that may create negative health outcomes in their later life. Families in need are triaged for referral, care coordination, and recommended for targeted intervention services.

The expansion of partnerships with pre-natal and early childhood providers are focused on reducing premature births, increasing referrals to pediatric settings that prioritize social and emotional health, and integrating behavioral health services, as well as ensuring more babies and parents receive care within medical homes.

For their ongoing efforts, Dr. Talmi and her team have been featured on local news and successfully acquired additional funding from The Colorado Health Foundation, Rose Community Foundation, Caring for Colorado, Kohl's, and BUILD.

Breastfeeding Trifecta: A Unique Model of Care

"Trifecta"— a multidisciplinary approach to supporting new mothers by combining the expertise of a pediatrician specializing in breastfeeding management (Maya Bunik, MD) and a registered nurse lactation consultant (Lorry Watkins) with that of PMHI psychologist Melissa Buchholz, PsyD, who brings her expertise in infant mental health and child development.

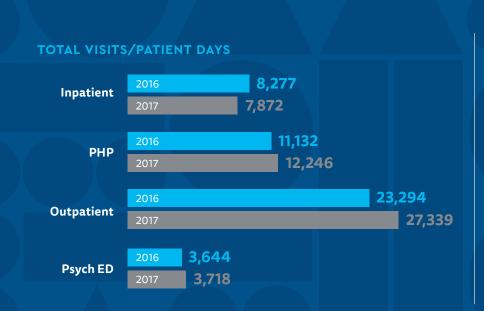
The Trifecta team has been working to hone their model for several years, resulting in a unique and well sought after service. Typically, mothers who have trouble breastfeeding consult with a lactation specialist.

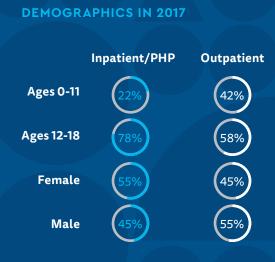
However, breastfeeding success can be hindered by other medical and psychosocial challenges. These challenges are best addressed by a team such as the Trifecta. According to Dr. Bunik, "... a mom who doesn't produce milk because of anatomical anomalies can still feel good about having special time breastfeeding baby even if she needs to feed baby using alternative methods. Having a psychologist on the team has been so helpful. She's able to loop us back in if there are any lingering issues and we are able to get so much more information on how to best support moms by designating this counseling time immediately after the clinic consult. I'd love



Pictured left to right: Melissa Buchholz, PsyD, Maya Bunik, MD, and Lorry Watkins, RN, IBCLC

to see this type of 'right here, right now' approach to mental health consultation become standard practice. Doing this type of work alone isn't possible. I think we should all dare to join forces with talented colleagues to provide the best, most compassionate care for our patients." In 2017, the team were featured in *Clinically Speaking*, a monthly publication by the University of Colorado School of Medicine for their significant accomplishments.







Celiac Center: Providing Much-Needed Support

In 2014, Monique Germone, PhD, started working at the Colorado Center for Celiac Disease at our hospital. This collaboration was initiated to bridge a gap in clinical care to address the psychological needs of children with celiac disease. In addition to providing clinical care, Dr. Germone is completing a study focused on understanding the psychosocial impact of adhering to the treatment of celiac disease (a gluten-free diet) on both the patient and family.

Transplant: A Growing Clinical and Research Collaboration

Our transplant psychologists (Cindy Buchanan, PhD, Elizabeth Steinberg, PhD, and Elenda Hessel, PhD) are part of a stellar multidisciplinary team. Clinically, a increasing demand for behavioral health expertise resulted in an expansion of our service with the addition of Dr. Hessel to this team. Their collaboration with colleagues from the kidney and liver transplant units resulted in publications in *Pediatric Nephrology* and *Pediatric Transplantation*. The team also presented their work at several annual national conferences including the American Psychological Association and the Society for Pediatric Psychology.

