VCU
Research and Innovation

Wright Regional Center
for Clinical and Translational Science

RESEARCH ACCELERATED

2025 Impact Report

C. Kenneth and Dianne Wright Center
for Clinical and Translational Research

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As we step into 2026, I find myself reflecting on what can only be described as an extraordinary year for the C. Kenneth and Dianne Wright Center for Clinical and Translational Research. Our theme for 2025 was Impact, and looking back at the data from our Evaluation team, the evidence of your hard work is everywhere.

I am particularly proud of our efforts to advance the research workforce. Our **K Scholar** alumni and past **pilot awardees** continue to show the lasting impact of our mentorship, with over $23 million in extramural funding secured or under review this past year. Our **T32 pre-doctoral program** has seen significant gains in student research proficiency, and our **educational events** reached more than 400 unique attendees across 30 different institutions or organizations. Furthermore, our team was instrumental in the development and launch of the new **Research Ecosystems minor** which debuted in the fall of 2025, providing VCU undergraduate students with a direct pathway into the complexities of clinical and translational science.

I am also very proud of the community engaged research collaboration with the Virginia State Government through the Opioid Abatement Authority, where we are working with Virginia cities and counties to have a real impact on health.

Of course, 2025 had its share of challenges that I know impacted every single member of our team. However, I was inspired by how this team turned those challenges into opportunities. Instead of slowing down, we took those delays and uncertainties as opportunities to streamline our internal processes and to strengthen our ties with partner institutions like VSU, EVMS and ODU through new mentorship and collaboration initiatives.

Successes like these are only possible through the combined efforts of our research teams. From the infrastructure provided by **Informatics**, to the critical support from **Research Resources and Services**, your work is essential to our mission. Whether you are driving **Community-Engaged Research**, managing **Clinical & Translational Science Pilots**, or leading **Workforce Development** and **Education**, every module played a vital part in our collective impact. Your resilience and dedication are the reasons the Wright Center remains a cornerstone of translational science in our region.

We are also grateful for the continued support of the **Office of the Vice President for Research and Innovation**, under whose leadership the Wright Center was established and has grown into the regional translational science hub it is today.

Thank you for everything you do. I look forward to another year of breaking barriers together.

Warmly,

F. Gerard "Gerry" Moeller, M.D.

Director, C. Kenneth and Dianne Wright Center for Clinical and Translational Research

Our Mission

The C. Kenneth and Dianne Wright Center for Clinical and Translational Research seeks to advance science and foster partnerships that accelerate translational research for the betterment of human health.

Our Vision

The C. Kenneth and Dianne Wright Center for Clinical and Translational Research will catalyze a cultural transformation at VCU, evidenced by increased interdisciplinary research across the clinical and translational spectrum. The Wright Center facilitates collaboration among wide-ranging expertise within the university and throughout the communities we serve. Our efforts transform scientific discoveries into treatments for patients. By training a new generation of interdisciplinary clinical and translational scholars, the Wright Center will work to ensure our vision is sustained.

C. Kenneth and Dianne Wright

OUR STORY

2007

Virginia Commonwealth University established the C. Kenneth and Dianne Wright Center for Clinical and Translational Research to provide the commonwealth with infrastructure and resources that promote interdisciplinary human health research.

VCU President Michael Rao, Ph.D. announcing the CTSA award in 2010.

2010

In July 2010, the National Institutes of Health awarded VCU with a **$20 million Clinical and Translational Science Award** to integrate the Wright Center with a national consortium of more than 50 research institutions funded through the National Center for Advancing Translational Sciences. As the first academic health center in Virginia to receive a CTSA, VCU belongs to a national network of research institutions that are working to accelerate the transformation of laboratory discoveries into treatments for patients, engage communities in clinical research and train a new generation of clinical and translational scholars.

2015

Longtime VCU benefactor **C. Kenneth Wright** made a **$16 million gift** to name the Wright Center for Clinical and Translational Research in 2015. The gift established six Distinguished Chairs in Clinical and Translational Research and a physician-scientist scholars program. Wright's support enabled the university to recruit distinguished researchers from around the country and helped VCU prepare the best and brightest students for careers along the spectrum of translational science.

2018

In 2018, Wright renewed his support with a **$5 million** gift to help the Wright Center expand its biomedical informatics program. Also in 2018, the National Institutes of Health awarded VCU with a **$21.5 million CTSA** - at the time, the largest NIH grant in VCU's history - to further its groundbreaking research that saves lives and improves treatments for patients around the world.

2020

And in December 2020, the C. Kenneth and Dianne Wright Foundation gifted the Wright Center another **$16 million gift** to support collaborative science and health care research by VCU investigators.

2022

In 2022, the Wright Center formed the Wright Regional Center for Clinical and Translational Science (CCTS) in a joint venture with **Eastern Virginia Medical School**, **Old Dominion University** and **Virginia State University**.

From left to right: VCU President Michael Rao, Ph.D., Governor Ralph Northam, Daniel Carey, secretary of health and human resources, and F. Gerard Moeller, M.D., director of the C. Kenneth and Dianne Wright Center for Clinical and Translational Research at the 2018 CTSA announcement.

2023

In March 2023, the NIH renewed the Wright Center's CTSA award with a seven-year, $27.5 million grant, the largest in VCU's history. The latest grant allows the center to grow a new regional partnership to advance a healthier region through translational science that actively engages communities, train the next generation of the research workforce and support the rapid implementation of innovative clinical and translational science that advances the scientific study of human health.

Wright Regional Center

for Clinical and Translational Science

Clinical Trial Leadership

1271 Number of clinical research studies supported by the Wright Center's OnCore team in 2025.

809 Number of clinical trials supported by the Wright Center's OnCore team in 2025.

55% Percent of the total participants (942 out of 1,717) the Wright Center recruited for the Virginia Cancer Screen Research Network (CSRN) Vanguard Study, a multicancer national detection trial by integrating recruitment directly into primary care practices.

Additional Wright Center-supported activities:

ACORN (Virginia Ambulatory Care Outcomes Research Network)

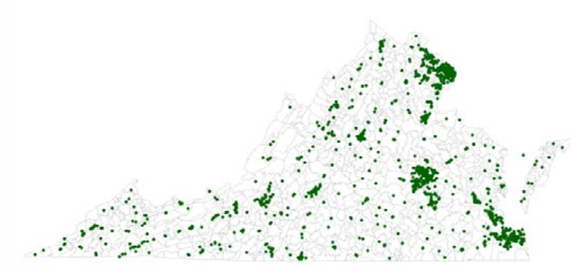
526 The number of primary care practices in Virginia participating in ACORN (the Virginia Ambulatory Care Outcomes Research Network), representing 27% of Virginia's primary care practices.

16 The number of active research studies supported by ACORN in 2025.

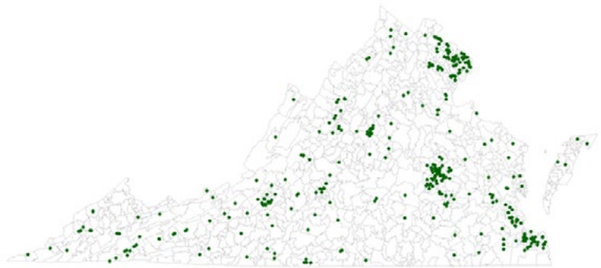
$55M The amount of grant funding ACORN's active research studies procured in 2025.

58 The number of peer-reviewed articles published in 2025 based on research conducted through the ACORN network.

All Primary Care Practices in Virginia (n=1,968)



ACORN Member Practices (n=526)



CTSA GRANT YEAR 3 HIGHLIGHTS

Virginia All Payer Claims Database (APCD)

The Wright Center maintains a license to Virginia's All Payer Claims Database which supports:

17 Active grants (2 trainee led).

27 New requests we fielded for APCD related research.

$82M Funding for active grants supported by the APCD in 2025.

Longitudinal Impact of Wright Center Grantees

$5.5M Amount of extramural funding previous K12 Scholars secured in 2025.

$18M Estimated total potential award amount of grant proposals that current and past K12 scholars submitted in 2025 (under review).

Experiential Learning and Internships

54 People attended the Wright Center's Annual Research Day in October 2025.

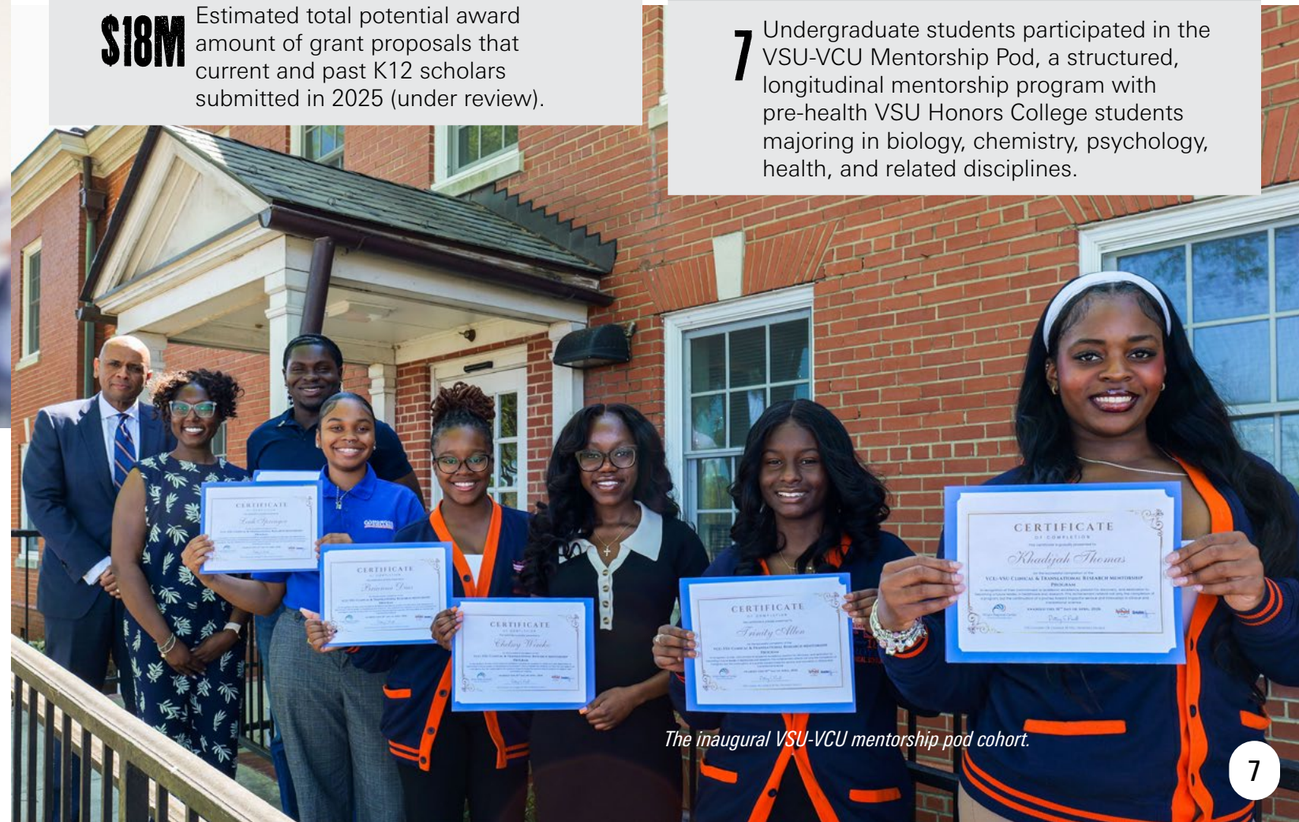
12 Students trained in our Clinical Research Coordinator internship program in 2025 (38 students trained to date).

20 Students trained in the 2025 Honors Summer Undergraduate Research Program (HSURP), a 10-week mentored summer research experience.

410 Unique attendees from more than 20 institutions attended our educational and professional development sessions for the research community in 2025 (satisfaction: 4.49-4.69/5.0)

50 Attended a two-day Google AI Research Workshop, hosted by the Wright Center.

7 Undergraduate students participated in the VSU-VCU Mentorship Pod, a structured, longitudinal mentorship program with pre-health VSU Honors College students majoring in biology, chemistry, psychology, health, and related disciplines.



The inaugural VSU-VCU mentorship pod cohort.

