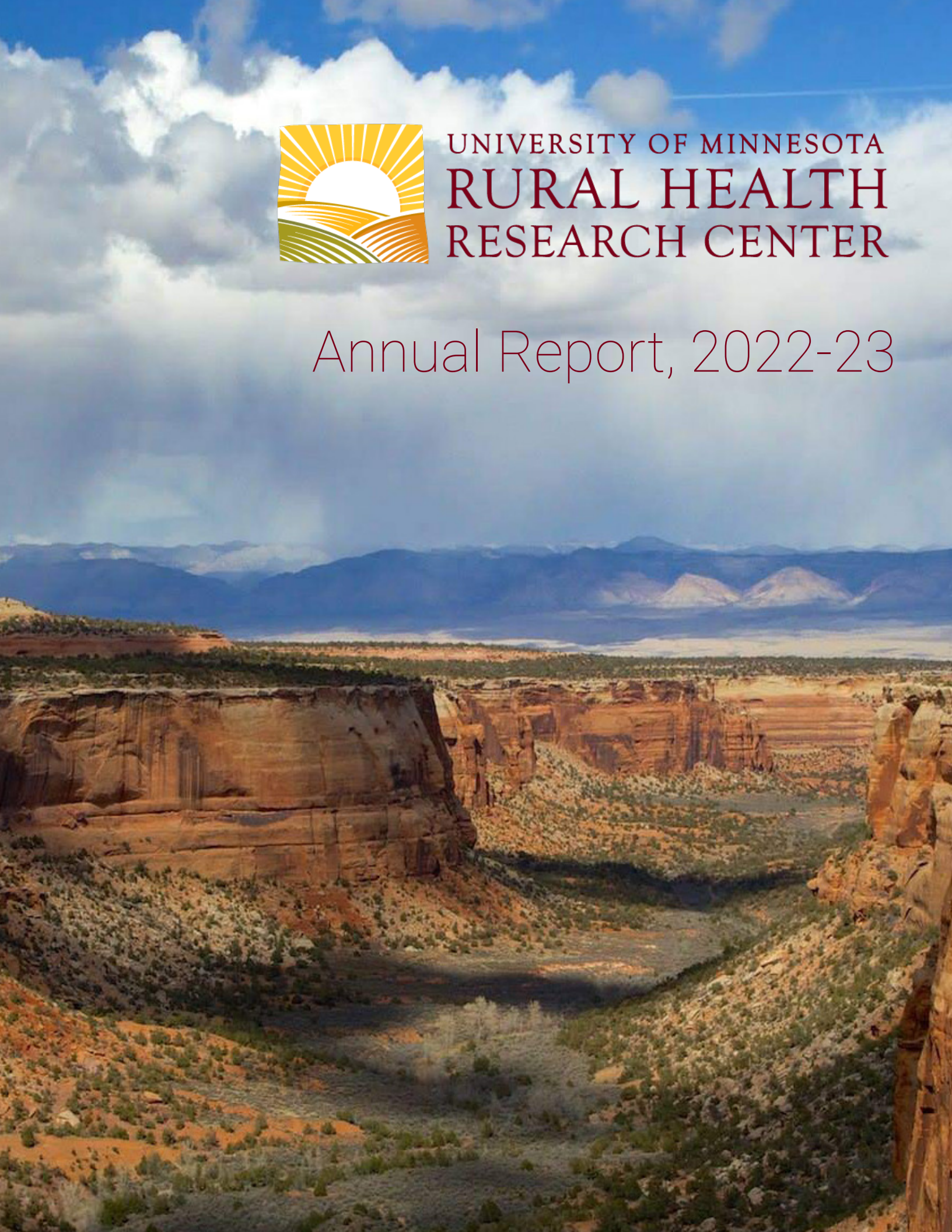




UNIVERSITY OF MINNESOTA  
**RURAL HEALTH**  
RESEARCH CENTER

Annual Report, 2022-23



We conduct policy-relevant research

to **improve** the **lives** of rural residents and families,

to **advance** health **equity**, and

to **enhance** the **vitality** of rural communities.



[rhrc.umn.edu](http://rhrc.umn.edu)





## A NOTE FROM LEADERSHIP

We are grateful to our wonderful team for the many contributions, discoveries, and connections that have illuminated challenges and joys in rural communities across the country. This is our first annual report that comprehensively describes the accomplishments of the past year for all three major grant programs that comprise the University of Minnesota Rural Health Research Center: the Flex Monitoring Team, the Rural Health Program, and the Rural Health Research Center (RHRC) Grant.

This year, the Flex Monitoring Team (FMT, led by Megan Lahr) successfully completed a competitive renewal of their cooperative agreement, setting them up for another five years supporting the federal and state Flex Programs and Critical Access Hospitals (CAHs) across the country. The Rural Health Program (co-led by Katy Kozhimannil and Carrie Henning-Smith) successfully supported the second cohort of Project REACH (Rural Experts Advancing Community Health) in completing the program and making important contributions in their home communities in Brown, Kittson, and Cook counties across Minnesota. Additionally, the University of Minnesota's Rural Collective, part of the Rural Health Program, hosted in-person gatherings on the University's Crookston and Morris campuses, and a third Rural Health Equity Postdoctoral Fellow joined our team. The RHRC Grant continued to impact rural health by informing policy through the dissemination of research in policy briefs and case studies, peer-reviewed publications, and broad public engagement.

We look forward to an engaging and productive year ahead. The FMT will be completing projects to support workforce in CAHs and rural communities, as well as providing support for quality measurement and improvement in CAHs, with a focus on improving demographic data and health related social needs data collection to improve health equity. We will welcome our first all-BIPOC cohort for Project REACH and connect with other rural researchers at planned in-person gatherings across Minnesota through the Rural Collective. Finally, through the RHRC grant, we will lead research on a wide range of important topics that shape rural life, including medical debt, elder abuse, midwifery care, and programs to support rural older adults with disabilities aging in the community. Thank you for engaging with our team and our work!

Katy Backes Kozhimannil, PhD, MPA

Carrie Henning-Smith, PhD, MSW, MPH

Megan Lahr, MPH

## Background

The University of Minnesota Rural Health Research Center (RHRC) is a federally-funded cooperative agreement between Division of Health Policy and Management within the University of Minnesota School of Public Health and the Federal Office of Rural Health Policy (FORHP), a division of the Health Resources and Services Administration within the U.S. Department of Health and Human Services. RHRC staff also have another cooperative agreement with FORHP for the Medicare Rural Hospital Flexibility Program Evaluation. Additionally, the RHRC partners with the University's Clinical and Translational Sciences Institute (CTSI) and Office of Academic Clinical Affairs (OACA), who fund the University of Minnesota Rural Health Program. The Rural Health Program has three components: a postdoctoral program, Project REACH, and the University of Minnesota Rural Collective.

## VISION

Our dedicated team of experts at the University of Minnesota Rural Health Research Center conducts research to advance equity and improve health and well-being among those who are frequently absent from policy discussions, but whose lives are deeply impacted by policy decisions. Our work is informed by the lived experiences of rural people, families, and communities that experience disproportionate health risks and exhibit disproportionate resilience.

We study access to and quality of health care and population health outcomes in order to build the evidence base for policy-making. Our work maintains a focus on eliminating inequities based on geography, race, gender, nationality, age, and ability. We are committed to the highest standards of excellence in research and to communicating results to academic and policy audiences as well as to the people and communities to which our research pertains.



*RHRC participants Madeleine Pick, Katie Rydberg, and Megan Lahr at the National Rural Health Association (NRHA) Policy Institute in Washington, D.C., February 2023*



*2022 NRHA Award Winners, including Carrie Henning-Smith (top left), Julia Interrante (bottom right), and Katy Backes Kozhimannil (not pictured).*



## CORE PRINCIPLES

1. We conduct research to inform the development, implementation, and evaluation of health policy that impacts rural residents and communities.
2. We study the impacts of policies that affect health care access and quality and population health outcomes across the lifespan, answering questions voiced by rural residents and communities.
3. We focus on groups that experience disproportionate health risks because of structural inequities, including communities of color, Indigenous people, LGBTQ+ individuals, people with disabilities, women and girls, older adults, and people with limited incomes in rural communities.
4. We educate policy-makers about the consequences of their decisions for the communities and population groups we study.