Dr. Buchanan's virtual support groups (conducted via videoconference) for adolescents who received solid organ transplants and do not live in close proximity were highly regarded during ongoing pilot testing.

In addition, Dr. Steinberg received a grant with her surgical colleagues to explore factors that contribute to delays in listing for transplant and strategies to improve adherence in transplant recipients.



BEYOND OUR WALLS

School and Community Outreach

Youth Action Board: Destigmatizing Mental Health

For the past five years, the Mental Health Youth Action Board become recognized as a powerful force in creating open conversations about youth mental health in Denver and beyond.

Over 45 youth from at least 20 schools in eight school districts have participated in the Youth Action Board.

Each year, the Youth Action Board produces an arts-based project with mental health as the theme. Youth Action Board members also participate in local and statewide events to advocate for sustained attention on the importance of mental health. In 2017, Youth Action Board members traveled to Washington, D.C., with the American Academy of Child and Adolescent Psychiatry to participate in their legislative conference, were interviewed by Colorado Public Radio, and presented during Speak up



for Kids Health Day at the Colorado Capitol. Our Youth Action Board members completed a social action project called Stigma Speaks that consisted of four short videos emphasizing different aspects of teen's experience with mental health. The topics in this project included bullying, boys' mental health, LGBT mental health, and treating mental health like physical health.

Mental Health Family Advisory Council

The mission of the Mental Health Family Advisory Council is to create mutually-beneficial partnerships among patients, families, and PMHI providers to promote the best outcomes and enhance the quality and safety of healthcare delivery in a sensitive, compassionate, and family-inclusive way. The primary goals of the Mental Health Family Advisory Council Care are to: 1) strengthen communication and collaboration among patients, families, caregivers, faculty, and staff at PMHI; 2) to develop and enhance community access to information, support, and educational resources that help families promote their child's social and emotional health; and 3) to develop and enhance programs, services, and policies within the PMHI departments that are aligned with families' needs and values. The Mental Health Family Advisory Council consists of family members and PMHI team members. In 2017, the Council focused on advocacy efforts, a review of PMHI clinical programs and clinical materials for children and families. Family members provided important observations about discrepancies between their experiences with "the medical side" as compared to "the mental health side" of our Hospital. This has sparked recommendations related to improving family programming and care coordination at the PMHI. In the fall, Debra Paul, a founding family member of the council, stepped up as co-chair. Further, recruitment efforts have resulted in a significant increase in the number of family members represented in the council. Thanks to the generosity and commitment of our council members, we look forward to continue our efforts to improve pediatric mental health care.

In the Schools

The "Teleschool" project led by Patrick Romani, PhD, focuses on improving the ability of school personnel to address challenging behaviors amongst their students. Developed in partnership with the Colorado Department of Education, participants were six educators (e.g., teachers, school psychologists, speech pathologists) and six students diagnosed with an Autism Spectrum Disorder. The educators and students were located an average of 166 miles (range of 124 – 189 miles) from Children's Colorado. In this project, educators connected with Dr. Romani via videoconference, and educators learned evidence-based behavioral modification techniques. The evaluation of this pilot project demonstrated that telehealth was feasible, acceptable, and effective.

In the Community

We advocate for stronger statewide mental health infrastructure, easier access to care, and expansion of prevention and community education efforts. Every year, the PMHI participates in many community events to raise awareness regarding mental health and about the services provided at Children's Colorado. In 2017, we participated in the Out of the Darkness Walk (which raised more than \$244,000 for the American Foundation of Suicide Prevention), Denver Bronco's Health and Wellness Expo, National Alliance on Mental Illness Walk-Kids Zone, and the Denver Zoo Teddy Bear Clinic. Our faculty and staff are regularly engaged in speaking events, interviews for print or broadcast media, and represent the PMHI at community events throughout the year. By the end of 2017, we participated in more than 100 outreach activities.

Lisa Costello, PhD, Chad Pennick, and Deb Federspiel worked closely with the Aurora Public School system and Aurora Mental Health to plan and carry out the inaugural Aurora Providers' Fair with the theme of Connecting Aurora. This event brought together a network of services providers available to Aurora Public Schools' students and families.