Health Informatics & Bioinformatics

7 New bioinformatics pipelines developed in 2025.

164 Bioinformatics projects supported in 2025 (a 59% increase).

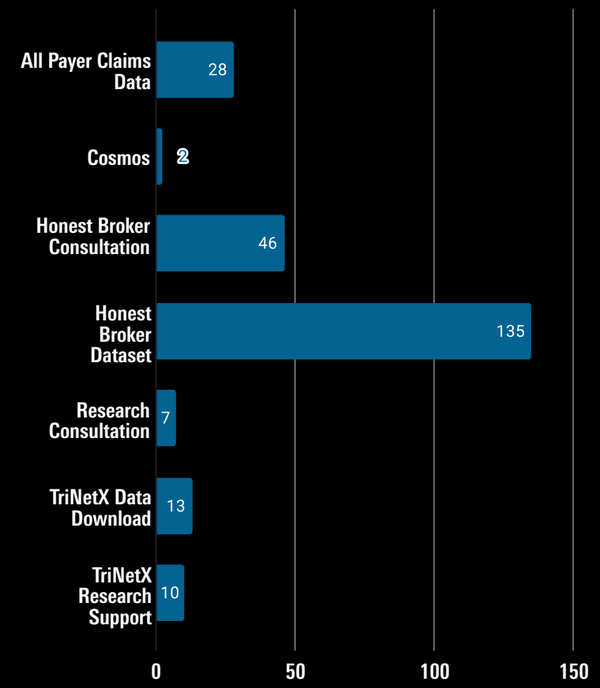
62 Number of PIs who utilized bioinformatics (a 16% increase).

161 Datasets released by honest brokers for 114 projects.

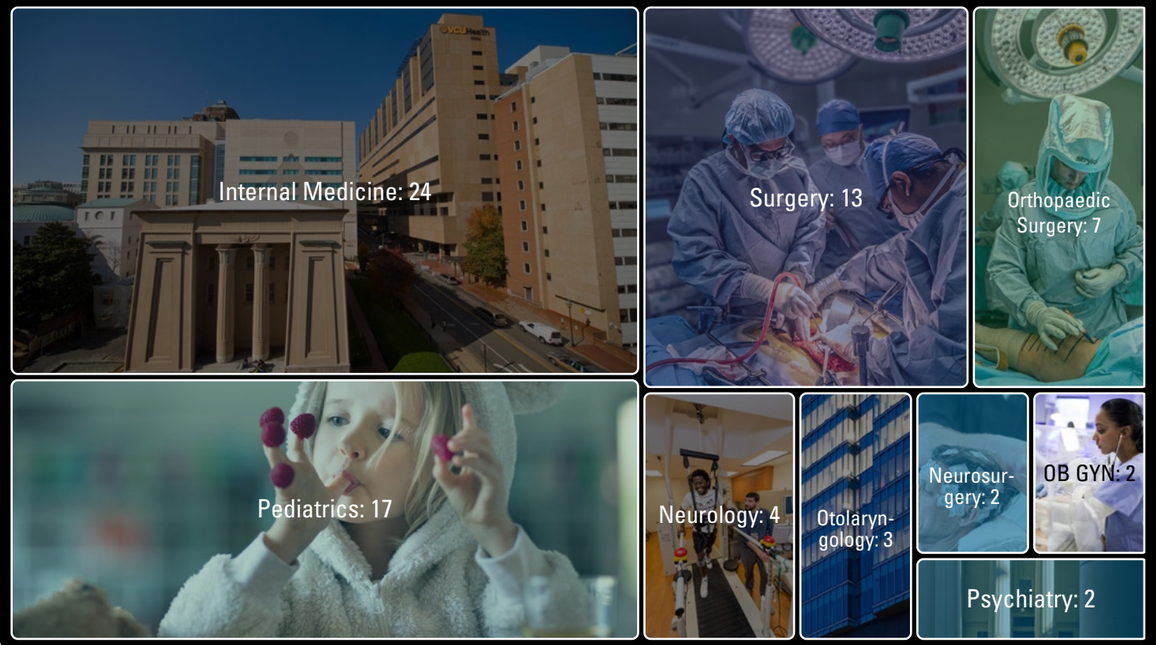
23% Reduction in honest broker data request processing time in 2025 compared to 2024

60,000+ TriNetX queries conducted by 859 active users

Category of Requests processed by Health Informatics in 2025



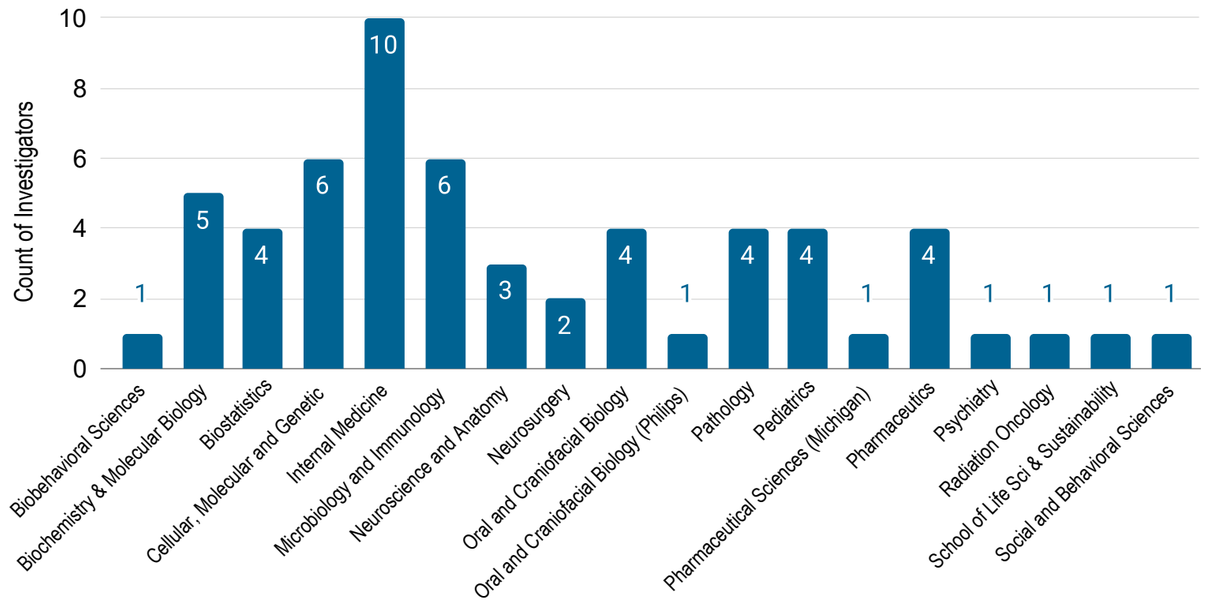
HEALTH INFORMATICS SERVICE REQUESTS BY DEPARTMENT IN 2025



CTSA GRANT YEAR 3 HIGHLIGHTS

CATEGORY OF REQUESTS PROCESSED BY BIOINFORMATICS IN 2025

In 2025, Bioinformatics contributed to the research projects of 62 investigators across 18 internal and external Departments.



OUR COLLABORATING ORGANIZATIONS

The national reach of our clinical and translational science collaborations

1. Case Western Reserve University, Cleveland, OH
2. Johns Hopkins University, Baltimore, MD
3. University of New Mexico, Albuquerque, NM
4. Weill Cornell Medicine, New York, NY
5. University of North Carolina, Chapel Hill, NC
6. Mountain Empire Community College, Big Stone Gap, VA
7. Norfolk State University, Norfolk, VA
8. Sentara Health System, Norfolk, VA
9. VCU Community Memorial Hospital, South Hill, VA
10. VCU Health Tappahannock Hospital, Tappahannock, VA
11. Virginia Tech, Blacksburg, VA
12. Virginia Cooperative Extension, Blacksburg, VA
13. VCU Massey Comprehensive Cancer Center, Richmond, VA
14. Virginia Union University, Richmond, VA
15. Serve Virginia, Richmond, VA
16. University of Richmond, Richmond, VA
17. VDBHDS, Richmond, VA
18. Virginia Department of Health, Richmond, VA
19. Medical Society of Virginia, Richmond, VA

PARTNERS AND COLLABORATORS

Wright Regional Center
for Clinical and Translational Science

Key Collaborations with our CTSA Partner Institutions

WORKFORCE DEVELOPMENT (VSU)

Collaborating with **Virginia State University (VSU),** we prioritize workforce development, preparing a skilled workforce that represents our communities to advance the field of translational science effectively.

Virginia State University (VSU)

INFORMATICS (ODU)

Our Informatics team's partnership with **Old Dominion University (ODU)** streamlines data management processes, enabling more efficient research and development of new methodologies.

Old Dominion University (ODU)

ELEMENT E (EVMS/ODU)

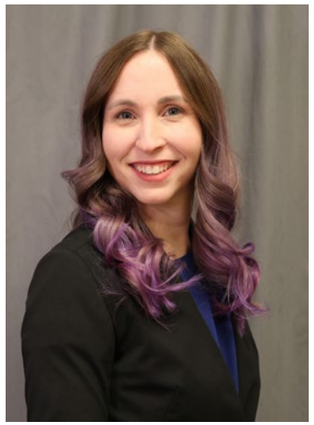
The collaboration with **Eastern Virginia Medical School (EVMS),** now ODU, through our Element E research project enhanced research capabilities, fostering innovation in clinical and translational science initiatives.

ODU (formerly Eastern Virginia Medical School)

MEET THE WRIGHT CENTER'S 2025 CTSA K12 SCHOLARS

Brooke Dexheimer, PhD, OTD is an Assistant Professor of Occupational Therapy at Virginia Commonwealth University. Dexheimer's research explores the neural mechanisms of motor control and motor adaptation, with a special focus on handedness. Her work aims to bridge neuroscience and neurorehabilitation, improving outcomes for individuals with motor impairments. She is currently investigating perception and fine motor deficits in Parkinson's Disease, with funding from the VCU Quest Fund and the Shirley Ryan AbilityLab's Center for Smart Use of Technologies to Assess Real-world Outcomes (C-STAR).

"I AM THRILLED TO HAVE BEEN SELECTED FOR THE K12 PROGRAM," SAID DEXHEIMER. "THIS OPENS UP AN INCREDIBLE NETWORK OF RESOURCES, SUPPORT, AND EXPERTISE FROM SO MANY INDIVIDUALS AT VCU. WE ALL SHARE THE SAME GOAL: IMPROVING HUMAN HEALTH THROUGH RIGOROUS AND IMPACTFUL RESEARCH. THIS WILL BE INVALUABLE FOR MY DEVELOPMENT AS A TRANSLATIONAL SCIENTIST."



Chelsea Sawyers, PhD is an Assistant Professor in the Department of Psychiatry. Sawyers integrates genetics and neuroimaging to better understand the biological basis of risk and protective factors for stress disorders and suicidality, particularly in adolescents. Her research examines how adverse childhood experiences shape adolescent brain development and mental health outcomes, with a focus on identifying predictors of suicide risk.

"THE K12 PROGRAM PROVIDES A WONDERFUL OPPORTUNITY TO CUSTOMIZE MY MENTORING PLAN TO MY SPECIFIC CAREER DEVELOPMENT GOALS," SAID SAWYERS. "I LOOK FORWARD TO WORKING WITH MY MENTORS AND BRINGING A TRANSDISCIPLINARY APPROACH TO ADOLESCENT SUICIDE RESEARCH."

Paul Kline, DPT, Ph.D., is an assistant professor in VCU's Department of Physical Therapy. The focus of his research project, supported by a career development award from the Wright Center, is to understand how individuals with lower-limb amputations navigate their communities — and why many remain dissatisfied with their mobility, even after successful rehabilitation.

"THIS PRESTIGIOUS K12 SCHOLARSHIP IS A CATALYST," DR. KLINE STATED. "IT WILL SIGNIFICANTLY ENHANCE MY CAPACITY TO TRANSLATE RESEARCH INTO REAL-WORLD MOBILITY SOLUTIONS, DIRECTLY ALIGNING CLINICAL TREATMENT WITH PATIENT-CENTRIC GOALS AND ACCELERATING OUR PROGRESS IN IMPROVING HEALTH FOR INDIVIDUALS WITH COMPLEX CLINICAL NEEDS."

THE WRIGHT TALK: A NEW PODCAST FOR TRANSLATIONAL SCIENCE

When Brad Williams, the Wright Center's Faculty Development Program Manager, started working on a new tool to connect K12 scholars with the broader research community, he had a specific gap in mind: the career experiences that never make it into a CV.