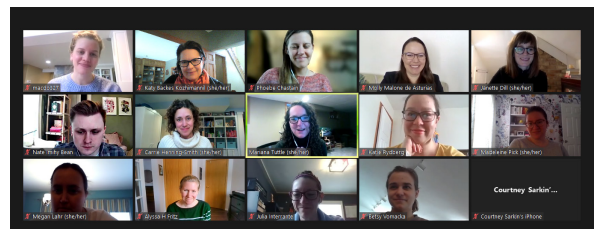
*Carrie Henning-Smith sharing rural expertise at the House Select Committee on Economic Disparity and Fairness in Growth, July 2022.*



*Mariana Tuttle presenting RHRC research at the UMN SPH Research Day, April 2023.*



*Presenting research on health and well-being of LGBTQ+ rural residents at NRHA, May 2022.*



*RHRC staff meeting with a county commissioner (Molly Malone de Asturias) from rural Minnesota, March 2022.*

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Who We Are, 2022-2023

## Leadership

### KATY BACKES KOZHIMANNIL, PHD, MPA, DIRECTOR



Katy Backes Kozhimannil is a Distinguished McKnight University Professor in the Division of Health Policy and Management, University of Minnesota School of Public Health. Katy is Director of the RHRC and co-leads the University of Minnesota Rural Health Program with Carrie Henning-Smith.

Katy conducts research to inform the development, implementation, and evaluation of policies that improve health during critical times in people's lives, including pregnancy and childbirth. The goal of her scholarly work is to contribute to the evidence base to advance racial, gender, and geographic equity and to collaborate with stakeholders in making policy change to address structural injustice. Katy's work challenges norms in the fields of public health and health policy, and her contributions to improving the health of birthing people, recognizing the unique strengths and challenges in rural places, and centering racial justice were recognized nationally when she received the 25th annual Heinz Award in the Public Policy category in 2020.

Katy's research, published in major journals such as *Science*, *the New England Journal of Medicine*, *JAMA*, *Health Affairs*, *American Journal of Public Health*, and *Medical Care*, has been widely cited. Media coverage of her research, including feature stories by the *New York Times*, *USA Today*, *Washington Post*, *National Public Radio*, *Wall Street Journal*, and *US News & World Report*, has generated dialogue, interest and policy action at local, state, and national levels. In addition to conducting research, Katy teaches courses that build skills for effective engagement in the policy process, and works extensively with community organizations and state and federal policy-makers on efforts to improve the health and well-being of individuals, families, and communities, starting at birth.

### CARRIE HENNING-SMITH, PHD, MPH, MSW, DEPUTY DIRECTOR



Carrie Henning-Smith is an Associate Professor in the Division of Health Policy and Management, University of Minnesota School of Public Health and Deputy Director of the University of Minnesota Rural Health Research Center. Together with Katy, she also co-leads the University of Minnesota Rural Health Program.

Carrie's research focuses on health equity and the structural drivers of health for rural populations, with a particular emphasis on aging, mental health, and social well-being. In particular, she focuses on the role of geographic and community context in shaping health outcomes. In all of her work, she emphasizes the importance of "health in all policies", identifying how certain living arrangements, environmental contexts, and other social determinants of health impact health equity, or lack thereof. She has published more than 150 peer-reviewed manuscripts, commentaries, book chapters, and policy briefs, and her work has been widely cited in federal and state policy documents, as well as in national and international media outlets, including the *New York Times*, *Washington Post*, *National Public Radio*, *NBC News*, *AP*, *CBS*, *CNN*, *ProPublica*, and *Politico*.

Carrie has led multiple research projects at the Rural Health Research Center, with a wide range of topics including the social drivers of health, access to and quality of care, and aging and long-term care. She was a 2017 Rural Health Fellow with the National Rural Health Association (NRHA) and currently serves on the NRHA Board of Trustees and as chair of the NRHA Research and Education Constituency Group. She is actively engaged with other service and community engagement activities to improve rural health, including serving on NRHA's Health Equity Council and RHHub's Advisory Council, as well as serving on multiple government and non-profit organization advisory boards to work on better serving older adults and working toward health equity in rural areas. In 2022, she was honored as a University of Minnesota McKnight Presidential Fellow for her work in advancing rural health equity.



## Leadership



### MEGAN LAHR, MPH, PRINCIPAL INVESTIGATOR

Megan Lahr is a Senior Research Fellow at the RHRC, and the Principal Investigator of the Medicare Rural Hospital Flexibility Program Evaluation, known as the Flex Monitoring Team.

Megan's research focuses on evaluating the national Flex Program and supporting Critical Access Hospitals (CAHs) across the country. She conducts research on quality, quality improvement, and quality measurement in rural hospitals, as well as on issues impacting access to care in rural communities. During her time with the RHRC, she has also led qualitative work on research projects focusing on older adults in rural communities including topics related to caregiving, the oldest old, and aging in place. Upcoming projects include those related to workforce concerns in rural communities, health equity and demographic data in CAHs, and addressing elder abuse in rural areas.

## Staff



### BOBBY BARCLAY, MPH

Bobby Barclay is a Data Analyst with the University of Minnesota Rural Health Research Center. He started working with the RHRC in September 2022 and predominantly serves on the Flex Monitoring Team (FMT). His work with the FMT centers on the topics of quality and access in Critical Access Hospitals. Bobby has assisted with projects that have explored the provision of hospice care in rural communities and the reporting of antibiotic use data in Critical Access Hospitals.



### ALYSSA FRITZ, MPH, RD, CLC

Alyssa Fritz is a Research and Policy Fellow; she began working part-time with the RHRC in January 2021, and joined the team full-time in August of 2022. Alyssa brings experience working in public health at the individual/family-focused level, community level, and state policy level. She leverages this experience for her role as policy lead, consulting and advising on policy implications of RHRC work, and making connections with local, state, and federal policymakers. Alyssa's research focuses on maternal and child health, and she also provides administrative, writing, and editing support.



### ALYSSA FURUKAWA, MPH

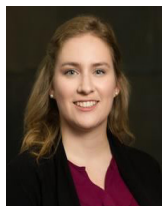
Alyssa Furukawa is a Data Analyst with the University of Minnesota Rural Health Research Center's Flex Monitoring Team (FMT). Since joining the FMT in July 2022, Alyssa's work has focused on analyzing Critical Access Hospital quality of care data and producing both quarterly and annual reports for the Medicare Beneficiary Quality Improvement (MBQI) Project.



### JULIA INTERRANTE, PHD, MPH

Julia Interrante is a Research Fellow and Statistical Lead at the University of Minnesota Rural Health Research Center. She began work as a graduate research assistant in August 2018 and transitioned to her current full-time role after defending her dissertation in Health Services Research, Policy, and Administration in December 2022. Her research focuses on rural obstetrics and maternal and child health. Julia also has experience using a wide variety of quantitative methods using data from large complex weighted surveys, administrative and claims databases, national secondary quantitative data, and primary quantitative and qualitative data; she uses this expertise to serve as statistical lead, consulting and advising other RHRC researchers on analytic methods.

## Staff



### MADELEINE PICK, MPH

Madeleine Pick is a Research Fellow with the University of Minnesota Rural Health Research Center, primarily working on the Flex Monitoring Team (FMT). She joined the RHRC in March 2020. Madeleine's work has focused on quality of care and best practices in Critical Access Hospitals and access to health care for rural residents. She has also contributed to work addressing needs of marginalized populations, including the health and well-being of rural LGBTQ+ residents, housing as a social determinant of rural health, and language interpreter services in Critical Access Hospitals.



### KATIE RYDBERG, MPH

Katie Rydberg is a Program Manager, joining the RHRC in October 2020. During her time, she has managed the operations and development of the University of Minnesota Rural Health Program. She has also contributed to evaluations of two HRSA planning grant programs and research on the rural direct care workforce, rural housing, and the impact of ransomware attacks on rural hospitals. In the coming year, she will continue to grow the work of the Rural Health Program and assist on RHRC grant projects.



### MARIANA TUTTLE, MPH

Mariana Tuttle is a Research Fellow at the University of Minnesota Rural Health Research Center; she joined the RHRC in June of 2019. Her research contributions span an array of topics, from maternal and child health (including emergency obstetrics, racial equity in childbirth, and postpartum health and access to care), to social drivers of health in rural areas (including living alone, LGBTQ+ well-being, and housing). Mariana also serves as communications lead for the RHRC, which involves disseminating RHRC research, website management and strategic planning. As well as working on research projects and directing communication, she also is the project manager and handles administration for all RHRC grant projects.

