



THE CENTER FOR
RURAL HEALTH RESEARCH
ANNUAL REPORT

July 2022



CENTER *for* RURAL
HEALTH RESEARCH

EAST TENNESSEE STATE UNIVERSITY

KEY POINTS

- The Center has added **ten new funding sources** since July 2021, including from Federal agencies, national associations, and through academic partnerships.
- The Center currently **supports seven full time faculty, one Coordinator, eight associated faculty, one Communications Specialist, four Data Support Specialists, and ten Graduate Assistants.**
- The Center established a 12-member **formal Advisory Board** in 2021. The Advisory Board held its inaugural meeting in October, 2021.
- Center faculty and staff increased visibility this year with over **20 publications, dozens of presentations, and** by serving on several **task forces, committees and advisory boards** at the local, regional, state and national levels.
- As the Center continues to experience success through **research, community engagement, training, and policy work**, additional partnerships will expand our reach to rural **communities in our region and beyond.**
- In addition to the Core funding from the State and Ballad Health System, external funding sources have brought in over \$8 million to the region.

The Center for Rural Health Research was created by the state of Tennessee and is supported with a generous gift from Ballad Health. Located in the heart of Appalachia, the Center fulfills its mission by engaging rural communities to advance health and improve quality of life through innovative solutions that contribute to the expanding evidence base of what works in rural America. The Center works to honor and preserve its rich Appalachian heritage and Tennessee ties through distinctive research, community engagement, training and policy.

Mission: To engage rural communities to advance health and improve quality of life

Vision: To be the trusted home that supports and promotes rural health

Overview

The Center for Rural Health Research (the Center) was established in 2019 by Tennessee Governor Bill Lee, to align with his goal of improving opportunities for young people to achieve their goals of self-sufficiency and work or college readiness. Governor Lee proposed, and the Legislature approved, a \$1.5 million first year grant, with \$750,000 recurring annually, for the creation and implementation of the Center for Rural Health Research at ETSU. This funding was matched with a generous \$15 million gift from Ballad Health – providing an additional \$1.5 million annually over the ensuing decade.

To date, the Center has expanded upon this initial funding by securing over \$8 million in external funding from state, regional and national partners. This has allowed for expanded growth in Center staffing, expertise, and impact.

New and Ongoing Funding (2021-2022)

- National Initiative to Address COVID-19 Health Disparities (Tennessee Department of Health – TDH)
- ETSU/NORC Rural Health Equity Research Center Year 2 Projects (Health Resources and Services Administration - HRSA)
- Putting Data into the Hands of Local Decision Makers (Centers for Disease Control and Prevention (CDC), through NORC at the University of Chicago subcontract)
- Rural Recovery Ecosystem Index (HRSA through Fletcher Group subcontract)
- Community Engagement Alliance (CEAL) Against COVID-19 Disparities (National Institutes of Health through Meharry Medical College subcontract)
- Evaluation of the INSPIRE Initiative (Appalachian Regional Commission – ARC)
- Evaluation of the Workforce Opportunity for Rural Communities (US Department of Labor through Appalachian Sustainable Development subcontract)
- Child Friendly Cities Initiative Core Support (City of Johnson City)
- Associations – Public Health Accreditation Board, National Indian Health Board, American Medical Association
- Research and University Partners – NORC at the University of Chicago, University of Kentucky, University of Minnesota, Meharry Medical College, and the Medical University of South Carolina

The Center currently supports 7 full time faculty, 1 Coordinator, 8 associated faculty, 1 Communications Specialist, 4 Data Support Specialists, and 10 Graduate Assistants.