Several PMHI team members – Shannon Van Deman, Antonia Airozo, Bruno Anthony, PhD, Jason Williams, PsyD, and Susan Young, PhD, initiated a new "center of excellence" that will focus on improving the quality of children's mental health services in Colorado through training, consultation, technical assistance, and research and evaluation to mental health programs in rural and urban areas.

Cultivating the Minds of the Next Generation of Providers

Psychology Training Program

The Psychology Training Program added an additional intern position to our APA-accredited internship program. This new position, funded through a grant from the American Psychological Foundation, allowed us to have two interns receiving specialty training in integrated pediatric psychology. Our doctoral psychology interns also returned to complete a rotation on our inpatient unit. They learned about conducting targeted psychological assessment with children in the midst of mental health crises, brief therapeutic interventions, and inpatient program development.

During recruitment for the current 2017-2018 training year, the psychology training program had a robust applicant pool for each of the three training programs. The externship program, which provides two fifth-year doctoral students with clinical child and pediatric psychology training, received 30 applications for 13 placements. The 13 externs selected came from six different universities in the Colorado region. The Doctoral Internship Program received 291 applications and the program successfully matched all seven available positions with doctoral students from universities around the nation. Interns receive general training in PMHI in both the outpatient and intensive inpatient unit. Additionally, interns receive specialty training in one of six specialty tracks which include; Primary Care Psychology, Integrated Pediatric Psychology (two positions), Developmental Pediatrics, Eating Disorders, Rehabilitation Psychology, and Neuropsychology.

The Psychology Training Program emphasizes the importance of contributing to the wealth of knowledge within the scientific literature. Trainees from each of the three programs had a successful year and generated a large body of scholarly work.



20 TRAINEES ENGAGED IN SCHOLARLY ACTIVITIES DURING THE 2016-2017 PROGRAM

10

Local talks & poster presentations

2

Manuscripts submitted

13

National poster presentations

5

Manuscripts in preparation

7

National paper/symposium presentations

2

Book chapters in preparation

Harris Infant Mental Health Program

The Harris Infant Mental Health Program graduated its 20th class, in 2017, and is honored to receive continuous funding from the Irving Harris Foundation. The program focuses on postdoctoral psychology fellowships providing advanced clinical skills in infancy and early childhood mental health. Also in 2017, the Harris Program received a grant from the Piton Foundation to support Piton Community Fellows. The Piton Fellows come from community agencies that provide services to pregnant mothers, young children, and their families. These fellows come from multiple disciplinary backgrounds: master's level clinicians, psychologists, and psychiatrists.

Psychiatry Training Program

The Child and Adolescent Psychiatry Training Program was first accredited in 1960. It is a two-year program and currently has six residents per year, for a total of 12 trainees per cycle. We have an excellent national reputation and recruit residents from outstanding psychiatry programs across the nation, including University of Colorado School of Medicine, and received 88 applications.

Our program continues to progress by incorporating new research findings into our curriculum, including advances in neuroscience, epigenetics and intervention science. The clinical settings where we provide services are also evolving.



Many youth with emotional difficulties will never be seen in a mental health clinic, but are often seen in a primary care setting. "Integrated care" is a model that allows patients who are seeing their primary care provider to also receive mental health care.

In 2017, we modified our program so all graduates learn to practice this model through placement in an integrated primary care clinic. Our graduates address important community needs across Colorado and the United States. Besides providing excellent clinical care, the goal of our program is to train child and adolescent psychiatrists who not only consume knowledge, but also contribute to new knowledge. We increased our scholarship requirements in 2017 by requiring all trainees to participate in a project resulting in a poster or manuscript, and give a grand rounds presentation.

Developmental Psychobiology Research Group

The PMHI is proud to be a part of the Developmental Psychobiology Research Group, which includes faculty from the University of Colorado (Anschutz Medical Campus, Boulder), Colorado State University, and University of Denver. Founded more than 30 years ago, the group organizes a postdoctoral research fellowship, a seminar series, and a small grants program.