## Affiliates



### LINDSAY ADMON, MD, MS

Lindsay Admon is an obstetrician-gynecologist and health services researcher at the University of Michigan's Institute of Healthcare Policy and Innovation. She is an Assistant Professor in the Department of Obstetrics and Gynecology at the University of Michigan. Lindsay applies her interdisciplinary training in obstetrics, health services research, and public health to study policy relevant-issues for the childbearing population, and lends her expertise to maternity care projects at the RHRC. She served as a consultant on a project on intimate partner violence in 2022-23.



### DORI CROSS, PHD

Dori Cross is an Assistant Professor at the UMN School of Public Health in the Division of Health Policy and Management whose research focuses on understanding and developing solutions to the complex management challenges that impede digital transformation of health care. Her work promotes the value of health information technology both as a tool that supports care delivery and as a novel source of data for organizational learning and improvement. Dori worked with the Flex Monitoring Team on a project that examined how Critical Access Hospitals use electronic health records to support quality reporting and performance management in 2022-23.



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## Affiliates



### JANETTE DILL, PHD, MPH

Janette Dill is an Associate Professor in the UMN School of Public Health in the Division of Health Policy and Management. Her research focuses on the supply and labor market activity of the health care workforce, with an emphasis on direct care workers and workers without a college degree. She led a project in 2021-22 examining the supply of long-term care workers relative to the older adult population in rural areas and rates of turnover among these workers.



### GILBERT GONZALES, PHD, MHA

Gilbert Gonzales is an Assistant Professor at the Center for Medicine, Health, & Society, the Program for Public Policy Studies, and the Department of Health Policy at Vanderbilt University. He is a leading expert on LGBTQ health and served as a consultant on the 2021-2022 RHRC project on rural LGBTQ health and access to care.



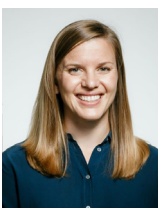
### SARA HANDLEY, MD, MDSC

Sara Handley is a health services researcher and attending physician in the Division of Neonatology at the Children's Hospital of Philadelphia, Assistant Professor of Pediatrics at the Perelman School of Medicine and Associate Fellow at the Leonard Davis Institute of Health Economics at the University of Pennsylvania. Her work focuses on the intersection and interaction of organizational factors in obstetric and neonatal care and the impact on the birth parent-infant dyad. She served as a consultant on the 2022-2023 RHRC project on postpartum morbidity and mortality and access to care.



### VALERIE LEWIS, PHD

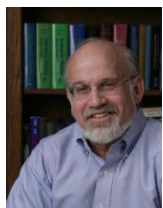
Valerie Lewis is an Associate Professor in Health Policy and Management at the University of North Carolina Gillings School of Global Public Health. She is a sociologist and policy researcher with extensive experience researching health care payment and delivery reform, health care organizations, and racial and socioeconomic disparities in outcomes. She uses a mix of research methods, from sophisticated statistical modeling to in-depth qualitative site visits. She served as a consultant on the 2022-2023 RHRC project on rural-urban differences in domestic violence.



### HANNAH MACDOUGALL, PHD, MSW

Hannah MacDougall is an assistant professor at the UMN School of Social Work. Her work examines the integration of health and social services, specifically the role of nonprofit hospitals in communities, with a particular focus on rural communities. Hannah was a Postdoctoral Associate with the Rural Health Equity Postdoctoral Fellowship from 2021-2022 and continues to work with the RHRC and Flex Monitoring Team on projects such as rural LGBTQ health and access to care and Critical Access Hospital hospice services.

## Affiliates



### IRA MOSCOVICE, PHD

Ira Moscovice is the Mayo Professor Emeritus in the Division of Health Policy and Management, School of Public Health, University of Minnesota. He was the former director of the University of Minnesota Rural Health Research Center since its inception in 1992. He has served as the principal investigator for numerous rural health projects funded by federal and state agencies and private foundations, and now serves as a Senior Advisor for the Flex Monitoring Team.



### HANNAH NEPRASH, PHD

Hannah Neprash is an Assistant Professor in the Division of Health Policy and Management whose research focuses on health economics and capacity strain within the health care system. Her research uses quasi-experimental methods and big/novel sources of data to study supply-side drivers of utilization, spending, access, and quality in health care. She led a project studying ransomware attacks on rural hospitals in 2022-2023.



### JONATHAN SCHROEDER, PHD

Jonathan Schroeder is a geographer with the Minnesota Population Center and the IPUMS Center for Data Integration at the University of Minnesota. He provides expertise in U.S. population geography, map design, and geographic data analysis, with deep knowledge of U.S. census data resources for studying rural populations.

## Postdoctoral Associates



### ALEXIS SWENDENER, PHD

Alexis Swendener is a Postdoctoral Associate with the Rural Health Equity Postdoctoral Program. She is a sociologist with expertise on how social inequalities shaped by gender, family, and work influence health within varied and often understudied social contexts. She has studied these domains primarily within rural and farming families. Her work extends our understanding of sources of health disparities among marginalized and underserved families including sexual and gender minorities, racial and ethnic minorities, and those at intersections of these groups. Within her role at RHRC, Alexis is a key contributor to work on housing as a social determinant of rural health.

## Students



### HAILEY BAKER, BS

Hailey Baker is a medical student at the University of Minnesota Duluth, and a citizen of Cherokee Nation. She began work with the RHRC in August 2021 and contributes expertise on Indigenous health and obstetric care on projects related to rural maternal health.



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## Students



### PHOEBE CHASTAIN, MPH

Phoebe Chastain is a graduate research assistant whose work focused on rural obstetrics and maternal and child health. She began work in August 2021 and continued until her graduation. She graduated in 2023 with an MPH from Public Health Administration and Policy program at the University of Minnesota School of Public Health.



### CARSON CRANE, BA

Carson Crane is a graduate research assistant focusing on demographic data and social needs screening in Critical Access Hospitals with the FMT. In addition to working with the FMT, Carson is an MPH student in the Public Health Administration and Policy program at the University of Minnesota School of Public Health.



### AIMZHAN IZTAYEVA, PHD, MSC

Aimzhan Iztayeva is a graduate research assistant whose work focused on mobility of direct care workers in rural areas using the Current Population Survey. She began work in May 2022. She graduated in 2023 with a PhD in Sociology from the University of Minnesota.



### ROBERT LIBAL, MPH

Robert Libal began working as a graduate research assistant in January 2022, focusing on projects relating to social determinants of health, especially sexual orientation and gender identity. He graduated in 2023 with an MPH from the Public Health Administration and Policy program at the University of Minnesota School of Public Health.



### AUSTEN OTT, BS, BA

Austen Ott is a medical student pursuing family medicine at the University of Minnesota Medical school. Their work with RHRC focused on expanding access to rural health care, LGBTQ+ populations, and community-centered primary care.



### CLAIRE MCGLAVE, MPH

Claire McGlave is a graduate research assistant focusing on ransomware attacks in rural hospitals at the RHRC. In addition to working at the RHRC, Claire is a PhD student in the Health Services Research, Policy & Administration program at the University of Minnesota School of Public Health.

## Students



### COURTNEY SARKIN, MBE

Courtney is a graduate research assistant whose work focuses on the intersection of sexual orientation and gender identity. She began work in August 2021 and continued through January 2023. Courtney is a PhD student in the Health Services Research, Policy & Administration program at the University of Minnesota School of Public Health.



### EMILY SHEFFIELD, MPH

Emily Sheffield is a graduate research assistant focusing on intimate partner violence and related maternal and child health research at the RHRC. Emily is also a PhD student in the Health Services Research, Policy & Administration program at the University of Minnesota School of Public Health.



### HAWKING YAM, MS

Hawking Yam is a graduate research assistant focusing on housing and rural health at the Rural Health Research Center. Hawking is also a PhD student in the Health Services Research, Policy & Administration program at the University of Minnesota School of Public Health.



### ELIZABETH VOMACKA, MPH

Elizabeth Vomacka began working as a graduate research assistant in August 2021, focusing on projects relating to the direct care workforce in rural areas. She graduated in 2022 with an MPH from Epidemiology and Community Health program at the University of Minnesota School of Public Health.



