THRIVING

The iTHRIV Newsletter

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De-"sludging" Care: Advancing Colorectal Cancer Screening for a Healthier Tomorrow

In the quest to enhance the delivery of colorectal cancer (CRC) screening services, the Family & Community Medicine Research Group at Carilion Clinic has embarked on an innovative initiative funded by iTHRIV through the Pilot Translational and Clinical Studies Program. The project, "Exploring Patient-Reported Sludge in the Delivery of Colorectal Cancer Screening Services," led by Michelle Rockwell, PhD, RD and John Epling, MD, MSEd, aims to study patients' perspectives on health system factors that may impede access to and the efficient delivery of cancer screening services.

*John Epling MD, MSEd and Michelle Rockwell PhD, RD- project Co-PI's*

Addressing a Critical Gap

Screening plays a critical role in the prevention and detection of CRC, and is recommended for individuals ages 45-75 years. Despite recommendations from major health organizations, up to one-third of Americans do not receive timely colorectal cancer (CRC) screenings. Southwest Virginia has the lowest CRC screening rate in the Commonwealth of Virginia, with individuals living in rural areas and with low-income being screened at a particularly low rate.

Traditional efforts to boost CRC screening have focused on increasing patient demand and clinician referrals, overlooking systemic health system barriers. These barriers, which may be described using the behavioral economics term "sludge", encompass administrative burdens such as paperwork and long wait times, affecting both clinicians and patients. Drs. Rockwell and Epling hypothesize that the process of identifying and reducing sludge will improve access to and completion of CRC screening and influence patients' interaction with the health system. This work responds to national calls to reduce the administrative burden associated with delivering and receiving healthcare from the Department of Health and Human Services, Cancer Moonshot Initiative, American Medical Association, and others.

Brianna Chang, MS, Virginia Tech Carilion School of Medicine student research assistant and the CRC awareness month (March) colon
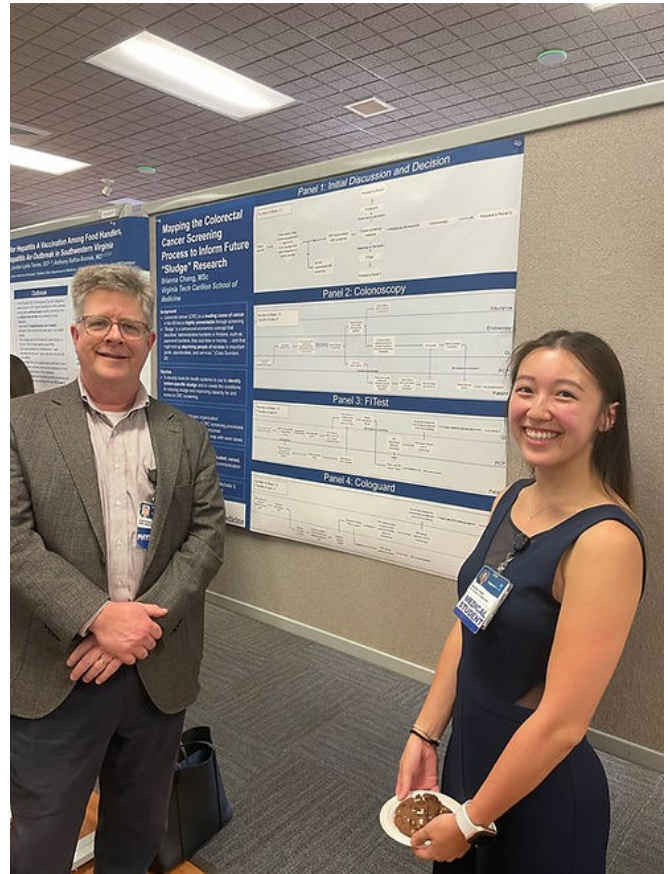
John Epling MD, MSEd and Brianna Chang, MS, Virginia Tech Carilion School of Medicine student research assistant at Carilion Clinic Research Day 2023

Applying a Methodical Approach

Dr. Rockwell and Epling's team previously piloted a method that identified and quantified sludge within a large health care system CRC screening delivery process through a sludge audit. The audit uncovered sludge in the following categories: paperwork, technology, communication, administrative tasks, and time. This initial pilot study did not directly incorporate patients, a limitation being addressed through funding from the iTHRIV Pilot Translational and Clinical Studies program.

A Comprehensive Mixed Methods Study

Through their mixed methods, patient-centered study, the research team used Community Engagement Studios, interviews, and a survey to learn more about patients' perceptions of sludge in the CRC screening process and the impact of this sludge to them.

John Epling MD, MSEd presenting about this study, which was named the "Research Paper of the Year" by the Society of Teachers of Family Medicine

Participants were patients ages 45 to 75 years who were referred for CRC screening or who completed CRC screening in the previous 12 months in one of several different health systems or settings. Approximately 70% of participants reported experiencing sludge in the CRC screening process, with the most common types being wait times and communication. The research team noted that sludge was experienced in both screenings conducted via colonoscopy and stool-based tests.

Jamie Turner, MPH, doctoral student research fellow, Brianna Chang, MS, Virginia Tech Carilion School of Medicine student research assistant, and John Epling MD, MSEd analyzing data.