Current Staffing

- Randy Wykoff, MD, MPH, TM, Co-Director
- Michael Meit, MA, MPH, Co-Director
- Christen Minnick, MPH, Director of Operations
- Sam Pettyjohn, DrPH, MPH, Research Faculty
- Amy Wahlquist, MS, Research Faculty
- Stephanie Mathis, DrPH, MPH, Research Faculty
- Casey Balio, PhD, Research Faculty
- Laura Hunt Trull, PhD, MSW, Research Faculty
- Nancy Miller, Center Coordinator
- Meredith Mitchell, Communications Specialist
- Chesnee Sumner, MPH, Data Support Specialist (Johnson City)
- Robert Dunham, MPH, Data Support Specialist (Memphis)
- Samira Tamimi, MPH, Data Support Specialist (Nashville)
- Opal Frye-Clark, MA, Data Support Specialist (State-wide)

Associated Faculty

- Katie Baker, DrPH, MPH, Associate Professor, Community and Behavioral Health
- Kate Beatty, PhD, MPH, Associate Professor, Health Services Management and Policy

- Karen Ervin, MSA, Assistant Dean of Finance and Administration, College of Public Health
- Ginny Kidwell, MALS, Executive Director, Tennessee Institute of Public Health
- Beth O’Connell, DrPH, MPH, Assistant Professor, Community and Behavioral Health
- Megan Quinn, DrPH, MSc, Associate Professor, Biostatistics and Epidemiology
- Dara Young, MEd, Media Coordinator, College of Public Health

Graduate Assistants

The Center works hard to engage and mentor students in rural health research, and currently supports 10 Graduate Assistants (GAs). As the Center is awarded new funding opportunities, additional GAs are included to support research activities and provide student learning and research engagement. The Center prides itself in including students in primary data collection and analysis, program evaluation, program planning, and scholarly writing work whenever possible. GAs are currently supported through Core Funding (3 positions), the TDH COVID-19 Health Disparities Grant (3 positions), the ARC INSPIRE Evaluation (1 position) and in collaboration with College of Public Health Academic Departments (3 positions).

Additional growth is expected over the coming year and the Center are actively working to fill additional research positions.

Advisory Board

The Center established a formal Advisory Board in 2021. The 12-member board met with Center and ETSU staff on October 7, 2021. Center staff shared updates on projects from 2020-2021 and highlighted future plans for partnerships and continued staffing. The Advisory Board will continue to meet at least once per year during the fall semester and receive quarterly newsletters throughout the year.

<i>Advisory Board Members</i>	
Dr. Alasdair Cohen	Professor of Environmental Epidemiology in Public Health, Virginia Tech
Dr. Tom Kincer	Associate Dean for Rural and Community Programs, ETSU Quillen College of Medicine
Dr. Alana Knudson	NORC Walsh Center for Rural Health Analysis
Dr. JP Leider	Director, Center for Public Health Systems, University of Minnesota School of Public Health
Dr. Matthew Loos	Chief Academic Officer, Ballad Health
Tim Marema, MA	Editor, The Daily Yonder
Beth O’Connor, M.Ed.	Executive Director, Virginia Rural Health Association
Commissioner	Commissioner, Tennessee Department of Health
Dr. Ron Roach	Director, Center for Appalachian Studies, ETSU

Kristine Sande, MBA	Director, Rural Health Information Hub
Dr. Altha Stewart	Senior Associate Dean for Community Health Engagement, University of Tennessee Health Science Center
Jacy Warrell, MPA	Executive Director, Rural Health Association of Tennessee

Serving Our Communities

The Appalachian Highlands region includes 21 counties in Northeast Tennessee and Southwest Virginia. This region remains the core focus of the Center’s work, highlighted through our enduring partnership with Ballad Health System. The Center collaborates with Ballad Health to conduct research and evaluation projects designed to improve health and well-being of the people of our region. Key support for Ballad initiatives is through the Ballad Health STRONG (Striving Toward Resilience & Opportunity for the Next Generation) Starts initiative, and include the following:

STRONG Accountable Care Community (ACC)

Several Center staff and associated faculty regularly participate in this 300+ member regional, multi-sector collaboration. The ACC is based on the Collective Impact Model and is made up of organizations that work on a common agenda to improve the ability of children in the Appalachian Highlands to be college and career ready and to better position them for optimal health outcomes. In addition to serving as an organizational ACC member, the Center is engaged with the following ACC working groups:

- The *No Wrong Door Working Group* guides, advises, and supports the development and implementation of the No Wrong Door initiative of the STRONG ACC. Christen Minnick is currently leading a sub-project of this group to update the Community Resource Inventory for the Ballad region.
- The *Adverse Childhood Experiences (ACEs), Trauma, and Resilience Working Group* guides, advises, and supports the development and implementation of the ACEs, Trauma, and Resilience initiative of the STRONG ACC. Megan Quinn serves on this workgroup.
- The *Workforce Training Working Group* supports the implementation of the Workforce Training initiative of the STRONG ACC. Sam Pettyjohn is currently serving on this workgroup and provides input on substance use prevention and treatment options for employees in the region.

STRONG ACC Difference in Difference Study

The Center works with the ACC Director to understand the effects of the formation and implementation of the STRONG ACC across a variety of population-level outcomes. Through a propensity score matching process, the Center collected information for a *Difference in Difference* analysis as an evaluation of the ACC by matching the 21 counties in the Appalachian Highlands region to 42 (2:1 matching) other counties around the country. A manuscript describing this process and the results is being formatted for Summer 2022 submission to the *International Journal of Public Health* for their short methodological report format.

STRONG Starts Universal Screening and Navigation

The Center serves as Ballad Health’s research partner to measure the impact of their efforts to assess all families and children for adverse childhood experiences (ACEs), environmental and social needs, and other risk factors, and to assist them in navigating towards best practice community-based interventions.

- *STRONG LINK* - Creating a longitudinal data repository to better understand health improvement opportunities for families and children in the Ballad Health region.
- *Retrospective Study* - Examining demographic and clinical factors in a population of mothers who have delivered in one of the birthing centers operated by Ballad Health. This study informed questions for the prospective components of STRONK LINK and is currently being drafted for academic journal submissions.

Additional Work with Ballad Health Programs

- *PEERhelp Recovery Evaluation* - The Center is leading the evaluation of, and sharing findings from, the PEERhelp program. PEERhelp is a program to support financial stability for individuals being released from prisons with a history of substance use disorder. Primary outcomes of interest for the evaluation include program participation, financial stability, recovery, healthcare utilization, employment, and recidivism. Data collection instruments have been designed to support a rigorous evaluation and streamline data collection processes. The Center will work with Ballad Health to collect and analyze data and summarize key initiative findings and outcomes.
- *Sullivan County Jail Scanner Project* - The Center is conducting interviews with key stakeholders to understand the impact of body scanning technology donated by Ballad Health that is used at intake in the Sullivan County Jail. The Center is assessing whether key intended outcomes of increased employee and prisoner safety and increased contraband seizure have been achieved, as well as opportunities for dissemination and replication to improve facility safety and community health outcomes.

The Center also supports several community initiatives, serving in various capacities related to programming and evaluation, including:

- *UNICEF Child Friendly Cities Initiative*—The Center provides analytic support, systems modeling and community focus group expertise to Johnson City’s efforts to become a UNICEF-designated Child Friendly City. The project focuses on understanding gaps in services to support children within our community and provides a framework for measuring changes and benefits to children and young families through policy making and shared governance on youth issues.
- *Johnson City Schools COVID-19 Data Assessment*—The Center provided weekly COVID-19 data trends and projections on cases and quarantines to assist in system-level decision making and policy setting throughout the 2021-2022 school year.
- *Rural Health Training Module Development*—To address the need for rural public health education across the region, the Center supported the Tennessee Public Health Training Center by developing online modules for rural public health training that were integrated into the training center’s Learning Management System.
- *Tennessee Opportunity Grants Pilot Initiative Data Collection*—The Center supported the STRONG ACC and First Tennessee Development District Foundation in a three-month project to convene cross-sector stakeholders across the Northeast Tennessee region. The Center hosted focus groups with families, interviewed community leaders, and surveyed families and service agency providers to assess factors that influence the outcomes of families experiencing low-income in our region. This information informed efforts that ultimately guided our region’s

successful proposal for one of the seven \$25 million Tennessee Opportunity Pilot Initiative Implementation Grants that will launch in fall 2022.