### ABIGAIL WENNINGER, MPH

Abigail Wenninger began working as a research assistant in January 2022, focusing on FMT projects relating to cancer care, the impacts of COVID-19, and hospice care in CAHs. She graduated in 2023 with an MPH from the Public Health Administration and Policy program at the University of Minnesota School of Public Health.



## Rural Health Research Center Grant



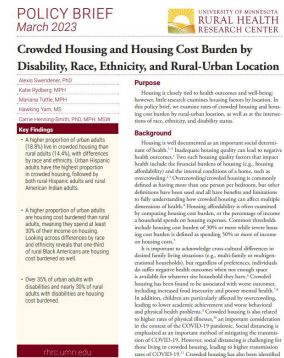
## PROJECT HIGHLIGHTS

### Housing as a Social Determinant of Rural Health

**Team:** Carrie Henning-Smith, PhD, MPH, MSW; Megan Lahr, MPH; Madeleine Pick, MPH; Katie Rydberg, MPH; Alexis Swendener, PhD; Mariana Tuttle, MPH; Hawking Yam, MS

**Goals:** The purpose of this project was to identify rural/urban and within-rural differences in housing quality and its relationship to health and disability status, especially for individuals living in poverty. We also identified rural-specific housing issues and innovative policy solutions to address housing challenges in order to improve rural health.

**Highlights:** We were honored to present on our research at the plenary session for the National Rural Health Association Health Equity Conference. In addition, we completed key informant interviews with representatives from 27 national government and advocacy organizations leading work on housing and health. We also published policy briefs highlighting differences in housing quality, affordability, and stability using three different national data sources (the American Community Survey, American Housing Survey, and National Health Interview Survey). We also have three peer-reviewed manuscripts in progress: one is already submitted, and two will follow soon.



Plenary presenters at the 2023 NRHA Health Equity Conference

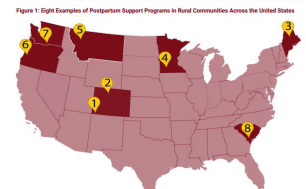
### Postpartum Morbidity and Mortality and Health Care Utilization in Rural vs. Urban Communities

**Team:** Katy Backes Kozhimannil, PhD, MPA; Julia Interrante, PhD, MPH; Mariana Tuttle, MPH; Phoebe Chastain, MPH; Sara Handley, MD

**Goals:** Understanding the health needs and access challenges that rural postpartum patients face is essential for improving postpartum health and for reducing postpartum maternal deaths in rural communities. The purpose of this project is to examine postpartum mortality among rural and urban residents, and to evaluate differences in health care utilization and barriers across rural and urban communities.

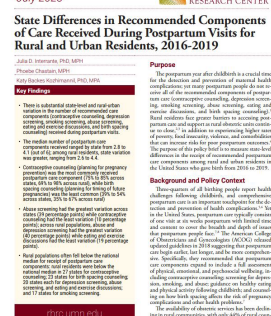
**Highlights:** Access to postpartum services and support is essential for rural residents. We are especially proud of the three products we published about access to mental health services, appropriate clinical care, emotional and logistical support, and social services for postpartum parents in rural communities. Two of these were series of case studies – one focused on local-level programming, and the other on nationally-available support services; the final product was on access to a variety of services associated with postpartum care. Finally, we have an ongoing analysis of national survey data on rural/urban differences in postpartum health and care utilization.

Eight Postpartum Support Programs in Rural Communities Across the United States



1. <b>Prison Project Family Resource Center</b> Cotton, Colorado Community serving non-profit Peer-to-peer mental health support specialists Since 2018	5. <b>Postpartum Resource Group</b> Cotton, Colorado Community serving non-profit Peer-to-peer mental health support specialists Since 2018
2. <b>Alma</b> Silverton Springs, Colorado Community serving non-profit Peer-to-peer mental health support specialists Since 2018	6. <b>Family Health</b> Cotton, Colorado Community serving non-profit Peer-to-peer mental health support specialists Since 2018
3. <b>Time of Hope</b> Hutchinson, Kansas Community serving non-profit Peer-to-peer mental health support specialists Since 2018	7. <b>Postpartum Mental Health Initiative</b> Cotton, Colorado Community serving non-profit Peer-to-peer mental health support specialists Since 2018
4. <b>The Nurture</b> Hutchinson, Kansas Community serving non-profit Peer-to-peer mental health support specialists Since 2018	8. <b>Family Solutions (SOMI)</b> Cotton, Colorado Community serving non-profit Peer-to-peer mental health support specialists Since 2018

POLICY BRIEF  
July 2023



## Rural-Urban Differences in Domestic Violence as a Contributor to Maternal Morbidity and Mortality

**Team:** Katy Backes Kozhimannil, PhD, MPA; Alyssa Fritz, MPH; Emily Sheffield, MPH; Carrie Henning-Smith, PhD, MPH, MSW; Valerie Lewis, PhD; Lindsay Admon, MD, MSc

**Goals:** Domestic violence is a leading contributor to maternal morbidity and mortality, which is elevated for rural residents. Universal screening for abuse is recommended at perinatal health care visits. Using 2016-2020 data from the CDC's Pregnancy Risk Assessment Monitoring System, this project assessed the prevalence and predictors of domestic violence and of abuse screening among rural and urban residents who gave birth.

**Highlights:** Our research team presented findings from this project at the National Rural Health Association and AcademyHealth. Our research found that intimate partner violence is more common among rural birthing people than urban birthing people, and that rural victims of intimate partner violence are at higher risk of not being screened for abuse compared to their urban peers, and a manuscript reporting these findings has been published in the journal *Health Services Research*. We are also conducting an analysis looking at experiences of intimate partner violence among rural residents based on Medicaid/health insurance coverage and racial/ethnic identity, and have submitted these findings to a peer-reviewed journal.



*Emily sharing findings at NRHA*



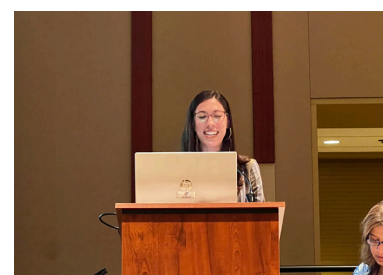
*Katy presenting at AcademyHealth*

## Ransomware Attacks on Rural Hospitals

**Team:** Hannah Neprash, PhD; Carrie Henning-Smith, PhD, MPH, MSW; Claire McGlave, MPH; Katie Rydberg, MPH

**Goals:** This project used a novel dataset of ransomware attacks on healthcare providers to better understand how this growing phenomenon affects rural hospitals. Specifically, we tested for differences in attack likelihood by rural/urban location. We also used American Hospital Association survey data to quantify hospital-level factors associated with a lower likelihood of attack (i.e., preventive factors). Finally, we used Medicare claims data to quantify rural/urban differences in how ransomware attacks affect patients and hospitals.

**Highlights:** Our research team presented findings from this project at AcademyHealth and the American Society of Health Economists annual conference. Our research finds that rural hospitals are less likely to experience ransomware attacks – which appear to be targeted at large, urban, financially profitable hospitals (results that have been accepted for publication at the journal *Health Affairs Scholar*). Despite the lower likelihood for rural hospitals, ransomware attacks are particularly disruptive when they do occur – resulting in dramatically fewer inpatient admissions, reduced outpatient hospital visits, and less emergency room care at rural hospitals. For displaced patients at rural hospitals, this means quadruple the travel time to reach the next nearest hospital, compared to patients at non-rural ransomware attacked hospitals.



*Claire presenting at AcademyHealth*

## WHERE TO FIND OUR WORK

We strive to maintain an accessible, user-friendly **website** where people of all abilities and backgrounds can engage with our research. This effort resulted in metrics we are proud of for January 2022-June 2023.