The Impact of Sludge in the CRC Screening Process

One-third of participants reported that their CRC screening was delayed or skipped altogether due to sludge. There was also a significant positive relationship between the amount of sludge and ratings of poor experience and health system distrust. Drs. Rockwell and Epling and their interdisciplinary team are working on presentations and reports to summarize their integrated mixed methods results, share their survey resources, and engage in several follow-on studies focused on reducing the sludge that patients experience in CRC screening as a novel method for enhancing screening rates.

Securing Additional Support and Collaboration

Dr. Epling has teamed with Drs George Davis and Carlin Rafie (Virginia Tech) to secure pilot award funding in partnership with Virginia Cooperative Extension through the Virginia Tech College of Agriculture and Life Sciences. This collaboration underscores the broader impacts and collaborative nature of their initiatives.

Voices in Clinical Translational Science

Integrating Genomics and Public Health Approaches to Achieve Health Equity
Dr. Keith L. Keene
March 26th, 2024 1 pm- 2pm

The Voices in Clinical and Translational Science Seminar Series is designed to lift underrepresented voices in research across the iTHRIV partnership. The series focuses on promoting dialogue and encouraging team science. The quarterly seminar series is designed to amplify diverse perspectives in clinical and translational research, and in doing so, foster innovation and an inclusive environment.

iTHRIV hopes that attendees will use this series as an opportunity to listen more deeply to one another and to broaden their own research in the quest to improve the health of communities in Virginia and beyond.

Our first speaker for the 2024th series is Dr. Keith L. Keene, a Professor of Public Health Sciences and the Director of the Center for Health Equity and Precision Public Health (CHEPPH) at the University of Virginia. Dr. Keene has nearly 20 years of experience in Precision Health and Genomics research, with a longstanding commitment to research focused on health disparities and health equity. Dr. Keene's research experience includes using -Omics based approaches (e.g. genetic, epigenetic, metabolomics), statistical, and molecular biology methodologies, to identify heritable risk variants contributing to complex diseases. Dr. Keene is particularly interested in performing integrative -Omics analyses utilizing biospecimens from underserved and marginalized populations, with hopes of alleviating the disparate burden of disease in those populations. As the inaugural director of CHEPPH, Dr. Keene is working to grow an interdisciplinary center devoted to integrating Precision Medicine, Public Health, and Health Informatics approaches to improve the health and well-being of rural, economically challenged, and racial/ethnic-minority populations. He will lead a team of scientists, administrators, and clinicians to utilize inclusive approaches to reduce disparities, promote health equity, and create a diverse workforce population where every person has the opportunity to "attain his or her full health potential". He was listed as one of "1000 Inspiring Black Scientists in America" Recent honors by Cell Mentor in 2021. Dr. Keene is an established NIH and NSF-funded

researcher, and his research demonstrates a commitment to team science and multi-disciplinary work.

Please join us for this Voices series. Registration is open to all and is available below.

iTHRIV Under the Microscope

Alicia J. Lozano, MS is a rising collaborative biostatistician in the health sciences with a passion in the practice of statistics within a team science environment. She is the Assistant Director of the Center for Biostatistics and Health Data Science (CBHDS) at Virginia Tech and has extensive collaborative experience supporting numerous clinical or biomedical research projects. Alicia has been a member of the iTHRIV Research Methods Core since arriving at Virginia Tech in 2019. She is funded on several contracts and NIH grants and has contributed to work in a broad range of research areas, including but not limited to sleep, cancer, cardiovascular disease, physical activity, women's health, geriatric health, mental disorders, weight loss, food insecurity, intimate partner violence, youth wellness, air pollution, and medication harm and management. Alicia has authored over 60 peer-reviewed research publications and currently has several under review or in progress. With respect to mentorship, she has mentored various undergraduate and graduate students in collaborative biostatistics. Since 2021, Alicia has been instrumental to the development and delivery of the Collaborative Undergraduate Biostatistics Experience (CUBE), an 8-week program seeking to diversify and bring awareness to the field of collaborative biostatistics. CUBE is funded by the National Institutes of

 Health's (NIH) NIDA/ NIAAA institutes (award number 1R25DA058482-01), iTHRIV, AbbVie, Merck & Co., as well as by Virginia Tech's Fralin Life Sciences Institute (FLSI), Institute for Society, Culture, and Environment (ISCE), and the College of Science.

As a Latina woman in biostatistics, Alicia is passionate about bringing equity and diversity to the practice of collaborative biostatistics and health data science, as well as training the next generation of collaborative biostatisticians. In addition to her professional accomplishments, Alicia loves spending quality time with her husband and two sons, Jude and Theo. She enjoys interior design, baking, dancing, streaming movies and television shows on Netflix, and karaoke.

Meet an iTHRIV Mentor

Raffaella De Vita, PhD

Professor & Associate Department Head
Department of Biomedical Engineering and Mechanics
Virginia Tech
Dr. Raffaella De Vita is an inspiring educator and world class researcher who is passionate about advancing fundamental and mechanistic knowledge of biological systems. She has worked tirelessly to advance the field of female reproductive biomechanics and constantly advocates for research that addresses urgent public health needs in underserved populations. As a mentor she has been my biggest supporter and has helped me build confidence in my role as an assistant professor. Her insight into how to build a team and create a supportive lab culture has been invaluable.

- Caitlyn Collins, PhD