Serving Our State

Tennessee Department of Health -- National Initiative to Address COVID-19 Disparities

The Center support Tennessee's work through its Centers for Disease Control and Prevention (CDC)-funded National Initiative to Address COVID-19 Disparities. The Center received a \$4.6 million, 2-year award that has two focus areas:

- East Grand Division Coordinating Center: The Center coordinates work across community-based organizations across the East Grand Division, sub-contracting approximately \$2.35 million to 12 organizations to address COVID-19 inequities facing racial and ethnic minority and rural populations. A unique feature of the East Grand Division activities is working with sheriff's offices to address COVID-19 among incarcerated individuals.
- Statewide Evaluation: The Center is designing and implementing the statewide evaluation of the TDH grant program, including development of metrics, a sub-awardee reporting system, data support and technical assistance to all associated community-based organizations, and analysis and reporting.

Tennessee Community Engagement Alliance (CEAL) Against COVID-19 Disparities

The Center is collaborating with Meharry Medical College as part of a National Institutes of Health (NIH) initiative to support community educational initiatives in northeast Tennessee, with the goal of increasing statewide COVID-19 vaccination rates. The Center has actively coordinated vaccine events through clinical partners including Ballad Health and ETSU Health. The Center has also acted as a media contact and liaison, acting as a trusted source for vaccine information and arranging interviews with community members on vaccination concerns for local and regional media. Additionally, we have expanded outreach to minority-owned businesses in East Tennessee and aligned them with opportunities for additional training and education on COVID-19 vaccinations for the communities they serve.

Serving Appalachia

University of Kentucky COVID Survey Partnership

In 2021, the Center analyzed survey data collected from over 900 healthcare providers, school leaders, community health workers and their clients, and community members in Kentucky during the summer and fall of 2020. Key findings document the experiences, disruptions, and concerns of community partners and providers during the pandemic. As part of a continuation of this study, the Center is conducting a second-round survey that included a comparison sample in East Tennessee and Southwest Virginia. The second round of surveys include additional questions focused on mask adherence and vaccine hesitancy among populations providers, patients, Community Health Workers, educators, community members, college students.

Evaluation of ARC's INSPIRE Initiative

The Center, in collaboration with the ETSU Addiction Science Center, was selected by the Appalachian Regional Commission (ARC) to evaluate its \$16 million INSPIRE initiative. Using a mixed method design, the Center is evaluating the accessibility of the INSPIRE application process, implementation successes and challenges, and preliminary impacts of the INSPIRE grants. This understanding will inform the development of actionable recommendations for strengthening implementation processes and ARC's capacity to document initiative effectiveness.

Deaths of Despair 2022 Update

On behalf of the Appalachian Regional Commission (ARC), and in partnership with the NORC Walsh Center for Rural Health Analysis, ETSU explored the impact of “diseases of despair” within the Appalachian region in both 2017 and 2020. Diseases of despair include deaths due to alcohol and drug overdose, suicide, and alcoholic liver disease/cirrhosis, which disproportionately impact residents in the Appalachian region. Together, NORC and ETSU will conduct a 2022 update to the *Appalachian Diseases of Despair* report, using 2020 mortality data from the CDC National Center for Health Statistics that will include data from the first year of the COVID-19 pandemic.

Serving our Nation

Rural Health Equity Research Center

In September 2020, ETSU was selected as one of seven Federally-funded Rural Health Research Centers, providing a 4-year, \$2.8 million award from the Health Resources and Services Administration (HRSA). This effort led to the establishment of the ETSU/NORC Rural Health Equity Research Center, a collaboration between the Center, the ETSU Addiction Science Center, and the NORC Walsh Center for Rural Health Analysis. Studies are designed to be national in scope, and inform federal rural health policy.