### • Traffic

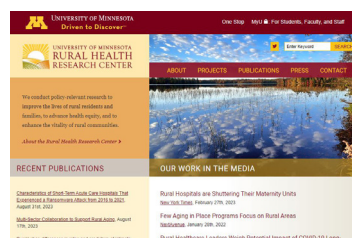
- Total # of sessions (single visit to the website): 18,311 (1.4 per user)
- Total # of pageviews (single visit to a page on the site): 34,699 (1.9 per session)
- Some users access our site by typing our URL directly (28.5%), others use a search engine (34.4%), some are referred from other sites (34.4%) and still others from social media or email (2.6%)

### • People

- Total # of users: 13,518
- 86.9% new, 13.1% returning

### • Content

- Total number of products downloaded: 4,815
- Top 5 publications downloaded (number of downloads):
  - \* **“Social Cohesion and Social Engagement among Older Adults Aging in Place: Rural/Urban Differences”** (187)
  - \* **“Who Will Care for Rural Older Adults? Measuring the Direct Care Workforce in Rural Areas”** (182)
  - \* **“A Comparison of Evidence-Based Supports for Maternal and Infant Health in 133 Rural US Counties with and without Hospital-Based Obstetric Care”** (169)
  - \* **“Racial Inequities in the Availability of Evidence-Based Supports for Maternal and Infant Health in 93 Rural US Counties with Hospital-Based Obstetric Care”** (139)
  - \* **“Key Informant Perspectives on Supporting Health and Well-Being for LGBTQ+ Rural Residents”** (128)



## Twitter ("X")

With over 1,450 Twitter ("X") followers, we have a growing platform through which to share our work. We leverage Tweets and Retweets frequently to disseminate our research. Follow us at @UMNRHRC.



## Rural Health Research Gateway

Our products are housed with all other federally-funded Rural Health Research Centers' on the Rural Health Research Gateway: **www.ruralhealthresearch.org**. Our work is also regularly highlighted through the Gateway's research recaps, and on an annual basis, we have an opportunity to share our research on their platform through webinars. Our webinar **“Supporting the Health and Well-Being of Rural LGBTQ Adults,”** was the most viewed presentation on their platform from January through June 2023.



## WHO INFORMS OUR WORK

### Expert Work Group

At the University of Minnesota Rural Health Research Center, we have an **Expert Work Group (EWG)** comprised of national stakeholders that help us identify urgent and emerging issues in rural health and provide feedback on the projects we undertake each year. The goal of the EWG is to provide our center with strategic guidance, input on research questions and project design, connections to rural communities and stakeholders, advice on troubleshooting, feedback on research findings and implications, and support for effective dissemination and policy impact.



*Expert Work Group Meeting, St. Paul, MN, February 2019.*

#### JENNIFER BACANI MCKENNEY, MD



*Physician Owner, Bacani/McKenney Clinic*

Dr. Jennifer Bacani McKenney is a practicing Family Physician and serves as the Wilson County health officer in her hometown of Fredonia, a community of approximately 2500 people in southeast Kansas. She provides outpatient, inpatient, emergency department, surgical, and endoscopic services to her community. She serves on the local school board, on the Kansas Health Foundation Board, and as the President of the Kansas Academy of Family Physicians. She is Assistant Dean for Rural Medical Education at the University of Kansas School of Medicine.

#### MARCUS BERNARD, PHD



*Chair & Associate Professor, Kentucky State University, Frankfurt, KY*

Dr. Marcus Bernard is Chair for the School of Agriculture, Communities, Environment, and the Sciences and Associate Professor of Agriculture Economics and Rural Sociology at Kentucky State University. Prior to this appointment, he served as director of the Rural Training and Research Center for the Federation of Southern Cooperatives/Land Assistance Fund in Epes, Alabama. He completed his doctoral studies at the University of Kentucky in Rural Sociology and Medical Sociology. Throughout his career, he has integrated working for and researching rural-based organizations and communities.

#### JENNIFER LUNDBLAD, PHD, MBA



*President & CEO, Stratis Health*

Dr. Jennifer Lundblad is President and CEO of Stratis Health, an independent non-profit organization that leads collaboration and innovation to improve health. Stratis Health leads or partners in a wide array of rural health programs nationally, including Rural Health Value, the Rural Healthcare Provider Transition Project (RHPTP), and the Rural Northern Border Healthcare Technical Assistance Center. Stratis also influences rural-relevant measure development, and informs rural health policy. Jennifer is a member of the RUPRI (Rural Policy Research Institute) Health Panel and did her doctoral dissertation on “Teamwork and Safety Climates in Small Rural Hospitals.”



## LESLIE MARSH, BS, MSN, MBA, RN

*CEO, Lexington Regional Health Center*

Since 2010, Leslie Marsh has presided over Lexington Regional Health Center as the Chief Executive Officer through a transformational time. Under her tenure, Leslie has recruited four (4) MDs and fourteen (14) APPs, and expanded access to patient care through the addition of four Rural Health Clinics. Leslie is a past President of the Nebraska Hospital Association; and formerly served on the American Hospital Association's Region 6 Policy Board. Leslie is the current President of the National Rural Health Association's (NHRA) Board of Trustees.



## BROCK SLABACH, MPH

*Chief Operations Officer, National Rural Health Association*

Brock joined NRHA in 2008 and currently serves as Chief Operating Officer. He was a rural hospital administrator for more than 21 years and has served on the board of the National Rural Health Association and the regional policy board of the American Hospital Association. Brock specializes in rural health system development that encompasses population health and the varied payment programs moving rural providers into value based purchasing models. He is a member of the National Quality Forum's Measures Application Partnership (MAP) Hospital and Rural Health Workgroup and serves on the Board of Directors of Accreditation Commission for Health Care (ACHC). Brock earned a master of public health degree in health administration from the University of Oklahoma and is a fellow in the American College of Healthcare Executives.



## PEGGY WHEELER, MPH

*Vice President, Policy, California Hospital Association*

Peggy Broussard Wheeler serves as Vice President, Policy, at the California Hospital Association (CHA). In her role, she advocates for small and rural hospitals and other members of the sponsoring organizations who provide service to rural populations in the State of California. Her portfolio also includes issues of workforce, telehealth and diversity, equity, and inclusion (DEI). Ms. Wheeler is responsible for developing, advocating and executing public policies, legislation and regulations on behalf of rural hospitals at the state and national levels.



## SAM WILSON, MA

*Regional Vice President, AARP*

Sam has spent the past 20+ years with AARP in both advocacy and senior leadership roles. He is the Regional Vice President for AARP's Central Region states (ND, SD, NE, KS, OK, AR, MN, IA and WI) and serves as enterprise strategy lead on health care issues impacting states and local communities, including access, affordability, and public/private health benefits and programs. Sam has been a regular co-host of "Rural America Live," a television program on RFD-TV that focuses on health, finances, fraud prevention, and other aging-related concerns for rural families and communities.



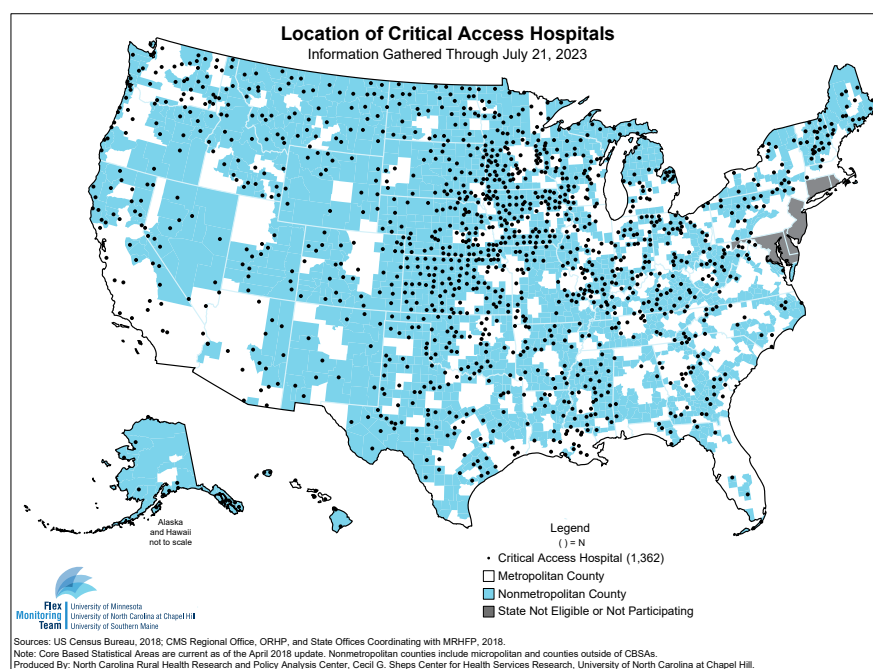
Flex Monitoring Team

## FLEX MONITORING TEAM

The Flex Monitoring Team (FMT) is a partnership of the Rural Health Research Centers at the University of Minnesota (UMN), the University of North Carolina-Chapel Hill, and University of Southern Maine, led by the team at UMNHRHC. This team has led the Medicare Rural Hospital Flexibility Program Evaluation cooperative agreement for over 20 years and focuses on evaluation of core areas of the federal Flex Program providing support for Critical Access Hospitals (CAHs) across the country: Quality Improvement, Operational and Financial Improvement, and Community Impact, including population health and Emergency Medical Services (EMS). The UMNHRHC FMT staff complete a variety of projects in various topics each year, often focused on quality improvement in CAHs.

