Identifying Depression Risk: Expanding on a Landmark Study

Depression affects more than 15 million adults per year in the United States, which is about 6.7 percent of the country’s adult population. By understanding the causes of depression, researchers and clinicians can gain a better idea of what to target and how to plan when developing new medications and treatments.

A pivotal moment in the quest to understand these causes came in 2015 when VCU researchers were part of an international team that identified, for the first time in history, two risk genes for clinical depression. The variants in DNA that they found are clues to the underlying cause of depression risk.

Kevin S. Kendler, M.D., is the Rachel Brown Banks Distinguished Professor of Psychiatry and Director of the Virginia Institute for Psychiatric and Behavioral Genetics at the VCU School of Medicine.
Priscilla Cash Wiggin can’t think of a better way to honor her late father than to bring comfort to children and adolescents in need of psychiatric care. As a young man, Charles Cash battled depression and other forms of psychiatric illness. But because of the quality care he received, he lived a joyful life. Cash passed away in July at the age of 89.

“I know he would be blown away by what we are doing,” Wiggin says. “He would love the fact that we are supporting something so important.”

Wiggin, senior development officer for VCU’s School of Medicine, and her four sisters are sponsoring a mural at the Virginia Treatment Center for Children. Opened in 2017, the center provides psychiatric services for children and adolescents.

The 9-foot by 18-foot mural by local artist Colleen Hall showcases a musical family of river otters playing a variety of instruments in a beautiful landscape. Each otter represents a member of the Cash family, as all seven children and their parents were musicians and singers.

Wiggin plays the guitar. Her sisters Jane Cash, Cathy Greenberg, Martha Isaac and Mary Folkes also either play an instrument or sing. They performed at school and community functions growing up in the Shenandoah Valley.

“It was like the fabric of our family,” Wiggin says. “It was the one element where I felt truly me.”

In her fundraising role at VCU, Wiggin toured the VTCC last fall and learned about the need for murals. The VTCC is hoping to raise enough funds to commission 40 throughout the interior of the building.

“Art is a great way to help create a healing environment,” says P. Muzi Branch, director of VCU Health System’s Arts in Health Care. “It can offer calm during a stressful time. It helps promote recovery.”

For Wiggin and her sisters, deciding where to place the otter mural was simple. It is located outside the music room.

“My father was surrounded by children and music his whole life,” Wiggin said. “What a wonderful way to honor him.”

The family was also eager to support a school with so many personal ties. Jane Cash earned her master’s and doctorate degrees in physical therapy from VCU, and Martha Isaac’s husband was on faculty in the School of Business. Several of Wiggin’s nephews are VCU graduates.

“We did a variety of projections, but the expectation would be that with the enlarged sample, we might have between 20 to 30 individual DNA variants,” said Kenneth S. Kendler, M.D., the Rachel Brown Banks Distinguished Professor in Psychiatry at the VCU School of Medicine and joint senior author on both studies. “That will increase the chances that we can tell a coherent biological story about the underpinnings of the vulnerability to depression.”

Dr. Kendler’s team, which is calling the previous study CONVERGE 1 and the new study CONVERGE 2, has begun collecting data for CONVERGE 2 from what will eventually be 24,000 individuals with major depression and 24,000 individuals who will serve as the control group. The sample sizes for CONVERGE 1 were roughly one-third of these expected totals.

As it was in the first study, the new sample will be made up of Han Chinese women with depression who are at least 30 years old; have had two episodes of major depression; have had no history of alcohol or drug abuse, bipolar illness, or psychosis; and have all four grandparents of Han Chinese descent. The team chose to study Han Chinese women because the population is relatively homogeneous from both a genetic and cultural perspective.

“The importance of these studies is the degree to which they provide clues to the underlying biology of the vulnerability to depression,” Dr. Kendler said. “From there we can clarify potential novel ways to try to prevent or treat the disorder.”
VCU Department of Psychiatry Graduates its First Fellow in Addiction Medicine

Instead of heading straight to college after high school, Michael Fox, D.O., H'18, did everything from telemarketing work to delivering pizza.

For four years he worked odd job after odd job. “I suddenly realized I wanted more for my life,” he says. “I wanted to use my mind to reach my full potential. I am very glad I took the path I did. By taking time off and maturing, it helped me become the compassionate doctor I am today.”

As the Department of Psychiatry’s first fellow in psychiatry specializing in addiction medicine, Fox is constantly reminded just how crucial compassion is.

“This population is stigmatized and often misunderstood,” he says. “But addiction is an illness. It is a disease.”

According to the Centers for Disease Control and Prevention, more than 70,000 drug overdose deaths occurred in the United States in 2017. Opioids were involved in more than 47,000 of them.

“It is a very disturbing trend,” Fox says. “The amount of suffering is incredible. I want to help change that.”