- Year 1 projects included studies exploring the use of buprenorphine among pregnant women; cost impacts of SUD treatment; characteristics of persistent health professions shortage areas; and stigma associated with mental health in rural communities. Manuscripts for these outcomes are in progress with planned submission in later 2022.
- Year 2 projects included studies of block grant funding mechanisms; rural hospital bypass; emergency department use; and screening, brief intervention, and referral to treatment (SBIRT) penetration.
- Year 3 project proposals are currently under review by HRSA, and may include studies exploring oral health inequities in rural areas, challenges with rural death record reporting; and geographical differences in health seeking behaviors during the COVID-19 pandemic, among others.

Putting Data into the Hands of Decision Makers

In partnership with NORC, the Center is conducting work for CDC to build a COVID-19 mapping tool that incorporates features of the NORC Prosperity Index, leading causes of death information, and social determinants of health overlays. In addition, the project includes a qualitative component to highlight rural communities that have successfully vaccinated community members against COVID-19. Using this “bright spots” approach, we are working to identify successful strategies for addressing vaccine hesitancy and increasing COVID-19 vaccination rates that can be replicated in other rural communities.

Rural Recovery Ecosystem Index

Funded by the Fletcher Group as part of their HRSA Rural Community Opioid Response Program (RCORP) Technical Assistance Center, the Center is collaborating with NORC to develop indicators to measure the strength of rural, county-level substance use disorder (SUD) recovery ecosystems throughout the United States which will be integrated into an interactive mapping tool to support planning, programming, and technical assistance efforts.

National Indian Health Board (NIHB) Evaluation Support

The Center is providing ongoing support to NIHB to create and refine evaluation materials for grant deliverables under NIHB's Centers for Medicare and Medicaid Services (CMS) and Indian Health Service (IHS) cooperative agreements. This work supports NIHB's information gathering process for their 2020-2025 Tribal Technical Advisory Group (TTAG) American Indian and Alaska Native Strategic Plan. To date, the Center team has designed, built, and shared data collection tools related to Strategic Plan progress and training evaluations. Evaluation results will also refine educational offerings NIHB offers to tribes across the US to ensure training and technical assistance needs are met.

Medical University of South Carolina Tobacco Cessation Research Projects

In partnership with the Medical University of South Carolina (MUSC), the Center is supporting several tobacco cessation clinical trial research projects. These projects include an NIH/NCI sponsored R01 grant for a translational randomized clinical trial of varenicline sampling to promote smoking cessation and scalable treatment dissemination (STARS); a second NIH/NCI sponsored R01 clinical trial for a nationwide study evaluating sampling of electronic cigarettes (CONNECT); and the development and testing of a Behavioral Activation Mobile Therapy for Elevated Depressive Symptoms via an NIH/NIMH R42 (Phase II STTR) grant. Type 1 Effectiveness-Implementation Trial of a Proactive Smoking Cessation Electronic Visit for Scalable Delivery via Primary Care

Defining and Mapping Rural Local Health Departments

The Center is partnering with the University of Minnesota as part of their work with the National Association of County and City Health Officials (NACCHO) on a project updating local health department membership GIS files. Because local health departments are organized differently across the nation, there is currently no way of mapping key public health data and findings by local public health jurisdiction. Faculty and GA's from the Center will research health department geographic boundaries to create shape files for GIS mapping needs.

Service and Visibility

Center faculty are proud to serve on several task forces, committees and advisory boards at the local, regional, state and national levels. Key among these are the Johnson City Homeless Taskforce, the Johnson City Child Friendly Cities Initiative (CFCI) Leadership Committee, the ETSU Farmers Market, the regional Accountable Care Community, the statewide Health Disparities Task Force, the Tennessee Rural Health Task Force, the National Consortium for the Public Health Workforce, the Delta Region Community Health Systems Development Program Advisory Committee, the National Rural Health Association's Rural Health Congress, the American Public Health Association's Committee for Health Equity, and editorial and

advisory boards for the *Journal of Appalachian Health*, *Journal of Public Health Management and Practice*, and *Public Health Reports*.

Faculty members and students of the Center have also been recognized with awards. Graduate assistant Margaret Melton received 2nd place the Appalachian Student Research Forum with the poster titled “Do Block Grant Resources Equitably Reach Rural Communities?” Dr. Kate Beatty was awarded the ETSU Graduate Council’s Outstanding Graduate Faculty Mentor Award.