"In science, we really only see other people's success, and the only failures you see are your own," said Gretchen Neigh, Ph.D., M.B.A., Co-Director of the Wright Center's K12 and T32 programs, who became the first guest on the podcast. "Which is part of what makes the field so daunting."

That candor is exactly what *The Wright Talk* was designed to capture. Launched in September 2025, the podcast series — and its flagship program Inside the Scholar's Journey — features in-depth conversations with researchers and faculty about the realities of building a career in clinical and translational science. Co-hosted by Patrick Nana-Sinkam, M.D., and Neigh, both co-directors of the Wright Center's K12 program, the series covers the milestones that define a research career: identifying a niche, finding mentors, navigating the transition to independence, and avoiding burnout along the way.

By early 2026, the podcast had released five episodes and accumulated more than 130 views across platforms. Guests have included world-renowned hepatologist Arun Sanyal, M.D., who reflected on his "scrappy" early career and the mentors who shaped his path; former K12 scholars Caitlin Martin, M.D., and Peter Hamilton, Ph.D., who discussed the challenges of stepping into scientific leadership; and communications expert Sara Serritella, who joined Nana-Sinkam and Neigh to offer early-career researchers practical strategies for building a digital presence without compromising scientific integrity.

The series is deliberately designed for the people who need it most: pre-doctoral students, postdocs, and early-career faculty looking to build a research identity before they have the publications and grants to prove it. It also serves as a window into the Wright Center's broader mentorship philosophy — that the most important parts of a research career are often the ones no one talks about openly.

New episodes of *The Wright Talk* are available on Spotify and YouTube.

Subscribe to the podcast on Spotify.

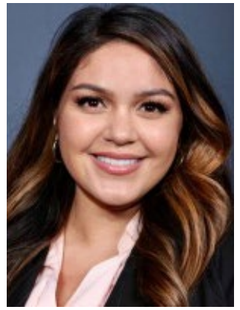
MEET THE WRIGHT CENTER'S 2025 PREDOCTORAL T-32 TRAINEES

Second Year Trainees

Hannah Stadtler

Mentor: Dr. Gretchen Neigh

Project: *Understand the relationships between glucocorticoid dysfunction, mitochondrial health, and cognitive impairment in women living with HIV (WWH)*



Carmen Camarena

Mentor: Dr. Rebecca Martin

Project: *Dendritic Cell alpha-ketoglutarate Regulates Tfh Polarization in Allergic Asthma*

First Year Trainees

Nina Dashti-Gibson

Mentor: Dr. Chuck Harrell

Project: *Proteogenomic features predict response to targeted inhibitors for breast and pancreatic cancers*

Vi Nguyen

Mentor: Drs. Victoria Findlay and David Turner

Project: *Increased AGE bioavailability contributes to rapid tumor progression via the activation of RAGE in fibroblasts to increase the invasive potential of tumor epithelia*

ANNOUNCING DR. STADTLER!

We are proud to announce that Hannah Stadtler, Ph.D. successfully defended her doctoral dissertation on February 26, 2026, completing the PhD portion of her MD-PhD program. Stadtler is a scholar in our Translational Biomedical Sciences (TBS) T32 Training Program. Stadtler's dissertation is titled "Early Life Stress and Cognitive Impairment in Women with HIV: A Mitochondrial Perspective" and her mentor was Wright Center lead, Gretchen Neigh, Ph.D., M.B.A.

Congratulations to Dr. Stadtler on this important milestone!

From left to right: Paula Bos, Jennifer Koblinski, Khalid Thompson, Silly Genius, Rain Spann, Chuck Harrell, and Nina Dashti-Gibson at The Brushstrokes of Discovery Community Engagement Project standing in front of the mural.

Massey launches art initiative that celebrates cancer patients and researchers

A vibrant, three-panel mural depicting how tumor tissue donation fuels scientific breakthroughs will soon be on display on the VCU Health campus for all to see.

The mural, titled "Brushstrokes of Discovery," features a design created by three local artists: Khalid Thompson, Silly Genius and Rain Spann. The trio collaborated to develop the design for this community art initiative and visually represent phases of the cancer research process: Facing Cancer, Science at Work and Restoring Tomorrow.

The project was led by Jennifer Koblinski, Ph.D., researcher at VCU Massey Comprehensive Cancer Center and associate professor in VCU's Department of Pathology, and **Nina Dashti-Gibson**, M.D./Ph.D. candidate in VCU's School of Medicine and a Wright Center T32 Translational Science Trainee.

"Our goal was to celebrate the contributions that patients have made to cancer research through tissue donation, as well as communicate the importance of collecting samples that represent people of all backgrounds," said Dashti-Gibson. "It's inspiring to take what I'm working on in the lab and share it with community members who have a personal connection to cancer or may just be curious about the research that's going on at Massey. We rely heavily on patient tissue donations to advance our research and make discoveries, so it's important to find ways to share these discoveries with the community that makes our work possible."

The opportunity for this artwork arose when Koblinski and Dashti-Gibson received a $5,000 Community-Engaged Data Dissemination of Research Findings Grant from the VCU Office of the Provost, which provided their team a chance to share scientific research with the community in a unique way. Massey also matched the grant funds, providing Koblinski's team with an additional $5,000 to help cover the cost of materials for the mural.

Their idea? Develop a cancer research-themed art project, designed by local artists, that the public can participate in to foster community engagement and inform them of the importance of tumor tissue donation in advancing cancer research.

Read more:

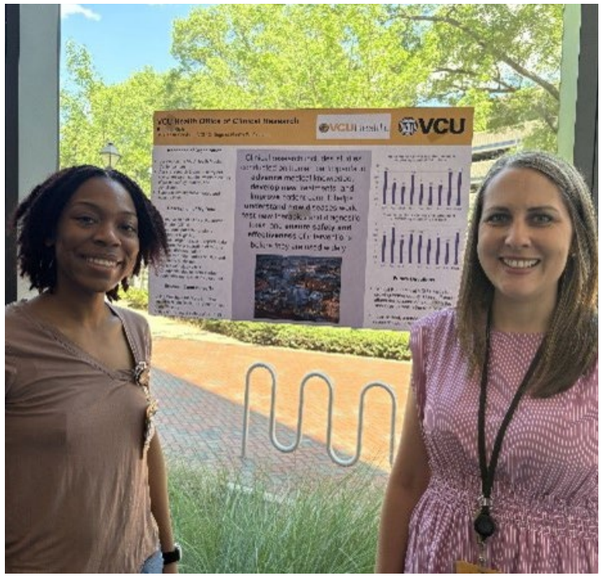
Congratulations to Our Newly Minted PhDs!

The Wright Center is proud to congratulate four graduates of its Ph.D. in Clinical and Translational Sciences program on the successful defense of their dissertations: Alexandra Straus, Carter (Kent) Fairchild, Christiana Appiah, and Grayson Way.

The Ph.D. in Clinical and Translational Sciences is a full-time, interdisciplinary program designed to train researchers to perform translational research — bridging the gap between bench science and clinical application. Students receive intense mentoring from teams of senior VCU researchers across multiple disciplines and develop individualized curricula shaped by their own research interests and career goals. The work of this year's graduates reflects the breadth and depth of inquiry that defines the program.

- **Alexandra Straus** explored "The Regulation of Ceramide Generation and Its Downstream Metabolites for Cancer Therapy."
- **Carter (Kent) Fairchild** focused on "Assessing the Therapeutic Potential of NM922 in Mitigating Doxorubicin-Induced Cardiotoxicity."
- **Christiana Appiah** investigated "Targeting Epigenetic Regulators as a Novel Means to Prevent Triple Negative Breast Cancer Recurrence."
- **Grayson Way** focused on "Integrative Multi-Omics Dissection of Pathogenic Mechanisms in Chronic Liver Diseases."

We applaud their hard work, groundbreaking research, and commitment to advancing science and medicine. Their achievements exemplify the Wright Center's mission to develop the next generation of clinical and translational researchers.



Clinical Research Coordinator Internship Program Highlights Mentorship and Student Success

The Wright Center for Clinical and Translational Research, in partnership with VCU Health, proudly celebrates the continued success of the Clinical Research Coordinator (CRC) Internship Program. This immersive, service-learning experience is designed to introduce students from the VCU College of Health Professions to real-world clinical research practices and career pathways in the field.

This spring, Brianna Rich (top image, left) and Charity Adusei (top image, right) successfully completed their internship experience, marking a significant milestone as graduating seniors in the Health Services Bachelor of Science program. Under the expert guidance of Dr. Shelly Orr (also pictured), Director of Clinical Research Operations at VCU Health and member of the Wright Center's Translational Workforce Development team, the internship culminated in a final poster presentation delivered to peers and community partners.

A key component of the program's success is its focus on mentorship. Both Brianna and Charity were mentored by Keila Najera, VCU Health Clinical Research Coordinator II, whose leadership and support gave the students valuable insight into the daily work of clinical research professionals. Their internship included hands-on experience with participant screening, data collection and verification, and understanding the regulatory requirements across nephrology, nursing, and hepatology studies.

In recognition of her exceptional performance and enthusiasm, Brianna Rich received the student award for her cohort. Her experience in the internship has sparked a lasting interest in clinical research, and she has already applied for entry-level CRC positions as she begins her post-graduation journey.

The Wright Center and VCU Health are always looking to grow this impactful program. Experienced CRCs who are interested in mentoring future clinical research professionals are encouraged to get involved. If you would like to serve as a mentor for an upcoming intern, please contact Shelly Orr at michelle.orr@vcuhealth.org.

Congratulations again to Brianna and Charity, and thank you to Keila Najera for her outstanding mentorship. Programs like the CRC Internship are instrumental in developing the next generation of clinical research professionals, and we're proud to support their success.

Read more:

VCU summer program puts two heads together for migraine research

Undergraduate Sunwoo Kim and School of Pharmacy professor Joseph McClay explore genetic angle to debilitating headaches.

Sunwoo Kim spent the summer studying headaches. Not the take-two-aspirin kind of headache, but the type of migraine that leaves thousands of people unable to function in day-to-day activities.

The goal? Help better understand, through genetic makeup analysis, why migraine medication helps some people and not others.

Kim, a junior in Virginia Commonwealth University's Honors College, is majoring in chemistry with a concentration in biochemistry in the College of Humanities and Sciences. She was paired with Joseph McClay, Ph.D., an associate professor in the School of Pharmacy, for the project through the Honors Summer Undergraduate Research Program, which is a partnership between the **Honors College** and **VCU's Wright Center for Clinical and Translational Research**.

HSURP pairs students from VCU, Old Dominion University, Virginia State University and Virginia Union University with VCU and VCU Health faculty members to spend the summer working together on a project. McClay and Kim studied the genetic makeup of individuals who suffer from refractory migraine – a debilitating form that doesn't respond to preventative medication – and compare the makeup to those of others whose migraines are more easily treated with medication.

Kim said the project helped her understand the scope of what goes into a research project before publication, and it helped her develop the skill set and confidence for later work. Kim and McClay believe their project laid groundwork for future studies in migraine research, and Kim plans to apply to Ph.D. programs to study pharmacology and chemistry.

To conclude her time working with McClay, Kim presented their findings at the recent HSURP poster presentation session that included more than 20 other student researchers.

Read more:

New minor in research ecosystems to debut in fall 2025 at VCU

Developed by The Wright Center and the College of Health Professions, the undergraduate program will prepare students for careers in scientific research and administration.

Reflecting an ongoing commitment to future-proofing its students, Virginia Commonwealth University is introducing a new undergraduate minor in research ecosystems in fall 2025. The program will offer a comprehensive introduction to the operational, regulatory and strategic aspects of modern research conduct and management.

The research landscape has grown increasingly interdisciplinary and complex, requiring trained and qualified professionals with expertise in both the content of their domains as well as research ecosystems overall. Reflecting this evolution, the new minor was developed through the VCU Student Pathways Collaborative, led by the C. Kenneth and Dianne Wright Center for Clinical and Translational Research and the College of Health Professions. Representatives included associates from Human Resources, the School of Medicine and the Massey Comprehensive Cancer Center.

"This new minor reflects our commitment to preparing students for real-world impact, and supporting the future of science at every level," said Amy R. Darragh, Ph.D., dean of the VCU College of Health Professions. "By equipping them with indispensable skills to navigate the research ecosystem, our students will have greater opportunities to find meaningful research careers in their chosen fields."