The PMHI is excited to report that Aviva Olsavsky, MD, a child and adolescent psychiatrist who just finished our Child and Adolescent Fellowship training program and has an expertise in brain imaging, was accepted as a Developmental Psychobiology Research Group research fellow. Dr. Olsavsky is interested in studying reward pathways in mothers with trauma history, and how they interact with their infants and toddlers. The idea behind her research focus is that by identifying circuits that regulate those interactions, we will be able to improve parent child interaction in situations where the family has experienced a traumatic event.

THE NEXT GENERATION

Student Mentorship Programs

The Innovations Center is building a pipeline for future mental health professionals by creating opportunities for student mentorship. We offer two student mentorship programs, one for master-level students (practicum/capstone projects) and the other for undergraduate students (internship). In 2017, we had three master-level students and three undergraduate students from universities in Colorado mentored for their practicum/capstone projects, as well as seven students in our summer program.

During our 12-week summer program, students were paired with a faculty mentor to develop a research project, conduct clinical observations, as well as to get coaching on career options.

Students also received in-class trainings to develop research skills and strategies for professional development, ranging from resume building to interviewing strategies. The program culminated in a poster symposium and an oral presentation to their family, friends, peers, and PMHI faculty. The diverse topics included:

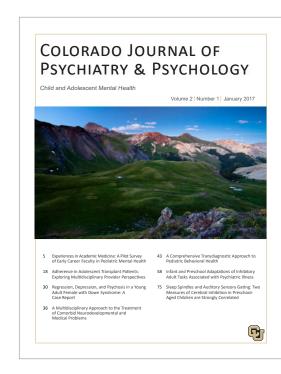
- Investigating mechanisms underlying hostile interpretation bias in irritable youth
- Assessing the relationship between emotional environment and perfectionism in eating disorder patients
- Comparing functional behavior assessment methodologies to analyze problem behavior
- Investigating the neural underpinnings of severe worry and emotional anticipation among adolescents
- Evaluating experiences of family and providers in our medical day treatment program
- Identifying adversity factors among non-english speaking families at the child health clinic
- Evaluating the relationship between maternal coping style and medical adherences in pediatric solid organ transplant candidates

For the past two years, the program was supported in part by funding from the Colorado Clinical and Translational Sciences Institute at University of Colorado Denver and private donations.



From top right: Gabrielle Fabrikant-Abzug, Analyse DeSousa, Cassandra Lefebre, Emmaly Perks, Rohit Gupta, Robert Evans, Vishruti Patel, Andrea Boorse, Yovana Perez-Ramirez, Merlin Ariefdjohan (2017 Program Director)





Colorado Journal of Psychiatry and Psychology Vol 2

The second volume of the Colorado Journal of Psychiatry and Psychology was published in 2017 and included articles related to early career faculty experiences, a clinical case study regarding developmental disabilities, the use of transdiagnostic approaches in clinical care, and more. Search "Colorado Journal of Psychiatry & Psychology" to read the journal online.

Sharing Knowledge & Advancing the Field



Jonathan Miller, PhD

Dr. Miller was awarded a pilot grant from the Developmental Psychobiology Research Group and a Research Scholar Award (a two-year training and research

grant) from the Research Institute at Children's Colorado. Using a combination of behavior analysis and behavioral economics, Dr. Miller seeks to identify new approaches to addressing the childhood obesity epidemic that is currently facing the nation.



Emily Muther, PhD

Dr. Muther is the Director of Behavioral Health in the Mike McMorris Cystic Fibrosis Research and Care Center. Dr. Muther provides psychosocial support for pediatric

patients with cystic fibrosis and their families and involved in studies related to the provision of behavioral health care for children with cystic fibrosis. Dr. Muther is working on is a study identifying barriers to treatment adherence for children with cystic fibrosis and their families and how to address these barriers, as we know adherence is critical for children struggling with this condition. The Cystic Fibrosis Foundation largely funds her research. She is a member of the Success with Therapies Consortium, which is a national consortium that promote adherence to medical care for individuals with cystic fibrosis. Dr. Muther is a member of the PMHI psychology training committee, developed a specialty training rotation that is embedded in the Cystic Fibrosis Center, and supervised many psychology trainees.