The FMT manages a website, [flexmonitoring.org](https://flexmonitoring.org), that provides access to all FMT products, including policy briefs, data reports, and briefing papers. The FMT is also responsible for maintaining a **full list and map** of all CAHs across the country.

Additionally, the FMT operates the **Critical Access Hospital Measurement and Performance Assessment System (CAHMPAS) website**, which includes tools for exploring CAHs' performance on financial, quality, and community benefit measures.



## SELECTION OF FMT PROJECTS

### Advanced Electronic Health Record Use and Quality Measure Performance

Team: Madeleine Pick, MPH; Alyssa Furukawa, MPH; Dori Cross, PhD; Megan Lahr, MPH

Goals: Though the proportion of CAHs using at least a basic electronic health record (EHR) is comparable to non-CAHs, CAHs are less likely to have advanced EHR functions than non-CAHs. Consequently, the objectives of this project are to assess the relationship between advanced EHR use and quality measure reporting and performance in CAHs, evaluate how CAHs may differ from non-CAHs in their EHR capabilities for information exchange, and provide an overview of how CAHs use EHRs for quality reporting, as informed by key stakeholders.

Highlights: This project is nearing completion with two policy briefs expected in Fall 2023, including new data on EHR functions and capacity in CAHs, as well as analyses of qualitative interview data from conversations with CAHs regarding use of EHRs to report quality measures.



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## Access to Hospice Care in Communities Served by Critical Access Hospitals

Team: Megan Lahr, MPH; Robert Barclay, MPH; Hannah MacDougall, PhD, MSW; Abigail Wenninger, MPH

Goals: The purpose of this project is to assess access to hospice care in communities served by CAHs. This project will analyze data for CAHs that provide hospice care to assess where CAHs are providing hospice care and the characteristics of these hospitals. We will perform 4-8 qualitative interviews with CAHs providing hospice care to learn more about the care they provide. We will investigate differences in types of hospice care provided (hospital-based hospice, home-based hospice, etc.), challenges to providing care in a rural setting, and recommendations for overcoming challenges faced.

Highlights: We are anticipating the release of our policy brief, *Provision of Hospice Services by Critical Access Hospitals: Strengths and Challenges*, later this fall.

## Practical Strategies to Engage CAHs in Health Equity Improvement

Team: Madeleine Pick, MPH; Megan Lahr, MPH; Alyssa Furukawa, MPH; Carson Crane, BA

Goals: This project leverages the work of CMS and HRSA on health equity to identify data collected and used by CAHs can use to advance health equity in their communities; describe demographic and social needs data that are currently being collected by CAHs and quantify the number of CAHs collecting these data; explore and compile information on state-level policies concerning hospital reporting of patient demographic data to improve health equity; and provide examples of best practices for how CAHs use these data to improve health equity in their communities.

Highlights: Our data collection has just begun for this project, with our team investigating state-level policies regarding patient demographic data in hospitals. We are looking forward to analyzing additional data throughout the next several months.

## Providing Best Practices to Address Workforce Issues in CAHs

Team: Megan Lahr, MPH; Robert Barclay, MPH; Ira Moscovice, PhD; Hannah MacDougall, PhD, MSW; Madeleine Pick, MPH

Goals: The objectives of this project are 1) to identify the areas of need for workforce-related best practices in CAHs, and 2) to develop a workforce toolkit for SFPs and CAHs to use to improve CAH recruitment and retention in these areas of need. This project will assess CAHs' most pressing workforce needs by engaging with SFP staff as well as other rural stakeholders, and then developing a toolkit that will contain modules focused on improvement in organizational culture and leadership, as well as operations, and will provide specific examples of initiatives and resources to improve workforce constraints in CAHs and the communities they serve.

Highlights: We are just beginning this project and look forward to assessing the greatest needs of CAHs through focus groups with key stakeholders, and then we will be diving into the literature and best practices in workforce improvement.

## National CAH Quality Inventory and Assessment

Team: Megan Lahr, MPH; Robert Barclay, MPH; Madeleine Pick, MPH; Alyssa Furukawa, MPH

Goals: The objective of this project is to collect, analyze, and disseminate nationally standardized information on CAH quality improvement (QI) processes, data tracking, and quality reporting. The assessment will include questions related to QI infrastructure in CAHs, service provision details, and related quality measurement efforts.

Highlights: Our team has spent the past year working with an expert Advisory Group, and co-hosting a National CAH Quality Infrastructure Summit to help with development of the National CAH Quality Inventory and Assessment ("Assessment"). We completed Assessment testing in early summer and look forward to concluding our full Assessment data collection this fall.



# University of Minnesota Rural Health Program

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## University of Minnesota Rural Health Program

In fall 2020, we launched the **University of Minnesota Rural Health Program** to provide training and support for addressing public health challenges in rural Minnesota, and to connect local experts with one another and with national research and policy work. Katy Backes Kozhimannil and Carrie Henning-Smith co-lead this program, and the lead staff person is Katie Rydberg. With funding from the Office of Academic and Clinical Affairs and Clinical and Translational Science Institute at the University of Minnesota, the Rural Health Program has three main components:

### *Rural Health Equity Postdoctoral Program*

The primary goal of this **program** is to train scholars who will become innovative research leaders in rural health. Our postdoctoral associates receive mentorship and support from the RHRC leadership and staff and closely collaborate on projects. The postdoctoral associates also have an opportunity to develop and implement an independent rural health equity research project specifically focused on rural Minnesota.



**Bridget Basile Ibrahim** (Postdoctoral Associate 2020-2022) co-led the development and implementation of a survey of rural hospitals on the topic of safe maternity care. Bridget also received independent grant funding for a project on childbirth equity in Minnesota, called “the Indigenous Good Birth Project.” Bridget is currently an Assistant Professor at the Yale School of Nursing.



**Hannah MacDougall** (Postdoctoral Associate 2021-2022) contributed to RHRC projects on aging in place and LGBTQ health and also conducted research on community benefit spending of rural hospitals and on the social determinants of health in rural areas. Hannah is currently an Assistant Professor at the University of Minnesota School of Social Work.