Translational research transforms scientific discovery into practical solutions for public health, clinical practice and health care policy, but many professionals entering those fields lack formal training in how research is funded, regulated, conducted and managed. The new minor's courses would prepare students for entry level positions in fields such as research administration, lab research, animal care and clinical research.

The curriculum also emphasizes the interdisciplinary nature of team science, where varied skill sets help implement successful research. The minor's content applies to various research domains conducted throughout the various schools, colleges, centers, and institutes at VCU.

"Research administrators are the backbone of any research enterprise and there are few formal pathways to these crucial careers," said P. Srirama Rao, Ph.D., vice president for research and innovation. "I am so pleased that VCU is continuing as a national leader in cultivating early-career research professionals by designing and offering this unique minor. With 62% of research policies and regulations being introduced in the last 10 years, our research administrators are now more essential than ever."

The minor's 18-credit curriculum includes four core courses as well as an elective within the student's chosen research domain, and the program culminates in an internship experience.

The research ecosystems minor, which is open to all majors, aligns with the mission of the Clinical and Translational Science Award granted to the Wright Center by the NIH to cultivate a skilled and future-ready workforce.

Read more:

VCU-VSU partnership leads to a long-term mentorship program with undergraduate honors pre-med students

Outside the large windows of the Richmond Academy of Medicine building, home of the Wright Center for Clinical and Translational Research, a steady Friday afternoon rain obscured the VCU Health medical campus. But inside a first-floor conference room at the Wright Center, the atmosphere was bright with ambition.

On March 27, six honors students from the Virginia State University (VSU) Troyals Medical Scholars program traveled from the Petersburg area to the heart of VCU Health. They weren't there for a standard lecture; they were there to gain hands-on research tools and meet the people they hope one day to emulate.

The event marked a milestone for the mentorship pod at the Wright Center, a burgeoning partnership between VCU and VSU. VSU is a key partner institution in the Wright Center's Clinical and Translational Science Award (CTSA) from the National Institutes of Health. This collaboration is a core component of the center's training and outreach programs for regional universities, designed to cultivate the next generation of clinical researchers.

Led by S. Patrick Nana-Sinkam, M.D., Associate Director of the Wright Center, and professor in the VCU School of Medicine's Department of Internal Medicine, and supported by Brad Williams, MSPH, and VSU liaison Brittany S. Powell, MPH, the program aims to bridge the gap between undergraduate aspirations and professional medical reality.

For Nana-Sinkam, the day was the "culmination of a really new program" designed to give students a longitudinal experience in mentorship. "I consider this to be an investment in our workforce, and ultimately an investment in our patients," said Nana-Sinkam. "The better the workforce we have, the better care our patients receive."

"Any of us who've had a modicum of success can point to several mentors throughout our careers," he continued. "We recognize that in order to develop a workforce best suited to serve our community, we need to start very early.

Read more:

THE WRIGHT CENTER HOSTS SECOND-ANNUAL RESEARCH DAY

Organizers highlight theme of "Collaborative Foundations: Building the Future of Research"

Building on the momentum of its debut year, the Wright Regional Center for Clinical and Translational Science gathered Virginia's brightest minds in October 2025 for its second-annual Research Day. Under the banner of this year's theme, "Collaborative Foundations: Building the Future of Research," the event transformed a day of academic reporting into a dynamic celebration of partnership, innovation, and shared vision.

The halls were filled with a diverse cross-section of the scientific community, bringing together 54 attendees and 18 expert speakers. While Virginia Commonwealth University (VCU) remained the heartbeat of the gathering, representing 81% of participants, the event's regional impact continued to grow. Nearly a fifth of the room traveled from regional partners Virginia State University (VSU) and Old Dominion University (ODU), highlighting the Wright Center's commitment to a truly statewide research network.

The day was intentionally designed to break down the traditional silos of academia. Attendees included seasoned principal investigators (40%) working alongside the next generation of talent, including students and trainees (15%). Crucially, the "foundations" of research were represented by the administrators and support staff who make complex studies possible, ensuring that every voice in the research lifecycle had a seat at the table.

The agenda featured a rich tapestry of content, ranging from deep dives into ongoing research projects to a high-level panel discussion on the mechanics of team science. Participants were also given a roadmap of the latest research resources and services available through the Wright Center, designed to streamline the path from laboratory discovery to community impact.

The response from the community was overwhelmingly positive. According to post-event evaluations, a staggering 83% of participants rated the presentations as "above-average" or "excellent." Many attendees specifically praised the variety of the sessions and the rare opportunity to hear perspectives from multiple institutions in a single afternoon.

As the second-annual Research Day drew to a close, the sentiment in the room was clear: the foundations have been laid, and the future of collaborative research in Virginia has never looked brighter. By bridging the gap between institutions and career stages, the Wright Center continues to prove that we go further when we go together.

2025 CLINICAL AND TRANSLATIONAL SCIENCE PILOT AWARDS

Toribiong Uchel, MD and Patrick Nana-Sinkam, MD

A New Diagnostic Frontier for Lung Cancer Patients

With support from a Wright Center Translational Science Pilot Award, VCU researchers are testing whether a routine fluid drainage procedure could double as a powerful cancer diagnostic tool. Toribiong Uchel, M.D., and Patrick Nana-Sinkam, M.D. — Associate Director of the Wright Center — are piloting a standardized protocol for analyzing genetic mutations in malignant pleural fluid — the dangerous buildup that commonly accompanies advanced lung cancer — using next-generation DNA sequencing. The $25,000 award is funding the feasibility and safety data the team needs to validate this approach and build a case for larger clinical trials. If mutation testing of pleural fluid proves reliable, it could eventually offer patients with multiple cancer types a less invasive path to personalized treatment.

POTENTIAL TRANSLATIONAL BENEFITS:

- **Clinical:** Diagnostic procedures; Therapeutic procedures; Drugs (molecular profiling agents)
- **Economic:** Cost effectiveness
- **Policy:** Guidelines

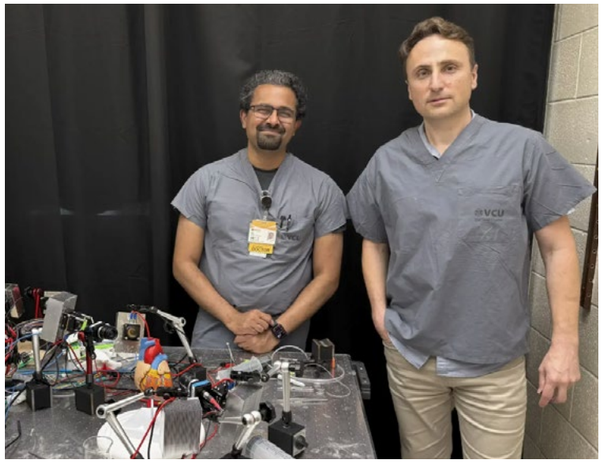
Khan Iftekharuddin, Ph.D.

AI-Assisted Diagnosis: Making Brain Imaging More Accessible

The Wright Center's Translational Science Pilot Award is supporting an early-stage effort to make neurodegenerative disease diagnosis faster, cheaper, and safer. Khan Iftekharuddin, Ph.D., of Old Dominion University, a key institutional partner in the Wright Center's broader CTSA award, is using the $25,000 grant to develop and test an AI-driven computational framework capable of predicting reduced brain glucose metabolism — a critical diagnostic marker — using MRI and spinal fluid data rather than costly, radiation-intensive PET scans. This pilot phase is focused on establishing the methodology and generating preliminary results that could attract larger funding for a full-scale study. The broader ambition is a disease-agnostic diagnostic tool that expands access to neurological care for patients who face barriers to advanced imaging.

POTENTIAL TRANSLATIONAL BENEFITS:

- **Clinical:** Diagnostic procedures; Software technologies; Biomedical technology
- **Community:** Health care accessibility; Health care quality
- **Economic:** Cost effectiveness; Cost savings; Societal & financial cost of illness



Ajay Pillai, M.D. (left), and Ilija Uzelac, Ph.D. (right)

Planting the Seeds of Precision Cardiac Care

A $25,000 Translational Science Pilot Award from the Wright Center is helping VCU researchers lay the groundwork for a potentially transformative approach to diagnosing and treating cardiac conduction disorders. Led by Ilija Uzelac, Ph.D., and cardiologist Ajay Pillai, M.D., the project uses ultra-high-frequency ECG technology alongside MRI data to begin developing patient-specific computational models — or "digital twins" — of the heart's electrical system. The pilot work will generate the preliminary data and proof-of-concept needed to pursue larger-scale federal funding. If that path succeeds, the long-term vision is a clinical simulation tool that allows physicians to model treatment outcomes for individual patients before intervening — reducing guesswork and improving care for those with serious heart conditions.

POTENTIAL TRANSLATIONAL BENEFITS:

- **Clinical:** Diagnostic procedures; Software technologies; Biomedical technology
- **Economic:** Patents; License agreements; Cost effectiveness

Alexander Krist, M.D., M.P.H.

Closing the Data Gap for Virginia's Patients

A Wright Center Translational Science Pilot Award is funding a critical infrastructure project that could significantly expand researchers' ability to study health outcomes for populations currently missing from Virginia's research databases — including uninsured individuals and veterans. Alexander Krist, M.D., Associate Director and Community Partnership Research Lead for the Wright Center, is using the $25,000 grant to acquire and integrate Virginia Health Information (VHI) hospital and emergency department data into the Wright Center's existing data systems — creating a unified resource covering more than 850,000 annual patient discharges statewide. By linking this data with Virginia's All-Payer Claims Database, the project will give investigators a more complete picture of how patients move through the health care system, laying the groundwork for studies on care coordination, intervention effectiveness, and statewide health policy.

POTENTIAL TRANSLATIONAL BENEFITS:

- **Community:** Health care accessibility; Health care delivery; Community power & partnerships
- **Policy:** Scientific research reports; Community-guided policy; Policies & legislation

Jinze Liu, Ph.D., and Kevin Matthew Byrd, D.D.S., Ph.D., have created a new tool called TACIT, which uses artificial intelligence to increase the efficiency and accuracy of patient diagnosis. The tool was recently submitted for a patent, and is based on research conducted during Liu's 2024 Wright Center pilot grant.

VCU FACULTY RECEIVE NEW COMMERCIALIZATION FUND AWARDS

Project: Powering the future of precision medicine.

Fund recipients: Jinze Liu, Ph.D., professor, Department of Biostatistics, School of Public Health, Co-Lead for Health Informatics at the Wright Center for Clinical and Translational Research, and member, Massey Comprehensive Cancer Center; Kevin Byrd, D.D.S., Ph.D., assistant professor of oral and craniofacial molecular biology, School of Dentistry, and member, Massey Comprehensive Cancer Center.

Treatment strategies are shifting away from the one-size-fits-all approach, instead tailoring therapies based on individual patient biology — called precision medicine.

Developed by Liu and Byrd, Astrograph is a software tool that uses artificial intelligence to interpret high-resolution images of tissues, identifying cell types, molecular properties and spatial interactions that were previously impossible to analyze with such depth and accuracy.

The inventors say it could revolutionize how scientists and doctors analyze the spatial organization of human cells — an essential step toward advancing precision medicine.

[The technology benefited from an initial 2024 clinical and translational pilot award from the Wright Center to Jinze Liu, Ph.D.]

Astrograph accelerates the push toward precision medicine by providing detailed spatial cell analysis — improving diagnostics, disease monitoring and drug development. Beyond pharmaceutical companies and medical researchers, Liu and Byrd say, the technology has broad applications for government and regulatory agencies, contract research organizations and clinical settings. They say analysis of a cell's spatial organization is a critical factor in understanding disease mechanisms and therapeutic responses.

Astrograph's AI-powered spatial biology data and understanding of medical imaging "has the potential to become a foundational tool for advancing precision diagnostics and translational medicine," Liu said.

The inventors are focused on scaling Astrograph for broader clinical and research adoption, making high-resolution spatial analysis accessible across biomedical fields.

Read more:

Pilot Design Studio Success Story: Alyssa Button, Ph.D.

The Research Design Studio reached a major milestone with its inaugural pilot session in December 2025. Among the first participants was Alyssa Button, Ph.D., an early career researcher and a clinical psychologist in pediatric endocrinology at Children's Hospital of Richmond at VCU. Button utilized the studio to refine her NIH K23 (career development) proposal on integrating physical activity into GLP-1 treatments for adolescents—a complex project that required both specialized clinical knowledge and rigorous design.