Jenny Lindwall, PhD

Dr. Lindwall is the Clinical Director for the Medical Day Treatment program at the PMHI, which serves children whose medical conditions interfere with their

ability to attend school without high levels of nursing, medical, and psychosocial support. Within this role, she is leading a program evaluation project examining psychosocial outcomes (depression, anxiety, quality of life, coping, resiliency, family functioning, and family quality of life) in children admitted to the Medical Day program.

Her research interests primarily revolve around the delivery of integrated pediatric psychology care within health care settings. Currently, Dr. Lindwall receives funding from the Cystic Fibrosis Foundation to participate in the Success with Therapies Research Consortium. Dr. Lindwall also serves as the co-principal investigator of a study funded by the Cystic Fibrosis Foundation that will implement a telecoaching intervention for adolescents and young adults targeted at improving medical adherence. Dr. Lindwall's future research and scholarship goals will focus on promoting positive psychosocial health and well-being in youth with chronic medical illnesses and in their families.



Laura Gutermuth Anthony, PhD

Dr. Anthony, who joined our faculty in 2017, conducts research and clinical work on behalf of children with neurodevelopmental

disabilities. She has co-authored 28 journal articles, four book chapters, and two books. She has also received funding for 11 federally-funded and seven foundation research grants, including a current Patient Centered Outcome Research Institute Addressing Disparities Award. This grant supports her work to study Unstuck and On Target, school-based interventions for children with autism or ADHD. She has special interests in community involvement in research and the design of clinical services.



Robin Gabriels, PsyD

Dr. Gabriels is a leading researcher on the treatment of behavioral problems among children with Autism Spectrum Disorders, particularly pertaining to the application

of human-animal interactions to facilitate behavioral improvement. Dr. Gabriels is working with her colleagues to expand outpatient services for these children and families. Dr. Gabriels also serves as the Colorado principal investigator for the Autism and Developmental Disabilities Inpatient Research Collaborative, a multisite research network (six sites) that is aimed to better understand and treat the most severely affected portion of the ASD population.

BUILDING A CULTURE OF RESEARCH

Establishing an Infrastructure to Advance Scholarship

Since its inception in June 2015, the Innovations Center has assisted faculty at the PMHI in a wide variety of scholarly activities, including research consultation, study management, grant writing, and ongoing research education and training. Key activities in 2017 included Lunch with ME, a monthly workshop for faculty to discuss their research ideas, learn new grant opportunities, and learn about research



methodology. The Sip and See is a quarterly in-house mini poster symposium featuring the scholarly works of a selected faculty member. The Innovations Center also brought in librarians from the Health Sciences Library to provide in-house training classes for faculty to learn new research tools.

A major Innovations Center initiative in 2017 was the launch of a 10-week grantsmanship course for junior faculty called the Faculty Collaborative Scholarship Program. Five faculty members were accepted into the program, where they wrote grant applications through the support of didactics and peer-to-peer learning. Federally-funded faculty researchers and staff from various departments at the University of Colorado Denver were guest speakers during the didactic sessions and shared their grant knowledge. The course ended with senior faculty mentors reviewing grant applications developed during the course, and providing individual feedback to the cohort.

The Faculty Collaborative Scholarship Program has produced a 50 percent improvement in grant writing ability, a 122 percent increase in grant writing knowledge.

The program received overwhelmingly positive comments from faculty participants, including the following: "This program helped me feel supported by the department in my scholarly endeavors... I felt a better balance between my clinical work and scholarly work while participating in [the program]. It made me feel like I was able to do both of the duties (research and clinical) that are required of me as a faculty member."