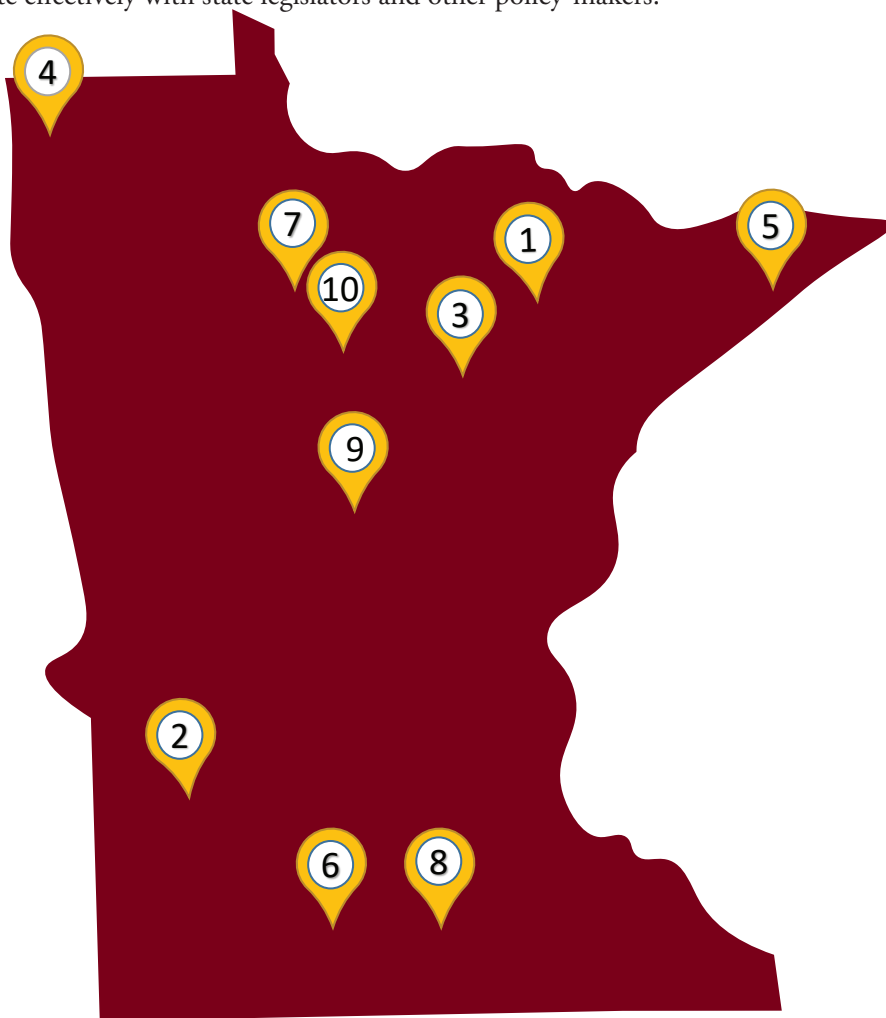
**Alexis Swendener** joined us as a postdoctoral associate in 2022, bringing expertise in farm families, LGBTQ health, and the social determinants of health for rural residents. Alexis contributed to RHRC projects on rural housing, including Minnesota-specific analyses of rural/urban differences in housing quality. Alexis will also be an active collaborator on multiple RHRC research projects in the upcoming year.







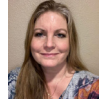





**Clara Busse** is a doctoral student at the University of North Carolina-Chapel Hill who will complete her PhD program and join us as a postdoctoral associate in 2024. Her research interests include postpartum health and rural maternity care access.

*Project REACH (Rural Experts Advancing Community Health)*

**Project REACH (Rural Experts Advancing Community Health)** is a year-long program that provides diverse community leaders in rural Minnesota with health policy and leadership training. Participants will learn to frame health policy challenges and how to communicate effectively with state legislators and other policy-makers.



<b>1. Side Lake</b> <i>Ann Bussey, MS</i> <b>Cohort 1</b>		<b>6. New Ulm</b> <i>Erin Schwab, BS</i> <b>Cohort 2</b>	
<b>2. Montevideo</b> <i>Leah Lehtola, BS</i> <b>Cohort 1</b>		<b>7. Bemidji</b> <i>Ben Cahill, CHW</i> <b>Cohort 3</b>	
<b>3. Grand Rapids</b> <i>Adam Pavek, PharmD</i> <b>Cohort 1</b>		<b>8. St. Peter</b> <i>Ana Garza, CHW</i> <b>Cohort 3</b>	
<b>4. Hallock</b> <i>Jeanna Kujava, RN, BA</i> <b>Cohort 2</b>		<b>9. Brainerd</b> <i>Shelly Muñoz, MS</i> <b>Cohort 3</b>	
<b>5. Grand Marais</b> <i>Jodi Tervo Roberts, MS</i> <b>Cohort 2</b>		<b>10. Walker</b> <i>Fatuma Youb, MPH</i> <b>Cohort 3</b>	



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Our **initial cohort**, listed below, completed the program in June, 2022:

- Ann Bussey, MS, is a retired health care leader from Side Lake, Minnesota. She is passionate about advocating for older adults and the opportunity to live and grow in an age-friendly environment. Her work in Project REACH focused on **social isolation among older Minnesotans**. Since completion of the program, her policy work has resulted in new provisions in the Minnesota Library Services 5-year plan to support digital access and literacy for older adults in rural Minnesota communities.
- Leah Lehtola, BS, is a community health leader from Montevideo, Minnesota. Her work focuses on addressing the physical and social health of community members through programs and events. Her work in Project REACH focused on **youth mental health and reducing suicide risk in Chippewa County**. Leah worked extensively with partners in her community to develop a local mental health coalition as a way to address the high rate of suicidal ideation, particularly among high school girls in her community.
- Adam Pavek, PharmD, is a pharmacist from Grand Rapids, Minnesota. He has served in a number of clinical and administrative roles across different sectors, giving him a unique perspective on the pharmacy industry and health systems. His work in Project REACH focused on **engaging Indigenous perspectives in health care in Itasca County, with a focus on maternal health and substance use**. His work in Project REACH led him to be a leader of a diversity, equity, and inclusion workgroup for Itasca Medical Care, which has developed a strategic plan to promote equity and inclusion and enhance culturally appropriate care, particularly for Indigenous people in Itasca County.

The **second cohort** completed the program in June, 2023:

- Jeanna Kujava, RN, BA, serves as the director for Kittson County Public Health. During Project REACH, she focused her policy work on **strengthening local alcohol ordinances in Kittson County as a strategy to reduce substance use in the community**. She also developed the Kittson County Substance Abuse Prevention Task Force Advisory Committee.
- Jodi Tervo Roberts, MS, is an early childhood advocate in Grand Marais, Minnesota. Through Project REACH, she focused on **empowering rural communities with equitable access to early intervention services for children with special health needs**. Her policy work aims to strengthen state level enforcements of federal laws related to early intervention services and create and implement of a special education cooperative in Cook County, Minnesota.
- Erin Schwab, BS, is a public health advocate in New Ulm, Minnesota. Through Project REACH, she focused on **addressing the high rates of adverse childhood experiences in Brown County**. Her policy work aims to create more opportunities for education about trauma and adverse childhood experiences (ACEs) and advocating for trauma informed systems in her community.

The **third cohort** began the year-long program in August, 2023:

- Ben Cahill, CHW, is a community health worker from Bemidji, Minnesota. Through Project REACH, he plans to focus on housing policy in his community.
- Ana Garza, CHW, is a community health worker from St. Peter, Minnesota. During Project REACH, she will focus her policy work on access to care for immigrants.
- Shelly Muñoz, MS, is an educational consultant and former teacher living in Brainerd, Minnesota. During Project REACH, she will focus her policy work on men's mental health.
- Fatuma Youb, MPH, is a public health advocate from Central Minnesota. Through Project REACH, she aims to impact transportation policy in Cass County, Minnesota.

During Project REACH, there are monthly sessions via Zoom that feature various lecturers and guest speakers who discuss aspects of the policy process and best practices in advocacy and creating equitable policy change. We have had a wide range of experts in rural health and policy present in these sessions, including:

- Erica Barnes, MS, CCC-SLP Executive Director of MN Rare Disease Council
- Linda Bane Frizzell, PhD, School of Public Health
- Alyssa Fritz, MPH, RD, CLC, Research & Policy Fellow at Rural Health Research Center
- Betsy Haugen, MLIS, and Molly Niehls, MLIS, Minnesota Legislative Library
- Mary Gilbertson, MPH, former Health Care and Aging Outreach Director for Senator Tina Smith
- Mary Jo Kreitzer, PhD, RN, FAAN, Director of UMN Earl E. Bakken Center for Healing and Spirituality
- Steve Gottwalt, Executive Director of Minnesota Association County Health Plans
- Molly Malone, MBA, County Commissioner for Murray County, Minnesota
- Uyen Thi and Kyle Tran Myhre, facilitators of rural diversity, equity, and inclusion workshop series

Each Project REACH participant is paired with two University of Minnesota based learning partners. These learning partners help the participants apply what they have learned in the program's monthly group session to the health policy issue in their rural community. They also connect participants to additional resources and information that are valuable for each person in their advocacy work.