The Research Design Studio was a fantastic opportunity to get feedback and 'fresh eyes' from experts who are intimately familiar with the grant review process," Button says. "I've been shaping my grant idea for over a year and I thought it was in good shape, but after the studio, I redid all of the aims because they brought up excellent questions and design considerations that I think will make it much stronger. Even though the project looks different now, I feel much more confident with it.

Expert Support for Your Next Grant Proposal

The Research Design Studio is a signature program run out of the Resources and Services Core at the Wright Center, which is led by Melanie Bean, Ph.D.

The Wright Center's Research Design Studio offers a 90-minute, no-cost, structured consultation specifically designed to support faculty and research fellows as they prepare their grant submissions. Because a high-quality proposal takes time to refine, the process typically takes 6–8 weeks; we recommend submitting your request approximately 6 months prior to your grant deadline.

Our multidisciplinary panel of experts can help you strengthen:

- Study design
- Specific aims & outcomes
- Hypothesis development
- Recruitment feasibility
- Data analysis planning

The Mission: Improving Protocol Quality and Feasibility

The studio was developed to address common pitfalls in the submission process—such as lack of feasibility or missing design elements—that can lead to grant rejection. As noted by Rose Williams, Research Navigator, the goal is to provide a dedicated forum for investigators to stress-test their ideas before they reach a formal study section.

Crucial to this process is the extensive "behind-the-scenes" work Williams tailors to each session. For every applicant, she identifies and recruits 2–3 specific scientific experts who specialize in the researcher's field of study to ensure that the feedback is not just general, but deeply relevant to the scientific challenges of the investigator's proposal. These scientific experts are complemented by experts in Biostatistics, Informatics, Community Engagement, and Clinical Trials (with the specific makeup of the expert panel tailored to the grant application).

Alyssa Button, Ph.D. says the research design studio was a fantastic opportunity to get feedback and 'fresh eyes' from experts who are intimately familiar with the grant review process.

Rose Williams is the Wright Center's Research Navigator.

Key Takeaways for the Wright Regional Center

A "Hub" for Excellence: The studio acts as a central hub, connecting researchers with in-house experts in informatics, biostatistics, community engagement, and clinical trials, as well as specialized scientific experts tailored to the applicant's specific field.

Beyond Written Feedback: Unlike static review forms, these sessions offer a "robust conversational element" for real-time problem-solving and mentoring.

Read more:

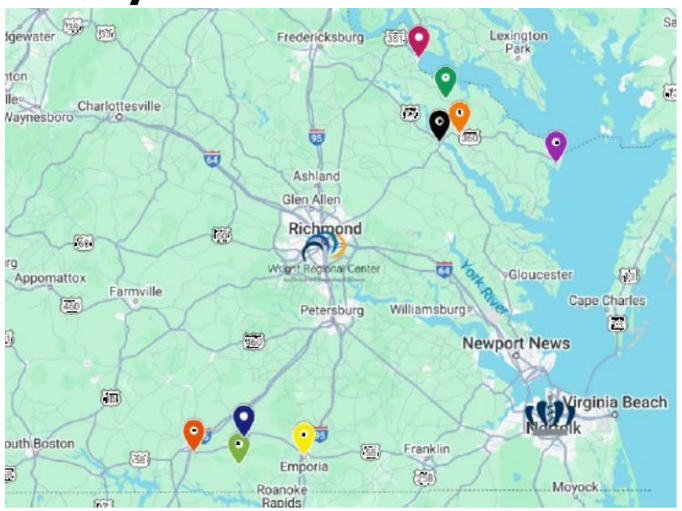
Community Engagement in Rural Areas

Virginia Health Sciences at ODU (formerly Eastern Virginia Medical School) is a key partner in this initiative and houses much of the research team, including site principal investigator, Henri Parson, Ph.D. With a focus on community engagement, we are piloting a model of engagement to improve health in rural areas and in research through a combination of a digital social-media style platform, virtual events, internet hubs, and in-person community relationship building.

Because cellular/internet connectivity is much less reliable in the targeted rural areas, we piloted satellite connectivity to rural participants. In the prior year, we provided Starlink, low orbit satellite internet, to our Community Advisory Board (CAB) members. This year the team began implementing community-based internet hubs by placing Starlink units in strategic public locations recommended by CAB members, such as libraries and community centers. These Rural Resident Digital Education Through Access Hubs (DEAHs) aim to offer broader Wi-Fi coverage for rural residents who may not have internet access at home. In addition, DEAHs will provide access to the Rural Health Connect platform, technology training, and health education sessions.

Rural Resident Digital Education Through Access Hubs (DEAHs) aim to offer broader Wi-Fi coverage for rural residents through satellite internet installations.

Members of the Rural Community Advisory Board:



Vanessa B. Sheppard, Ph.D. Launches *For HER with LOVE*, a Survivor-Centered Initiative

On November 10, 2025, the *For HER (Health, Empowerment, and Resilience) with LOVE™* initiative was launched with collaboration from the **Massey Comprehensive Cancer Center** and the **VCU Wright Center for Clinical and Translational Research**, and hosted at The Valentine Museum in Richmond. The event reached full capacity with more than 80 attendees who came from across Virginia and surrounding states, and as far as Colombia, South America. The event honored the voices and strength of Black breast cancer survivors and their caregivers while fostering dialogue among survivors, advocates, researchers, and health professionals.

Founded by **Vanessa B. Sheppard**, Ph.D., an affiliated faculty member of the Wright Center, *For HER with LOVE™* aims to share the insights and lived experiences of survivors to guide the development of a forthcoming community book and resources that will blend decades of community-engaged breast cancer research with survivor perspectives.

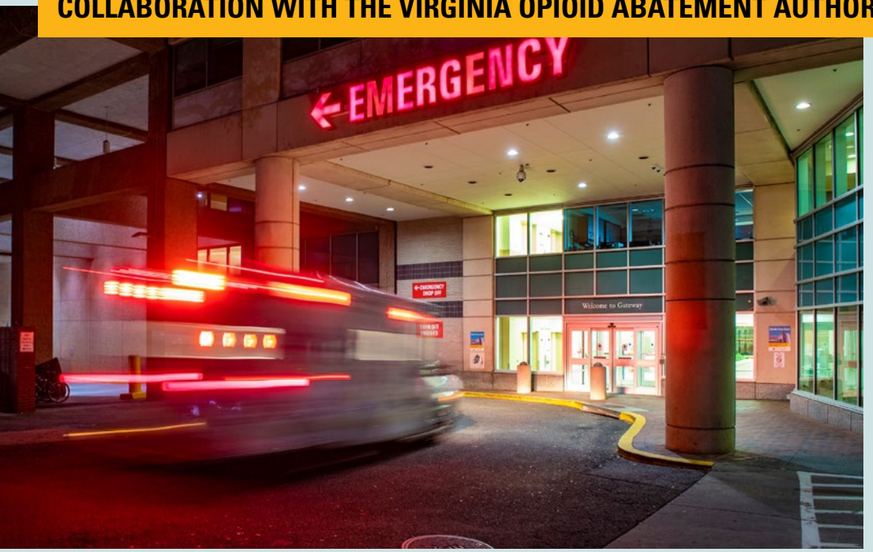
The vision was fueled by the paradox of a 40% higher breast cancer mortality for Black women against the tremendous progress of science and the resilient spirit of Thrivers. Sheppard describes this as a mandate for her to give back to thousands of study participants who have shared their perspectives, clinical records, and even biospecimens.

"The vision is to center the science of survivorship within the lived experiences of THRIVERs who defy statistics and to translate 'what we know carefully and have learned' into action and awareness."

The day began with portraits and recordings of survivors sharing their personal journeys of cancer survivorship. In the afternoon, after an opening prayer from **Rev. Rachel Pierce**, attendees were welcomed by **Delegate Delores McQuinn**, followed by remarks from **Dr. Monica Baskin**, Deputy Director of Research at Massey. Participants represented a variety of community-based organizations, including the American Cancer Society, Virginia Breast Cancer Foundation, Tigerlily Foundation, Thelma B. Jones Foundation, Here for the Girls, and CancerLinc, among others.

The keynote address was delivered by **Maimah Karmo**, Founder and CEO of the Tigerlily Foundation, who shared an inspiring message on resilience, advocacy, and the power of community.

Through storytelling, dialogue, and celebration, *For HER with LOVE* underscored the vital role of survivor-centered research and the need to continue advancing the science of survivorship. This is more than a book but an interactive mission and mandate to celebrate survival and address the disproportionate burden of breast cancer in our community.



VCU clinician-researchers say connecting with at-risk patients through an emergency department-based naloxone distribution program can also encourage patients to consider recovery services.

The Virginia Naloxone Project: How Narcan in emergency departments is saving lives from opioid overdoses

A life-saving strategy equipping at-risk patients with naloxone nasal spray before leaving the hospital is being led by clinician-researchers at VCU Medical Center.

The number of people dying from opioid abuse is ten times what it was two decades ago, according to the latest data from the **Substance Abuse and Mental Health Services Administration**.

However, the nasal spray naloxone (Narcan™) can bring someone back from death in mere minutes. Some could make the argument that wider availability of the opioid-reversal drug over the counter can save more lives, but clinician-researchers have seen mixed results on its impact – one reason being that the cost of naloxone can run upwards of $45.

Brandon Wills, DO, FASAM, FAACT, medical director of VCU Health's **MOTIVATE Clinic**, believes there is another way to get this life-saving medication into the hands of those who need it most – provide it to patients for free in the emergency department.

"By focusing on a patient population that we were already treating, we could easily provide patients with the medication and teach them how to use it," said Wills, who is also a professor in the Virginia Commonwealth University School of Medicine's departments of Psychiatry and Emergency Medicine. "Overall, giving at-risk patients the tools to potentially help themselves and others struggling with opioid use disorder (OUD) can help combat the opioid epidemic."

Patients who come to the emergency department after a nonfatal opioid overdose are a high-risk population; about 1 out of 20 dies within six months of their initial visit. In a recently published study, a research team led by Wills found that implementing a naloxone discharge program in a hospital can bring down that statistic by more than half. They conducted this research in VCU Medical Center's Emergency Department.

Brandon Wills, DO, FASAM, FAACT, is the medical director of VCU Health's MOTIVATE Clinic.

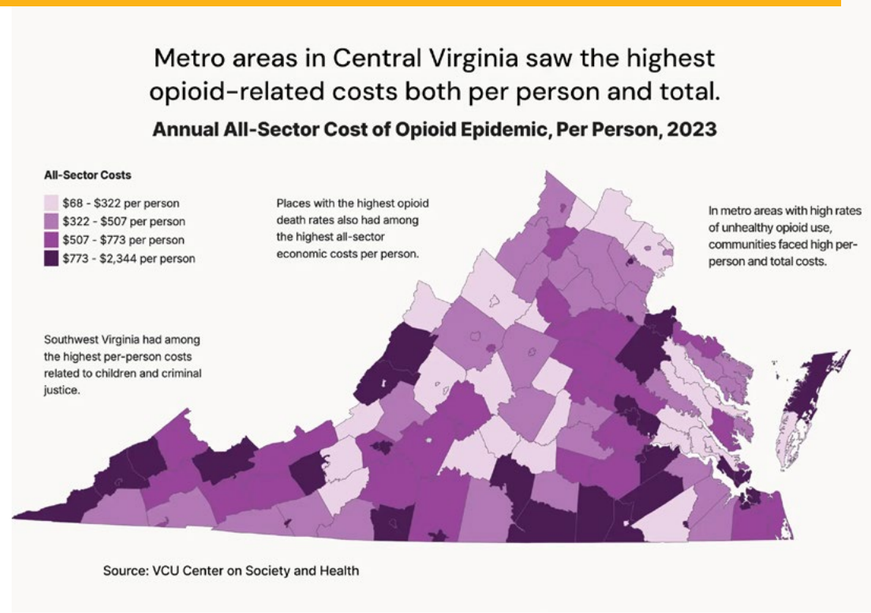
This study kicked off Wills' efforts to bring The Naloxone Project to Virginia. The initiative initially started in Colorado and aims to transform EDs into intervention spaces – where a medical crisis can become a step toward recovery.

Read more:

COLLABORATION WITH THE VIRGINIA OPIOID ABATEMENT AUTHORITY

The opioid epidemic in Virginia: 2,000+ saved lives, $5.2B in possible savings

VCU Center on Society and Health and Virginia Department of Health refresh website with locality-based map of the epidemic's impact.



Drug overdoses have been Virginia's leading cause of unnatural deaths since 2013, and new data from Virginia Commonwealth University is highlighting the high cost in human and economic terms.