Neuroscience at PMHI



Guido Frank, MD

Dr. Frank's Developmental Brain Research Program at Children's Colorado, which focuses on the neurobiology of eating disorders, found further evidence that reward processing is disturbed in adolescents with anorexia nervosa. Furthermore, this brain response was predictive of treatment success, opening an exciting path toward using brain imaging for clinical care. Dr. Frank and his team received new grant funding for a large study funded through the National Institute of Mental Health to study how the brain drives binge eating and what biological circuits are involved that we could target with medication in the future.

The team with Megan Shott, lab manager, Marisa DeGuzman, neuroscience graduate student and senior research assistant, and newest member, Brogan Rossi, research assistant, has been incredibly busy in screening study participants, performing brain scanning sessions, writing papers, as well as conducting a clinical behavioral study. The team published nine papers, and have several in press or in the works. One of our grants has ended but we have submitted two new ones. Marisa received a TL1 (T32) grant from the Colorado Clinical and Translational Sciences Institute (CCTSI) at University of Colorado Denver, a major accomplishment. Our work is increasingly recognized nationally and internationally.



Joel Stoddard, MD

Dr. Stoddard received a K Award for the study "Neurocognitive Targets of Hostile Interpretation Bias Training to Treat Irritability" in 2017. His team is dedicated to using neuroscience to understand and treat severe, affective psychopathology (e.g., emotion disorders) in youth. Dr. Stoddard applies systems-level affective neuroscience to improve diagnosis and to target disturbances in social threat processing.



Ben Mullin, PhD

Dr. Mullin's team investigates mechanisms underlying severe anxiety among adolescents. They employ multiple neuroscientific tools including functional MRI, eye tracking, and peripheral psychophysiology to study cognitive and affective processes that contribute to anxiety. He also studies the consequences of chronically insufficient sleep, specifically examining how sleep loss during adolescence interferes with brain function and increases risk for psychopathology.

EYE TRACKING

Studying the Neuroscience of Children's Mental Illness

In 2017, the PMHI invested in an "eye tracker" to further the neuroscience research in our Institute. During an experiment, the eye-tracking system records a participant's eye-movements, pupil response (pupillometry), and facial affect while looking at an image or video on a screen. Since these responses are largely unconsciously controlled, they provide a great deal of information about an individual's emotional and social processing, arousal, and attention. In the movie still from *Mean Girls* below, you can see the average gaze patterns of a person as they watch the movie. It demonstrates that people focus largely on faces, which is central to social communication.

Eye-tracking experiments may be done rapidly without any danger or discomfort to the participant.

Our eye tracker is currently being used for three separate studies to gauge levels of attention and social threat perception in children with mental illnesses, which is a promising inroad to diagnose and treat emotional disorders.



CHANGING THE STATE OF YOUTH MENTAL HEALTH

Donor Support Empowers Children's Colorado to Lead the Charge for Kids in Crisis

Colorado is facing a pediatric mental health crisis, with an estimated 1 in 5 youth facing a mental health disorder. Tragically, suicide is the leading cause of death for Colorado youth ages 10-17. Despite the staggering statistics, support services are few and far between.

This makes the Pediatric Mental Health Institute at Children's Colorado more important than ever.

Children's Colorado is committed to addressing the immediate pediatric mental health crisis, as well as creating a better mental health future long-term, which requires systemic changes. A goal this extraordinary takes extraordinary resources.

With donor support, Children's Colorado is making transformative improvements to the state of pediatric mental health. Gifts to the Children's Colorado Pediatric Mental Health Institute support renovation, research, programs to break the stigma, and more.

Thanks to donors, not only is the hospital adding more beds and services to help kids who urgently need support today, Children's Colorado is also building partnerships to create a better system for diagnosing, referring and treating kids statewide. From educating youth-serving adults about mental health warning signs to connecting doctors in rural communities with our trained psychiatrists via telemedicine, Children's Colorado wants every child to be able to access the mental health services they need to thrive.