The Center has also been featured in many state, regional and national conferences and webinars including the *National Rural Health Association Annual Meeting*, *the Rx Drug Abuse and Heroin Summit*, *the National WIC Association Webinar Series*, *the Tennessee Health Disparities Task Force Webinar Series*, *the Healthy West Virginia Coalition Webinar Series*, *the Southeast Prevention Technology Transfer Center*, *Tennessee Public Health Association*, *Rural Health Association of Tennessee*, *Virginia Rural Health Association*, *the American Public Health Association* and more. In addition, the Center has been featured in national media outlets including *National Public Radio*, Gray Television’s Google-funded reporting initiative *Bridging the Great Health Divide*, Regional and Local Press and Television and national print media including the *Atlantic*, *STAT*, *Medscape* and *Medpage Today*.

Publications from 2021-2022

Note: Only authors that are Center members are listed below.

- [Appalachian Health: Culture, Challenges and Capacity](#). Randy Wykoff (Co-Editor), Kate Beatty, Melissa White, Michael Meit, Stephanie Mathis. Published by the University of Kentucky Press
- [Estimating Public Health Workforce Efforts Toward Foundational Public Health Services](#). Casey Balio. *Journal of Public Health Management and Practice*.
- [Barriers to recruiting primary care practices for implementation research during COVID-19: A qualitative study of practice coaches from the Stop Unhealthy \(STUN\) Alcohol Use Now trial](#). Casey Balio. *Implementation Research and practice*.
- [Funding Public Health: Achievements and Challenges in Public Health Financing Since the Institute of Medicine's 2012 Report](#). Casey Balio. *Journal of Public Health Management and Practice*.
- [Regarding investment in a healthier future: impact of the 2012 Institute of Medicine Finance report](#). Casey Balio. *Journal of Public Health Management and Practice*.
- [Many States Were Able To Expand Medicaid Without Increasing Administrative Spending: Study examines the effect of Medicaid expansion on administrative spending by states](#). Casey Balio. *Health Affairs*.
- [Screening for prediabetes and type 2 diabetes: updated evidence report and systematic review for the US Preventive Services Task Force](#). Casey Balio. *Journal of the American Medical Association*.
- [Screening for eating disorders in adolescents and adults: evidence report and systematic review for the US Preventive Services Task Force](#). Casey Balio. *Journal of the American Medical Association*.
- [Nonmedical prescription drug use among female adolescents: The relative influence of maternal factors, social norms, and perception of risk and availability](#). Katie Baker and Stephanie Mathis. *Drugs: Education, Prevention and Policy*.

- [Development of a survey tool for assessing life traumas and barriers to HIV care in a Center of Excellence for HIV/AIDS in Appalachian Tennessee.](#) Megan Quinn and Stephanie Mathis. Journal of HIV/AIDS & Social Services.
- [Community pharmacist engagement in HIV and HCV prevention: Current practices and potential for service uptake.](#) Stephanie Mathis. Exploratory Research in Clinical and Social Pharmacy.
- [Project EARTH: Lessons from 10 years of teaching public health skills for resource-limited settings.](#) Randy Wykoff. Wilderness and Environmental Medicine.
- [Implications of long COVID for rural communities.](#) Michael Meit, Sam Pettyjohn, and Amy Wahlquist. Journal of Rural Health.
- [Sexually transmitted disease clinics in the United States: Understanding the needs of patients and the capabilities of providers.](#) Michael Meit. Preventive Medicine.
- [Evaluating N-acetylcysteine for early and end-of-treatment abstinence in adult cigarettes smokers.](#) Amy Wahlquist. Drug Alcohol Dependence.
- [Long-Term Survival After Alcohol Septal Ablation for Hypertrophic Obstructive Cardiomyopathy: A 16-Year Experience.](#) Amy Wahlquist. J Invasive Cardiology.
- [Incorporating Absolute Phagocyte Count With Absolute Neutrophil Count as a Measure for Safe Discharge for Pediatric Oncology Febrile Neutropenia: A Pilot Study.](#) Amy Wahlquist. J Pediatric Hematology and Oncology.
- [Motivating Students to Engage in Preparation for Flipped Classrooms by Using Embedded Quizzes in Pre-class Videos.](#) Amy Wahlquist. Innov Pharm.
- [A Pilot Randomized Clinical Trial of Remote Varenicline Sampling to Promote Treatment Engagement and Smoking Cessation.](#) Amy Wahlquist. Nicotine & Tobacco Research.
- [Does Medication Sampling Improve Compliance with Brief Advice? Results from a Pragmatic Randomized Clinical Trial.](#) Amy Wahlquist. Journal of Smoking Cessation.
- [A randomized, open-label, phase 2, multicenter trial of gemcitabine with pazopanib or gemcitabine with docetaxel in patients with advanced soft-tissue sarcoma.](#) Amy Wahlquist. Cancer.
- [An Economic Assessment of Smokefree Policies in Tennessee: A White Paper.](#) Christen Minnick
- [Social media and use of electronic nicotine delivery systems among school-going adolescents in a rural distressed Appalachian community: A White Paper.](#) Christen Minnick