This month, VCU's Center on Society and Health partnered with the Virginia Department of Health to release a third round of data via the updated Virginia Opioid Cost Data Tool, which now provides visual, geographic insights into opioid-related deaths.

Among takeaways from the newly analyzed 2023 data:

- 70% of drug-related deaths in Virginia were preventable in 2023, and evidence-based opioid care could help prevent more.
- Harm reduction centers across the state reversed as many as 2,085 overdoses.
- Evidence-based opioid care could save Virginia communities $5.2 billion, up from $3.5 billion in 2020.

Experts emphasize that these opioid overdose statistics demonstrate both the progress of harm reduction and the continued urgency of investing in evidence-based solutions to save lives and reduce economic losses.

"We know evidence-based opioid care saves lives and is worth the investment," said Derek Chapman, Ph.D., director of the Center on Society and Health and a professor at VCU's School of Public Health. "In 2023, more overdoses were reversed than the number of fatal overdoses that year, thanks to comprehensive harm reduction efforts. And we need to keep more people alive and help them live well, so they have the chance to recover through any path that is right for them."

A visual map of the impact of the opioid epidemic in Virginia

The rate of deaths from the Virginia opioid epidemic dropped 43% in 2024. But as shown in the previous year's data, the toll ripples across the full commonwealth, especially in poorer communities where opioid care could save more lives and boost local economies.

In late 2022, the Center on Society and Health and the VDH launched a first-of-its-kind tool to illustrate how much the opioid epidemic in Virginia costs residents each year, from impacted families to the businesses and publicly funded systems around them. In the latest update, the refreshed website offers an improved map showing which communities have faced the greatest opioid-related economic losses and which would benefit most from investment in evidence-based care.

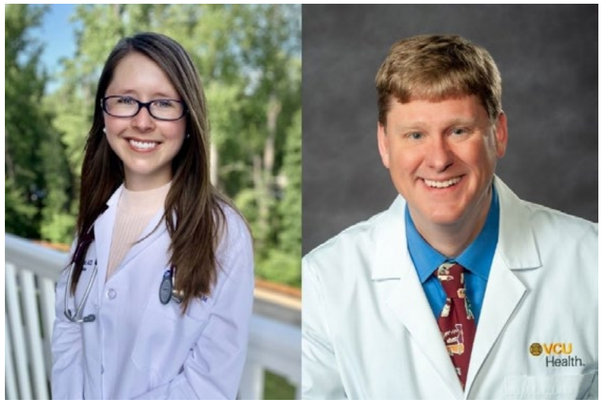
Read more:

BY FINDING 'BRIGHT SPOTS' IN THE OPIOID CRISIS, VCU RESEARCHERS ARE MAPPING A PATH TO BETTER OUTCOMES

Rather than focusing on the areas where mortality is highest, a multidisciplinary team is putting a spotlight on communities that are performing significantly better than expected despite facing the same risks as their neighbors who are struggling.

Fatal drug overdoses have been Virginia's leading cause of unnatural death since 2013, and researchers from Virginia Commonwealth University and the Virginia Department of Health **say more than five Virginians die every day from an opioid drug overdose**. Behind the statistics are parents, children, and neighbors lost to the opioid crisis—a human tragedy felt in every zip code, leaving a wake of grief that no ledger can truly capture.

While the headlines often focus on the areas hit hardest, researchers are now looking in a new direction: toward the communities that are beating the odds.



Jacqueline Britz, M.D. and Alexander Krist, M.D. are co-directors of the Virginia Ambulatory Care Outcomes Research Network (ACORN), a collaborative partnership between primary care practices and a multidisciplinary team of researchers devoted to evaluating and improving the quality of primary health care.

Leading this search is Jacqueline Britz, M.D., an assistant professor in the VCU School of Medicine's **Department of Family Medicine and Population Health**, a primary care physician on Richmond's Southside, and co-director of the **Ambulatory Care Outcomes Research Network, also known as ACORN**, a cornerstone of primary care research, policy and practice in Virginia, which includes 526 primary care practices (27% of all primary care practices in the state).

With support from VCU's Wright Center for Clinical and Translational Research, and through her NIH K12 Career Development Award through VCU's Building Interdisciplinary Research Careers in Women's Health (BIRCWH) Program, Britz and her team are pioneering a "bright spots" approach to the opioid crisis. Rather than focusing solely on "hot spots"—areas where mortality is highest—her team identifies "positive deviants": communities that are performing significantly better than expected despite facing the same economic and social risk factors as their neighbors.

Identifying success stories in the data

To find these communities, Britz's team utilized a rigorous data-driven methodology. By analyzing the Virginia All-Payer Claims Database—a massive repository of healthcare utilization and insurance claims data—her team created a statistical model to look beyond simple mortality rates. This effort was led by Roy Sabo, Ph.D., a professor in the Department of Biostatistics in the VCU School of Public Health and a Wright Center lead in charge of the Biostatistics, Epidemiology and Research Design core. This effort includes a multi-disciplinary team from VCU's School of Public Health including Adam Funk, Darya Niaki, Pharm.D., and Jong Hyung Lee, Ph.D., a senior data analyst in the VCU Department of Family Medicine and Population Health.

"By leveraging the Virginia All-Payer Claims Database and several other data sources, such as the American Community Survey, or Census, we were able to look beyond the raw mortality data to identify communities that were outperforming and underperforming their expected opioid mortality, based on measures we know relevant," Sabo said. "Further, we could look at this comparative performance longitudinally to identify areas that were consistently deviating positively from the norm over several years. This provides our team with those areas most likely to give us potential solutions to opioid abatement that were not found in our model, to help us find something truly novel."

COLLABORATION WITH THE VIRGINIA OPIOID ABATEMENT AUTHORITY

Crucial to translating this data into real-world practice is Alex Krist, M.D., a professor in the Department of Family Medicine and Population Health and the Wright Center's lead for Community Engaged Research. As co-director of ACORN, and a practicing family physician, Krist ensures that research isn't just academic, it's actionable for clinicians on the front lines.

"A major strength of this project is bringing together the translational science, frontline primary care, and community voices to identify what's working and move those solutions into action," Krist said.

Building a bridge to other communities

Making these connections is a powerful example of translational research in action. "Translational research is fundamentally about moving insights gained from research to improving the health of the community more quickly," said F. Gerard Moeller, M.D., director of the Wright Center. "In the context of the opioid crisis, this means finding what is working on the ground and ensuring other communities have the blueprint to replicate it."

To facilitate this, Britz worked with the Wright Center to develop the **Virginia Opioid Abatement Toolkit**, a first-of-its-kind state-specific project funded by the Virginia Opioid Abatement Authority to develop an evidence-based guide for cities and counties in the use of opioid abatement funds. This public resource has already seen significant engagement, with nearly 3,000 visits and 1,300 active users in Virginia.

A key component of the toolkit work is to provide community support and consultation, including community needs assessments and qualitative research led by Marshall Brooks, Ph.D., and Marie Schoen, from the VCU Department of Family Medicine and Population Health, for communities such as Richmond and Chesterfield. These consultations are key to understanding community context, including community priorities, challenges, as well as solutions. Through partnership with communities, the VCU team provides additional resources and support for communities in implementing programs to reduce opioid mortality.

Tyler Burton, the toolkit manager, brings a unique dual perspective to the project. A former health department opioid response coordinator, Burton's background includes utilizing the Overdose Detection Mapping Application Program—a tool used to reactively map "hot spots" of overdose activity.

While ODMAP is a critical reactive tool for mapping where the crisis is at its worst, the Bright Spots project is proactive, focusing on where community-led solutions are working. Burton's dual perspective allows her to bridge the gap between knowing where the problem is most urgent and discovering where the answers are already taking root.

Burton emphasizes that while national data exists, it often creates a clutter of information that doesn't apply to the unique legal and social landscape of the state.

"A big goal of ours was to take out all the noise… and create a one-stop-shop for everything Virginia-specific," she said.

The reach of the toolkit is the result of exhaustive boots-on-the-ground work. Burton and her team have joined over 100 national and community events, attended 67 city and county task force meetings, presented the Toolkit and conducted numerous one-on-one consultations with localities.

"We want people to feel like they have a seat at the table, especially those in smaller communities who might not have the same level of resources," Burton said.

Britz's hope for the toolkit is that it becomes a catalyst for real-world change.

Read more:

Primary care shortage affects 44% of Virginia's neighborhoods and almost 3.8 million residents, new VCU study finds

Rural communities are particularly hard-hit, and the research could point to workforce initiatives.

Nearly half of Virginia's neighborhoods don't have enough nearby primary care physicians for their residents, with rural communities being hit hardest by workforce shortages, according to a new study led by researchers at Virginia Commonwealth University.

Using anonymized health care claims data, the research team found that 44% of census tracts in the state lacked adequate access to primary care services, affecting nearly 3.8 million Virginians. The findings, published in the Annals of Family Medicine, could help inform workforce interventions in targeting neighborhoods most in need of expanded primary care access.

The researchers leading this study were supported by funds from the National Institutes of Health.

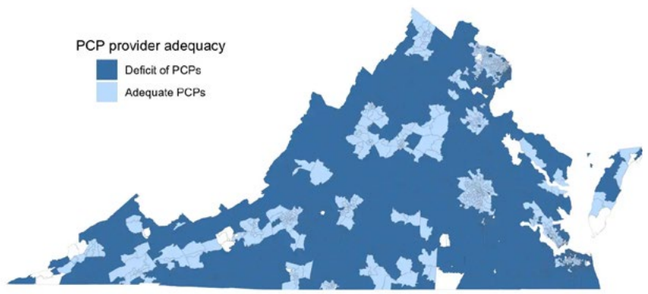
"Primary care physicians are the foundation of any health care system, with the ability to provide care across the spectrum of people's lives," said Hannah Shadowen, Ph.D., an M.D.-Ph.D. student at VCU's School of Medicine and School of Public Health and lead author of the new study. "Not only do they help treat acute medical problems, they also play an important role in helping patients manage chronic health issues like diabetes and hypertension."

Yet health care workforce shortages have worsened in the United States, and the need for primary care physicians is expected to keep growing. According to estimates from the Association of American Medical Colleges, by 2032 the United States will be short by more than 55,000 primary care physicians in meeting the health care needs of Americans.

Residents in areas with limited health care options often need to travel farther for medical appointments, and they consequently are less likely to utilize primary care services. This is a serious public health concern, as inadequate access to primary care results in more hospitalizations and emergency department visits, shorter lifespans and worse health outcomes.

"In order to develop interventions that effectively address primary care shortages, we need to better understand which communities are facing the biggest barriers to access," said Alex Krist, M.D., a professor in the VCU School of Medicine's Department of Family Medicine and Population Health and one of the study's co-authors.

By evaluating patient claims data collected in 2019 through the Virginia All-Payer Claims Database, Krist, Shadowen and their colleagues determined the number of physicians actively providing primary care in Virginia, the locations of their practices and the number of patients seen by each physician. The researchers also included obstetrician-gynecologists, internal medicine physicians and pediatricians seen by patients for wellness visits.



The researchers identified primary care provider deficiencies by calculating the total patient capacity of all physicians within a 30-minute drive of each census tract and compared this number with the census tract's population size. (Hannah Shadowen)

"While some studies estimate how many patients a provider should be able to see annually, this data really speaks to the actual capacity of each provider and the type of care they can give to the community," Shadowen said. "Rather than giving a prediction on health care shortages, this data provides a realistic depiction of the primary care workforce in Virginia and where the shortages are felt most prominently."

The research team then calculated the total patient capacity of all primary care physicians within a 30-minute drive of each census tract and compared this number with the census tract's population size.

The research team also assessed various demographic factors to better understand whether certain community characteristics were associated with primary care access. The factors included age, insurance coverage, income level, medical needs, disability rates, education level, rurality, and geographic and economic concentration.

The data showed that 4,850 physicians provided primary care services in 2019, with each seeing 1,368 patients on average. The researchers' analysis revealed that about 44% of Virginia's census tracts did not have adequate access to primary care physicians.

They also found that structural and geographic factors were the strongest predictors of whether a community had enough primary care physicians in Virginia. In particular, rural communities experienced significantly less primary care access compared with suburban or urban neighborhoods. On average, the primary care capacity of rural census tracts was approximately 725 patients fewer compared with that in suburban tracts.

The study authors say a number of factors may be behind this. For example, the majority of primary care residencies are located in urban or suburban areas, and other research shows that physicians are more likely to practice where they receive residency training.