Children's Colorado is already making this new future a reality. Thanks to donor support, we are spearheading a statewide initiative that brings together leaders in health care and policy across the state to improve access to the highest-quality mental health services for kids. This includes conducting a statewide assessment to track patient outcomes, gaps in care and best practices in pediatric mental health.

This data will guide recommendations for reforming the mental health landscape in Colorado and beyond so that kids can get the right diagnosis and care – before issues escalate to a crisis. And it wouldn't be possible without philanthropy. **Learn more how donors are making a difference at pmhi.org.**



WE ARE GRATEFUL TO DONORS WHO HAVE CONTRIBUTED TO NAMED ENDOWMENTS FOR PMHI, WHICH DISTRIBUTED \$503,448 FOR CLINICAL CARE AND RESEARCH IN 2017.



ONE TEEN'S

Mental Health Journey

Cora faced many barriers to getting treatment for a mental illness. Despite that her parents recognized the warning signs, fought for her, and live close to treatment facilities, they struggled to get her the help she needed when she needed it.

Finally, she was referred to the Pediatric Mental Health Institute and entered a five-week Partial Hospitalization Program. It wasn't easy — many days Cora wanted to quit — but her caregivers never gave up on her. Today, Cora continues on the path to healing. She is now an advocate for teens and kids who struggled with mental illness and raises money to help improve access to treatment.



We Climb Mountains

Climbing for Kids is one of Colorado's most anticipated charity-oriented summer family events benefiting Children's Colorado. Climbing for Kids aims to drive awareness and generate financial support for the care of children in Colorado that have mental health challenges, and their families, who have a much larger mountain to climb in dealing with their conditions. It is fitting that this charity event constitutes climbing one of Colorado's iconic "fourteeners" in their honor. The PMHI comes together annually to participate in this event. The year 2017 marks the fifth year that we have climbed together to the top of Mt. Bierstadt. This year, we had 110 registered fundraisers with approximately 80 participants. As the top fundraising team, the Institute raised \$25,000 for this effort, which supported patient and family programs in the Institute. Additionally, the donors have designated a portion of this money for staff events to recognize their hard work.

CHILDREN'S HOSPITAL COLORADO FOUNDATION



In many ways and many places, philanthropy is making this community impact possible. Our sincere thanks to the countless donors who join in the mission of Children's Colorado with their generous giving.

Another Side

LIFE AT THE PEDIATRIC MENTAL HEALTH INSTITUTE





We Ride as a Team

In 2017, we celebrated the 11th year of the Ponzio Pedalers participating in Children's Colorado Courage Classic, an annual bicycle riding charity event. This year, 52 riders in the Ponzio Pedalers raised \$84,286, with Captain Katherine Reed winning the 2017 fundraising award as the ninth highest fundraiser.

We Value Diversity

The Diversity Committee works on initiatives that raise awareness, promote dialogue, and create action to address issues of diversity. Highlights from the year include attending the annual CU Diversity Summit in Colorado Springs, "Fostering a Culture of Inclusion: Modeling Systemic Change." The committee also planned the inaugural Ruth Fuller Lectureship. Our guest for this year, Velma McBride Murry, PhD, from Vanderbilt University, presented at grand rounds and held roundtable discussions for staff, trainees, and faculty focused on issues of diversity that are relevant to our work. Additionally, Jenna Glover, PhD, also led a diversity dialogue that created an important space to discuss the events in Charlottesville, VA. The committee launched another "Community Read" for PMHI discussing the book, Becoming Nicole: The Transformation of an American Family, which highlights unique issues when working with transgender youth.

Faculty Publications

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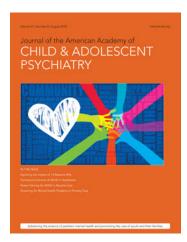
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Douglas Novins, MD, was selected as the seventh Editor-in-Chief of the Journal of the American Academy of Child and Adolescent Psychiatry, a leading international research journal focused on children's mental health.





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