Fox, who holds a bachelor’s degree in physics from the University of Wisconsin-Milwaukee, knew he wanted to specialize in psychiatric medicine during his third year of medical school at the Edward Via College of Osteopathic Medicine in Blacksburg.

“I was doing a rotation at Southwest Virginia State Mental Hospital and saw the profound changes in patients who received quality care,” he says. “I realized I could make an impact.”

He chose VCU’s School of Medicine for his residency in psychiatry after meeting faculty and touring Richmond.

“Everything about it was fantastic,” he says. “The school’s reputation is like no other.”

The program did more than challenge Fox in the classroom.

“It helped shape me,” he says. “It confirmed for me how much I love this population. They are a vulnerable population, and they deserve compassion from every single one of their providers.”

As Fox was finishing his residency, he learned about the start of a new addiction fellowship. The opportunity, he said, was too good to pass up. He accepted the year-long fellowship last June.

“Addiction medicine is an expanding field,” Fox says. “The conversation in this country is changing as the stigma surrounding addiction is being reduced and people are focusing more on this epidemic. But there is still a long way to go. The need is huge.”

According to the National Institute on Drug Abuse, there were 1,130 opioid-related overdose deaths in Virginia in 2016. Since 2010, the number of heroin-related overdose deaths has increased from 45 to 450, while the number of overdose deaths related to synthetic opioids has increased from 87 to 648.

To help meet the growing crisis, VCU opened the Multidisciplinary Outpatient Intensive Addiction Treatment Clinic (MOTIVATE) in 2017. Here, patients receive psychiatric care and have access to medication-assisted treatment for their addiction. In 2018 VCU’s MOTIVATE Clinic had 10,902 visits, compared with 3,161 in 2017.

The Department of Psychiatry also is expanding its fellowship in addiction medicine to two fellows this year.

“We are excited that Michael is part of the new fellowship program,” says Chris Kogut, M’04, H’08, F’09, director of residency education in psychiatry. “He is one of the more compassionate and non-judgmental people I know. He has this great way of building rapport with people who have an addiction.”

During his fellowship, Fox is working with VCU Psychiatry’s Virginia Health Practitioners’ Monitoring Program, which monitors health professionals with physical, mental or substance abuse challenges. He also sees patients through the MOTIVATE Clinic, Addictions Consult Service, and Physical Medicine and Rehabilitation, as well as Hunter Holmes McGuire VA Medical Center.

Once he completes his fellowship this summer, Fox is unsure if he will work in academia, in a clinical setting or research.

“It’s a hard choice to make,” he says. “I just know that ultimately it will be about helping people.”

Mental Health Resource Center Named to Honor Cameron K. Gallagher

The Cameron K. Gallagher Foundation continues to support outreach efforts through the Mental Health Resource Center at the Virginia Treatment Center for Children. David and Grace Gallagher started the Foundation in memory of their daughter, Cameron. Prior to passing away unexpectedly from an undiagnosed heart condition at the age of 16, Cameron battled depression and anxiety. As the Gallagher’s discovered more about Cameron’s wishes to help other teens with mental health issues, they started the foundation in her honor to reduce stigma and to encourage teens to speak up about their personal battles. Thanks to the Foundation’s generosity, visitors to the Cameron K. Gallagher Mental Health Resource Center have access to one-on-one support and referral assistance through family navigators who understand the mental health options available for children and adolescents. To learn more go to: chr Richmond.org/CKG-Mental-Health-Resource-Center.htm MM
resources

At VCU Psychiatry, we know individuals and families are navigating through life’s difficulties and changes. Below are some useful resources recommended by our faculty to help you in that process... for more information and insight.

families in crisis:
www.chrichmond.org/Services/Mental-and-Behavioral-Health.htm

Our team at Virginia Treatment Center for Children (VTCC) offers inpatient and outpatient programs for children and adolescents. We offer acute care crisis stabilization and evaluations, family and individual therapy and specialty clinics.

transgender children and teens:
www.genderspectrum.org

Gender Spectrum helps to create gender sensitive and inclusive environments for all children and teens.

trauma survivors:
www.emdr.com

Providing an effective therapy for the treatment of trauma.

Atul Gawande’s “Being Mortal” is an excellent account of getting older and facing major medical issues and how to do it while living the best life possible.

Atul Gawande, a practicing surgeon, has fearlessly revealed the struggles of his profession. Now he examines its ultimate limitations and failures - in his own practices as well as others - as life draws to a close. And he discovers how we can do better. He follows a hospice nurse on her rounds, a geriatrician in his clinic, and reformers turning nursing homes upside down. He finds people who show us how to have the hard conversations and how to ensure we never sacrifice what people really care about.

“A deeply affecting, urgently important book – one not just about dying and the limits of medicine but about living to the last with autonomy, dignity, and joy.” – Katherine Boo

More resources to come in the next issue of Mind Matters.