"These findings show that more work needs to be done to increase Virginia's rural primary care workforce," Shadowen said. "For example, expanding residency programs in rural settings or establishing incentive programs like loan repayment benefits could potentially help with closing these gaps in health care access."

Read more:

CENTER-SUPPORTED INVESTIGATOR BREAKTHROUGHS

VCU analysis of millions of records reveals telehealth surge, persistent barriers to access

As the pandemic reframed health care delivery, rural geography and higher poverty levels remain prevalent signs of an enduring digital divide.

While telehealth transformed from a niche service to a lifeline for millions during the pandemic, a massive new study from Virginia Commonwealth University researchers is sounding a cautionary note: The same technology that continues to bridge distances can also widen gaps in health care access if policy and infrastructure do not keep pace.

To understand the scale of the shift to telemedicine, the VCU research team, led by Jong Hyung Lee, Ph.D., in the School of Medicine's Department of Family Medicine and Population Health, analyzed an enormous dataset from the Virginia All-Payer Claims Database. Supported by the VCU Wright Center for Clinical and Translational Research, the team identified more than 41 million initial records, and its final analysis covered more than 21 million primary care visits – including more than 2.6 million specific telehealth encounters – across Virginia between 2016 and 2021.

The study, recently published in *JMIR Formative Research*, reveals a staggering transformation: a dramatic surge in telehealth at the onset of the pandemic that, unlike many other emergency measures, never fully receded.

Read more:

School salad bars raise fruit intake among kids and benefit economically diverse schools, VCU researchers find

Their latest study, centered on a Virginia school district, adds to evidence that salad bars are encouraging healthier dietary choices in the school cafeteria.

School salad bars boost how much fruit kids eat but don't drive up vegetable intake, according to a **new study** by researchers at Virginia Commonwealth University and Children's Hospital of Richmond at VCU. That's still good news for salad bars, which some schools have installed to help kids meet the fruit and vegetable guidelines of the National School Lunch Program and the Healthy, Hunger Free Kids Act of 2010.

Melanie Bean, Ph.D., and VCU colleagues tested whether salad bars increased elementary school students' fruit and vegetable intake in one Virginia school district. **The study**, published Feb. 5 in the International Journal of Behavioral Nutrition and Physical Activity, demonstrates the positive impact of school salad bars on kids' nutrition. It builds on **previous findings** from the same research team, which found that school salad bars improved the overall dietary quality of students' lunches.

"What's really important is that vegetable intake did not go down," said Bean, a professor in the **School of Medicine's Department of Pediatrics** and co-director of the **Healthy Lifestyles Center** at CHoR. "Students were still eating the same amount of vegetables with the salad bar. They were just adding fruit, and eating more fruit. Students in salad bar schools also selected a greater variety of fruits and vegetables, potentially leading to a greater range of nutrient intake."

The school district installed salad bars, which featured a rotating variety of four vegetables and three fruits, into all of their elementary schools over several years. The research team randomly selected seven schools receiving salad bars and paired them with control schools with similar demographics. The researchers matched the school pairs based on their Title I status, a designation where at least 40 percent of students live below the poverty line. Among the Title I schools, between 60% and 100% of students received free, federally funded lunches.

"We know that fruit and vegetable intake in particular is lower among families who are under-resourced, and that their risk for chronic disease is higher," Bean said. "School meals play a particularly important role for these families."

Researchers measured the amount of fruit and vegetables kids ate by taking photos of their lunch trays — over 13,000 photos from 6,623 students — before and after lunch. They then estimated how much the students ate, as well as how much food waste the kids left on their plates, before salad bars were installed and four to six weeks after installation.

The research team found that students in "salad bar" schools ate approximately one-third of a cup more fruit than they did before the salad bars were installed, and around one-third of a cup more than students in control schools, who were served fruit and vegetables in a typical lunch line throughout the study. Vegetable consumption — approximately one-quarter of a cup — stayed the same in both groups.

That could be because most kids naturally prefer fruit over vegetables.

A "before" image of a student's plate from the study is on the left, and an "after" image of the same student's plate is on the right. VCU researchers used images like this to estimate the students' fruit and vegetable consumption. (Courtesy of Melanie Bean)

CENTER-SUPPORTED INVESTIGATOR BREAKTHROUGHS

Melanie Bean, Ph.D.

"Sweet tastes are more palatable, and we hypothesize that kids were more familiar with some of the fruits versus the vegetables," said Suzanne Mazzeo, Ph.D., a professor in VCU's Department of Psychology in the Colleges of Humanities and Sciences and one of the study's co-authors. Over time, Mazzeo said, students might choose more vegetables from the salad bars.

The researchers also found that fruit food waste increased very slightly over time in "salad bar" schools but not in control schools, while vegetable food waste was unchanged in both.

Strikingly, the results were consistent across Title 1 designation, which means that all kids benefited from the salad bars.

"The National School Lunch Program, and salad bars within the National School Lunch Program, are in some ways kind of an equalizer," Bean said, explaining it overcomes those differences across income groups for fruit and vegetable intake.

The study's co-authors include Lilian de Jonge, Ph.D., a professor at George Mason University; Laura Thornton, Ph.D., a professor at the University of North Carolina at Chapel Hill; Hollie Raynor, R.D., Ph.D., a professor at the University of Tennessee, Knoxville; Ashley Mendoza, a research coordinator in the Department of Pediatrics and at ChoR; Sarah Farthing, a research manager in the Department of Pediatrics and at ChoR; and Bonnie Moore, from the nonprofit Real Food for Kids.

Read More:

F. Gerard Moeller, M.D., Presents National Model for Community Impact at CTSA Program Fall Annual Meeting

At the Clinical and Translational Science Awards (CTSA) Fall Meeting, F. Gerard Moeller, M.D., Director of the VCU Wright Center for Clinical and Translational Research, showcased a burgeoning national model for how academic institutions can directly influence public health policy and community outcomes.

Moeller, who continues to represent the Wright Regional Center for Clinical and Translational Science (CCTS) on the National Steering Committee, led a high-profile session titled "Translational Science Impact with Community Relevance." The session's highlight was a joint presentation with Tony McDowell, Executive Director of the Virginia Opioid Abatement Authority (OAA).

The presentation focused on the "gold standard" partnership between the Wright Center and the OAA, which manages the distribution of hundreds of millions of dollars in settlement funds to combat the opioid epidemic across Virginia.

A primary vehicle for this impact is the **Virginia Opioid Abatement Toolkit**, a data-driven resource developed to help cities and counties implement evidence-based programs. By providing standardized performance measures and technical assistance, the Wright Center ensures that local governments have a rigorous framework to track outcomes and ensure settlement funds are used effectively.

Moeller also detailed the "Virginia Bright Spot Project," an initiative that identifies local communities achieving exceptional success in opioid abatement. By studying these "bright spots," the Wright Center translates local triumphs into scalable models that can be replicated across the commonwealth and the country. This work serves as a vital bridge between high-level NIH research priorities and the immediate, practical needs of state and local public health authorities.

The collaborative model presented by Moeller and McDowell emphasizes a shared commitment to data integrity, focusing on providing the OAA with the tools necessary to evaluate the efficacy of local interventions. This includes leveraging the Wright Center's expertise in translational science to turn complex epidemiological data into actionable public health insights for policymakers.

As the opioid crisis continues to evolve, Moeller's work serves as a blueprint for CTSA hubs nationwide. It demonstrates that when academic centers move beyond traditional research and provide the rigorous data infrastructure needed by policymakers, they can drive measurable, real-world community impact.

Wright Center Administrator Elizabeth Fortune Wins Fulbright Award to Explore International Research Collaboration

In the world of health research, the path from a laboratory discovery to a patient's bedside is paved by the vital but sometimes unseen work of research administrators. For Elizabeth Fortune, MBA, Administrative Director of the C. Kenneth and Dianne Wright Center for Clinical and Translational Research at Virginia Commonwealth University (VCU), a recent two-week residency in Germany as a Fulbright Scholar provided a unique vantage point to explore how that path can be made smoother—not just at home, but across the Atlantic.

Fortune was selected for the prestigious Fulbright U.S. Scholar Program's International Education Administrators (IEA) award. From November 9 to 22, 2025, Fortune joined a cohort of 17 administrators to participate in the "Seminar for US Administrators in International Education," an experience designed to strengthen academic exchange in an ever-changing global environment.

A Global Solution to Local Frustrations

The seed for Fortune's Fulbright journey was planted at an international conference where she witnessed firsthand the barriers to global scientific collaboration. "I was listening to EU and U.S. researchers talk about how difficult it could be to work together simply because neither side fully understood the other's processes and requirements," Fortune recalled. "Hearing that mutual frustration was eye-opening. I realized we didn't have a science problem; we had a process problem. That friction is precisely what sparked my Fulbright application. I wanted to figure out how to make these two systems work together."

Bringing Knowledge Back to VCU

Fortune returns to Richmond energized by the possibilities of future collaborations. As the Wright Center continues its mission to convert health research into patient care, the insights gained regarding European research management will be invaluable.

"I am incredibly honored to receive this Fulbright award, which will enable me to bring back knowledge that will benefit VCU," Fortune said. By exploring research administration through a global lens, she is helping VCU lead the way in fostering a more connected and efficient global research community.

Patrick Nana-Sinkam, M.D., associate vice president of clinical and translational research at VCU Health and a pulmonologist at VCU Massey Comprehensive Cancer Center, provides guidance to researchers working on clinical trials, oversees research finance operations and partners with institutes and centers across the health system and university to ensure that clinical studies are effectively implemented. (Credit: VCU)

Becoming a destination for clinical research

As a university-based health system, VCU Health is unraveling medical mysteries one clinical trial at a time.

The roles of clinicians and researchers are intertwined. Clinicians rely on clinical research to provide leading-edge care for patients today, tomorrow, and in the future.

Patrick Nana-Sinkam, M.D., Director of The Wright Center's K12 Program and Co-Lead of the Workforce Development program, knew during his fellowship that he wanted to do both.

"I'd always been very interested in trying to better identify the underlying drivers of disease. And most importantly, how I could improve a patient's outcome," he said. "I quickly realized pursuing a career pathway as both a clinician and researcher would allow me to ask and answer some important questions."

Years beyond his fellowship in pulmonary and critical care at the University of Colorado and National Jewish Health, Nana-Sinkam is masterfully balancing his role as the associate vice president of clinical and translational research at VCU Health, where he leads a team to oversee the office of clinical research. Meanwhile, he still serves as a pulmonologist for the health system.

The office of clinical research provides guidance to researchers working on clinical trials, oversees research finance operations and partners with institutes and centers across the health system and university to ensure that clinical studies are effectively implemented.

"Patient-centered clinical care sits at the core of clinical research. When [patients] know research is part of their care, they can benefit from leading edge discovery. "

–Patrick Nana-Sinkam, M.D., associate vice president of clinical and translational research at VCU Health

Nana-Sinkam is currently involved in the implementation of the national Vanguard Study, in which randomized patients will receive one blood test to determine if it is reliable and effective in the early detection of multiple forms of cancer. VCU Massey Comprehensive Cancer Center, the C. Kenneth and Dianne Wright Center for Clinical and Translational Science and the Department of Family Medicine were selected together as one of nine groups in the U.S. to serve as a hub to lead the study. The other Virginia partners in the study, launched by the National Cancer Institute's (NCI) Cancer Screening Research Network (CSRN), are Inova Health System and Sentara Health.

"VCU is the lead institution between the three partners," said Nana-Sinkam, who is also a member of the Cancer Prevention and Control research program at Massey. "We will be responsible over the next 18 to 24 months for enrolling about 2,000 Virginians, ages 45 to 75. At this point, we have yet to determine whether or not a blood test for cancer early detection is feasible in clinical practice across our various communities. The test is unique in that it can provide information as to whether or not a patient is at risk of having a cancer. It can also provide some indication of what type of cancer they may have. This represents our first attempt to determine if such a diagnostic test is feasible."

Read more:

VIRGINIA SCREENING NETWORK LAUNCHES VANGUARD STUDY TO EVALUATE TESTS FOR THE EARLY DETECTION OF SEVERAL CANCERS

The Virginia Cancer Screening Research Network (CSRN)—led by a multidisciplinary team of experts at VCU Massey Comprehensive Cancer Center, the Inova Schar Cancer Institute and Sentara Health—is recruiting participants for the Vanguard Study, a national study evaluating a new type of blood test that screens for several types of cancer in their earliest, most treatable stages. Researchers will determine whether Multi-Cancer Detection (MCD) tests—tests that detect biological substances released in the bloodstream by cancer cells—are able to effectively screen people ages 45 to 75 for 10 different types of cancer, including bladder, breast, colorectal, esophageal, liver, lung, ovarian, pancreatic, prostate and stomach.