Select Presentations from 2021-2022

- Beatty K, Smith MG, Khoury A, de Jong J, Ventura L, Surles K. (2022) Telehealth Services During COVID-19: A Rural/Urban Analysis. National Rural Health Association (NRHA) Annual Conference.
- Beatty K, Meit M, Mathis S, Wahlquist A. (2022) Mental Illness Stigma among Rural and Non-Rural Residents. National Rural Health Association (NRHA) Annual Conference.
- Balio C, Meit M, Mathis S, Beatty K, Melton M. (2022) Do Block Grant Resources Equitably Reach Rural Communities? National Rural Health Association (NRHA) Annual Conference.
- Beatty K, Meit M, Mathis S, Wahlquist A. (2022) Rural and racial difference in mental health stigma. National Rural Health Association (NRHA) Health Equity Conference.
- Melton M, Meit M, Balio C, Beatty K, Mathis M. (2022) Do Block Grant Resources Equitably Reach Rural Communities? A 50 State Analysis. Appalachian Student Research Forum. Johnson City, TN *Second place winner
- Kearley J, Beatty K, Mathis S, Wahlquist A, Meit M. (2021) Comparing public stigma associated with mental illness in rural and non-rural populations. Rural Health Association of Tennessee.

- Balio C, Galler N, Meit M. (2021). Healthcare Conversion Foundation Investments in Communities by Rurality. National Rural Health Association (NRHA) Annual Conference.
- Brooks, B., Mathis, S., Dumas, C., Pettyjohn, S. (2021). Modeling fentanyl-related overdose risk among rural heroin using populations using a community-based approach. Poster presented at the American Public Health Association Annual Meeting and Expo, Denver, CO.
- Dowling-McClay, K., Mathis, S. M., Hagemeyer, N. (2021). A qualitative study of community pharmacist engagement in HIV/HCV prevention services in Central Appalachia. Poster presented at the American Public Health Association Annual Meeting and Expo, Denver, CO.
- Pettyjohn, S; Pack, R; Mamudu, H; Hillhouse, J; Wahlquist, A, Meit, M. “A Novel Methodology and Proof of Concept: Determining the Area of Highest Risk for Opioid Overdose in a Tennessee County” American Public Health Association Annual Meeting and Expo, Denver, CO.
- Pettyjohn, S; Mamudu, H; Hillhouse, J; Wahlquist, A, Meit, M; Pack, R. “Using Risk Environment, the Social Ecological Model, and a Dynamic System Approach to Inform State-Level Opioid Policies” Tennessee Public Health Association Plenary Session 2021
- Pettyjohn, S; Wahlquist, A; Mamudu, H; Hillhouse, J; Meit, M; Pack, R. “Determining the Area of Highest Risk Environment for Opioid Overdose in Washington County, Tn. A Novel Methodology as a Proof of Concept” Tennessee Public Health Association Plenary Session 2021



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