"We're thrilled to serve as leaders in this national effort to understand how multi-cancer detection tests work for the people in our communities," said **Alex Krist, M.D., M.P.H.,** co-principal investigator for the Virginia CSRN, research member at VCU Massey and a professor of family medicine and population health at the VCU School of Medicine. "If we find evidence that these tests can identify cancers in people before they develop symptoms, this will be a major step forward in our long-term goal of reducing deaths for multiple cancers where we currently have no screening options or for which the current options are more invasive."

This is the first study through the Cancer Screening Research Network, a new national network of primary care sites devoted to cancer screening research that is funded by the National Cancer Institute (NCI), part of the National Institutes of Health. As part of this national network, the Virginia CSRN is a partnership between VCU Massey Comprehensive Cancer Center and the C. Kenneth and Dianne Wright Center for Clinical and Translational Research with VCU Health; the Inova Schar Cancer Institute and its Saville Cancer Screening and Prevention Center; and Sentara Health and the Sentara Health Research Center.

The newly launched Vanguard Study will recruit adults ages 45 to 75 with no cancer diagnosis in the past five years. Study participants will give two blood samples—one year apart—and complete regular cancer screening as recommended by clinicians. Participants will be randomized to one of three groups: two groups where their blood will be tested by an MCD test or a third control group in which their blood will be stored for potential future research. There is no cost to participate in this study.

"By joining this study, participants can play a vital role in advancing cancer research and understanding emerging screening approaches," said **Patrick Nana-Sinkam, M.D.,** co-principal investigator for the Virginia CSRN hub, Linda Grandis Blatt Endowed Chair in Cancer Research at VCU Massey and the associate vice president of clinical and translational research at VCU Health. "Along with our partners at Inova and Sentara, we will be responsible for enrolling about 2,000 Virginians over the next two years."

Read more:

Gretchen Neigh, Ph.D., M.B.A., was this year's School of Medicine recipient of the Professional Achievement Award from VCU's Women in Science, Dentistry and Medicine (WISDM).

A mentor and an advocate: Dr. Gretchen Neigh receives this year's WISDM award

Gretchen Neigh, Ph.D., M.B.A., Co-Director of the Wright Center's K12 and T32 programs and a professor in the Department of Anatomy and Neurobiology, was recognized by VCU's Women in Science, Dentistry and Medicine for her commitment to advancing women's health and increasing participation in the sciences.

Gretchen Neigh, Ph.D., has always loved research. With a Ph.D. in neuroscience, 21 years of continuous extramural funding and more than 120 peer-reviewed publications, she is an authority in biomedical science. But what really keeps her going in academia is the opportunity to teach and mentor young researchers. Her dedication to supporting the next generation of scientists is one of many reasons she received this year's Professional Achievement Award from VCU's Women in Science, Dentistry and Medicine (WISDM).

Presented by WISDM, a multidisciplinary group that aims to promote and further the professional goals of women in science at VCU, the Professional Achievement Award recognizes the achievements and contributions of women faculty at the School of Medicine. Colleagues, students and mentees of Neigh nominated her this year, describing her as "a credit to the VCU community," with clear communication, innovative teaching methods and a lab that with a welcoming, collaborative environment.

"I'm very honored to receive the award," Neigh said. "The trainee letters that went in were very impactful. All I've ever wanted to do is make people's lives better."

Neigh, a professor in the Department of Anatomy and Neurobiology, explores the biological factors of risk and resilience, and has been foundational in establishing the biological basis of sex-specific stress-induced changes in risk. She said she was initially attracted to VCU because of the university's emphasis on researchers teaching, and when she joined the School of Medicine faculty in 2016, she was eager to connect with students and postdocs, both in the lab and in the classroom.

One course she especially enjoys teaching is on grant-writing. When she took it over from a retiring professor, she reshaped the lecture-based class to be more hands on. She shares with students details about her own journey writing grants, including the ones that were rejected.

"In science, we really only see other people's success, and the only failures you see are your own, which is part of what makes the field so daunting," she said. "I show my students that for every grant I do get, there are probably nine that I don't."

One nominator noted that in addition to science and grant-writing, Neigh teaches her students and postdocs practical professional skills like networking, public speaking and navigating interpersonal relationships in an academic setting. She also encourages them to advocate for themselves, ask for what they need and say "no."

"Especially as women, I think, it can be hard to say 'no,'" Neigh said. "It's ingrained in us, and that leads to people being spread too thin and burnout. I try to be cognizant of what I'm asking of my students."

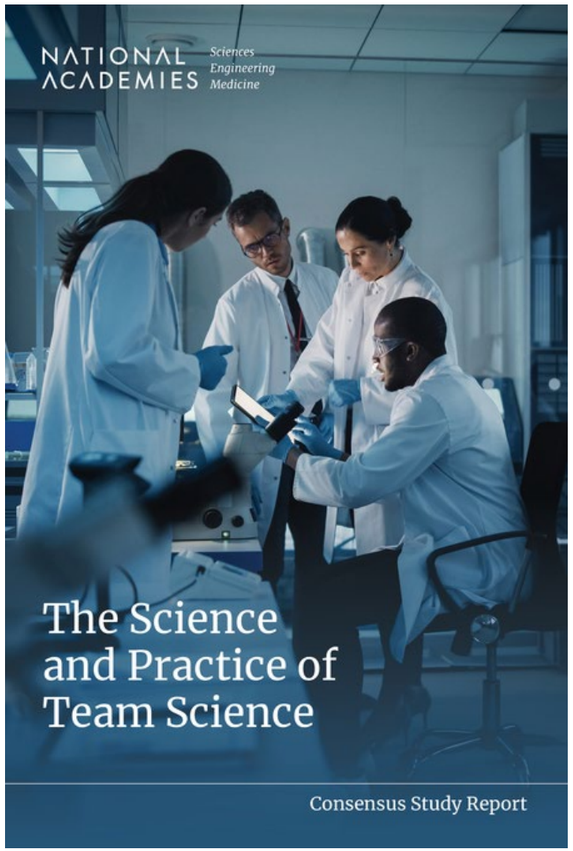
Read more:

Deborah DiazGranados, Ph.D. Helps Shape National Academies' New Roadmap for Team Science

A Virginia Commonwealth University researcher has helped produce what may become the defining guide to collaborative science for a generation.

Deborah DiazGranados, Ph.D., associate professor in the School of Medicine at Virginia Commonwealth University, and Director of Evaluation and Team Science at the C. Kenneth and Dianne Wright Center for Clinical and Translational Research, served on the 14-member Committee on Research and Application in Team Science convened by the National Academies of Sciences, Engineering, and Medicine. The committee's report, *The Science and Practice of Team Science*, was released in June 2025.

The report arrives a decade after the National Academies' landmark 2015 publication *Enhancing the*



Effectiveness of Team Science and takes stock of how the landscape has shifted — from the rise of virtual and hybrid collaboration to the growing role of artificial intelligence in research. Its findings offer updated, evidence-based guidance for science teams of all sizes and disciplines.

Among its key recommendations, the report calls on academic institutions to reform promotion and tenure policies that currently fail to credit collaborative work, urges scientific journals to adopt clearer standards for authorship and contribution in multi-investigator studies, and asks funders — including the National Institutes of Health and the National Science Foundation — to expand allowable costs to better support the real-world needs of science teams.

DiazGranados has described her participation on the committee as a career highlight, citing the experience of working alongside researchers from across disciplines and institutions to produce a resource she hopes will directly benefit the scientific community.

That impact is already taking shape close to home. The Wright Center plans to draw on the report's findings to strengthen its Team Science program, which supports researchers across VCU in building and sustaining effective collaborative research efforts.

The full report is available through the National Academies Press at **nap.edu**.

WRIGHT CENTER LEADER RICHARD STERLING HONORED AS "LIVER HEALTH HERO" BY AMERICAN LIVER FOUNDATION

Richard Sterling, M.D., chief of hepatology for VCU Health, chief clinical officer of the Stravitz-Sanyal Institute for Liver Disease and Metabolic Health, and Lead of the Wright Center's Clinical and Translational Science Pilot Award Program, was honored on Oct. 5 as a "liver health hero" by the American Liver Foundation.

VCU employees and others walked in the foundation's "Liver Life Walk" on Oct. 5, 2025 in Richmond to raise funds for research. Jazmine Edwards, the ALF's national coordinator of events, said the recognition celebrates his "extraordinary contributions to liver health" with his Fibrosis-4 index.

Developed nearly 20 years ago by Sterling, the Fib-4 is a simple, non-invasive test involving a blood sample and incorporates measurements such as a patient's age, liver enzymes and platelet count to judge the severity of a patient's liver disease. He crafted the index while pursuing a graduate degree in biostatistics, alongside his clinical work.

The Fib-4 index's impact on the field has been remarkable. The index is now considered the gold standard worldwide as the initial screening test for most liver diseases. The FIB-4 remains recommended by leading liver, gastroenterology and endocrinology societies as a first-line test to screen for liver scarring. For researchers seeking to propose new tests and biomarkers for liver disease, matching or besting the Fib-4's predictive powers is the goal.

Read more:

MASSEY RESEARCHERS DISCOVER NEW GENETIC TARGET THAT COULD SHAPE THE FUTURE OF LIVER CANCER TREATMENT

Pictured: Devanand Sarkar, M.B.B.S., Ph.D., director of the Wright Center's T32 Pre-Doctoral Program.

Hepatocellular carcinoma (HCC), the most common type of liver cancer and the third-leading cause of cancer-related deaths worldwide, is extremely challenging to treat. However, the future of HCC patient care looks brighter thanks to research by Devanand Sarkar, M.B.B.S., Ph.D., Director of the Wright Center's T32 Pre-Doctoral Program, who discovered that the gene TAF2 plays a pivotal role in the growth of this cancer.

Sarkar and a team of scientists at VCU Massey Comprehensive Cancer Center found that TAF2 is overexpressed in HCC patients compared to individuals with healthy livers. Through preclinical research, they discovered that TAF2 regulates the survival of hepatocytes—the functional cells of the liver—and tumor formation. Their study—recently published in the journal Hepatology—also demonstrates that TAF2 cooperates with the MYC gene, another known major driver of cancer, to accelerate tumor growth.

With these findings in hand, Sarkar is eager to explore new approaches for treating HCC through the development of new therapies that target TAF2. As the earliest study of TAF2's role in cancer, this research opens the door to a world of potential in future liver cancer treatment.

"Ours is the first in vivo study to show that TAF2 can help in promoting HCC," said Sarkar, the associate director for research training and education who holds the Harrison Foundation Distinguished Professorship in Cancer Research at Massey, as well as a professor of cellular, molecular and genetic medicine at the VCU School of Medicine. "Once you identify a new gene, that allows you to develop a combination therapy, which we hope would be more effective compared to single gene treatment."

Since TAF2 is also elevated in other types of cancer, he hopes to lay the groundwork for further research of the gene's role in cancers beyond HCC.

About hepatocellular carcinoma

Liver cancer is difficult to treat due to several underlying factors. Often caused by viral hepatitis, alcoholism or obesity-induced fatty liver disease, HCC is preceded by a long-standing fibrosis that destroys the liver. And because liver function is already compromised, patients cannot metabolize cancer-treating drugs, resulting in drug toxicity.

To make matters more complex, HCC is commonly diagnosed at a later stage since patients often present vague symptoms. While patients with early-stage HCC may be eligible for a liver transplant, it's typically not caught quickly enough to take advantage of this opportunity.

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RESEARCH ACCELERATED: BY THE NUMBERS

$27.5M largest NIH grant in VCU history (2023 CTSA renewal)

$23M+ extramural funding secured or under review by K Scholar alumni in 2025

1,271 clinical research studies supported by the OnCore team in 2025

$82M funding for active grants supported by the All-Payer Claims Database

164 bioinformatics projects supported in 2025

The projects described in this report were in part supported by CTSA award No. UM1TR004360 from the National Center for Advancing Translational Sciences. Its contents are solely the responsibility of the authors and do not necessarily represent official views of the National Center for Advancing Translational Sciences or the National Institutes of Health.