We are greatly appreciative to the following current and former Project REACH learning partners for their contributions to the program:

- Ryan Allen, PhD, Humphrey School of Public Affairs
- Lynn Blewett, PhD, University of Minnesota School of Public Health and State Health Access Data Assistance Center
- Devon Charlier, MPH, Evaluation and Communications Manager, Upper Midwest Agricultural and Safety Health Center
- Alyssa Fritz, MPH, RD, CLC, Research and Policy Fellow at Rural Health Research Center
- Carrie Henning-Smith, PhD, MPH, MSW, Rural Health Research Center
- Mary Jo Katras, PhD, Program Leader, Family Resiliency, University of Minnesota Extension
- Katy Backes Kozhimannil, PhD, MPA, Rural Health Research Center
- Megan Lahr, MPH, Principal Investigator of Flex Monitoring Team
- Lacey Loomer, PhD, University of Minnesota Duluth Labovitz School of Business and Economics
- Hannah MacDougall, PhD, MSW, University of Minnesota School of Social Work
- Laura Palombi, PharmD, MPH, MAT, University of Minnesota Duluth College of Pharmacy
- Madeleine Pick, MPH, Research Fellow at Rural Health Research Center
- Nate Shippee, PhD, University of Minnesota School of Public Health
- Laurissa Stigen, MS, RN, University of Minnesota College of Nursing
- Megan Schossow, MPH, Director of Outreach, Upper Midwest Agricultural and Safety Health Center
- Mariana Tuttle, MPH, Research & Communications Fellow at Rural Health Research Center



*Cohort 2 (Jodi, Erin, and Jeanna) meeting in person for the first time at a conference in May 2023*



*Cohort 1 participant Ann, alongside learning partners Lacey and Carrie, and Program Manager Katie Rydberg presenting at NRHA 2023*



*Project REACH presenters at the Minnesota Rural Health Association Conference in Duluth, MN, June 2023*



*Cohort 2 participant Jodi, sharing about her experience in the Project REACH program at the Minnesota Rural Health Association Conference*

## Rural Collective

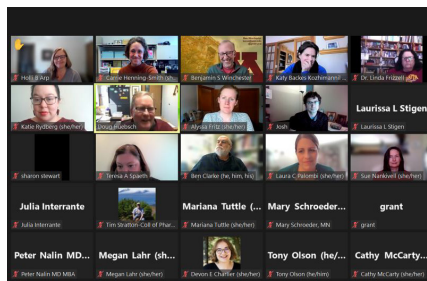
The **University of Minnesota Rural Collective** provides a forum for networking, learning, and collaborating across the University of Minnesota system with the ultimate aim of improving health, quality of life, and community resources for rural people and places throughout Minnesota and across the US. The Collective is an active and growing membership directory, and began regular meetings in spring 2021. As of June 2023, the Collective has a membership of more than 100 University of Minnesota staff, postdocs, and faculty, along with 20 affiliated centers and institutions from across all University campuses and the Extension.

This past year, the Rural Collective has hosted two in-person events. In October 2022, the Rural Collective gathered at the University of Minnesota Crookston campus for a networking meeting. The Rural Collective gathered again at the University of Minnesota Morris campus in April 2023. In addition to time for networking for Rural Collective members, this meeting provided opportunities to learn about the UMN Center for Small Towns, food systems work in Morris, and local rural public health efforts in Western Minnesota.

The Rural Collective also holds biannual virtual meetings. In October 2022, the virtual meeting focused on the University of Minnesota Driven 2 Discover initiative to increase research opportunities at rural county fairs in Minnesota. In March 2023, the Rural Collective held a Q&A session with University of Minnesota Board of Regents member, Regent Doug Huebsch to hear about his experience representing rural Minnesota as a Board of Regents member.



*Carrie and Katie getting ready for the first ever Rural Collective meeting on the Crookston campus, October 2022*



*A very lively virtual event: Rural Collective Q&A with UMN Regent Doug Huebsch, March 2023.*



*Rural Collective members gathered in person on the UMN Morris campus, April 2023*



# Results and Impact on Rural Health, 2022-2023



## POLICY AND PUBLIC IMPACT

### Policy Engagement

We are proud of the impact of our work on programs, legislation, and policy discussions at the local, state, and federal levels. In 2022, we created a new role on our team for a Policy Lead. The person in this position acts as the main point of contact and lead liaison for key policy stakeholders (state, federal, tribal and local) with an interest in research activities in rural health. Alyssa Fritz, who currently serves in this role, is a point person for policy-related requests and relationships. Her work has allowed us to further expand our already-robust policy relationships, enhance the policy implications sections of our products, and better track our policy engagements and impact.

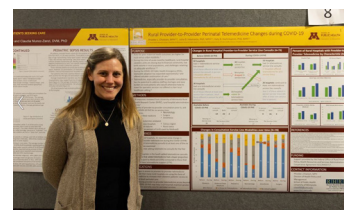
Over the past year, experts at RHRC received frequent invitations to share our research findings and relevant insights with key stakeholders, and our work has been cited in major policies and reports – at the federal, regional, state, and local levels. Several examples are described below:

- Carrie Henning-Smith worked closely with NRHA to develop and deliver invited testimony to the U.S. Senate Committee on Agriculture, Nutrition, & Forestry in March 2022 and to participate in a rural roundtable with the U.S House Select Committee on Economic Disparity and Fairness in Growth in July 2022.
- Carrie was an invited speaker at the meetings of various rural-relevant stakeholder groups, including to inform the redesign of the National Health & Aging Trends Study (April 2022), the Interdisciplinary Network on Rural Population Health and Aging (INRPHA) Rural Health and the Built and Social Environment (RHBSE) Working Group (April 2023), and the University of Utah Family Caregiving Collaborative (September 2022). Carrie was also an invited keynote speaker at two recent rural conferences: the Iowa Rural Development Summit (April 2023) and the Iowa Community Health Conference (October 2022).
- Katy Backes Kozhimannil met upon request with staff in the U.S. Government Accountability Office on the topic of obstetric service availability, barriers to obstetric care, and efforts to improve access to obstetric services in rural areas, which informed House Report 116-450 (January 2022). Members of the UMNHRHC's maternity care research team have also responded to multiple stakeholder invitations from the Centers for Medicare and Medicaid Services to HRSA regional offices to state and federal legislators to health care delivery systems.
- Julia Interrante consulted with the office of Senator Maggie Hassan (NH) on the topic of obstetric unit closures.
- Carrie met with the office of Senator Bob Casey (PA) to discuss issues related to aging, disability, and transportation in rural communities.
- Katy and Julia provided written feedback to Representative Lauren Underwood (IL) on rural obstetric care legislation.
- Carrie met with members of the NASA Convergent Aeronautics Solutions Project to answer questions related to rural health care access as well as with staff from FEMA to discuss emergency preparedness among rural older adults. Carrie is a member of the Public Health AmeriCorps National Process, Outcomes, and Impact Evaluation Technical Working Group, where she provides guidance on evaluating rural aspects of the newly established Public Health AmeriCorps program.

- Our team has regular contact with Minnesota’s federal legislators. Carrie works closely with Representative Angie Craig’s office, and Center staff including Alyssa Fritz and Katie Rydberg have met with outreach staff from the offices of both of Minnesota’s U.S. Senators, Senators Amy Klobuchar and Tina Smith. Meetings with U.S. Senate staff included a “tour” of RHRC’s website and the Rural Health Gateway; legislative staff have also met virtually and in their home communities with several Project REACH participants to discuss their policy work.
- At the state level, Alyssa Fritz has engaged with state agency staff, including policy liaisons in Governor Tim Walz’s Children’s Cabinet and the Health Economics Program within the Minnesota Department of Health. Further, Katy and Alyssa provided input to State Senator Bill Lieske on questions related to the potential impact of proposed nurse staff legislation on rural Minnesota hospitals.
- In 2022 our maternity care research was cited in the **White House Maternal Health Blueprint**, the **2022 National Healthcare Quality and Disparities Report (Agency for Healthcare Research and Quality)**, and an **ASPE Office of Health Policy Issue Brief on doula care**.
- Research published in 2022 in the *Journal of Women’s Health*, *Women’s Health Issues*, and *Obstetrics and Gynecology*, led by Katy, Julia, and Lindsay Admon, respectively, on health insurance coverage in the postpartum period has been cited in state and federal policy proposals to extend pregnancy-related Medicaid coverage for one year postpartum.



*Carrie at the House Select Committee on Economic Disparity & Fairness in Growth, July 2022*



*Phoebe and her award-winning poster at UMN SPH Research Day, April 2023*

## Honors and Awards

In May 2023, Katy Kozhimannil was selected as a Health Hero, and awarded the National Indian Health Board’s Outstanding Service Award for the many ways in which her rural health research has impacted American Indian/Alaska Native health care access, quality, and outcomes. In 2023, the CDC released updated maternal mortality data, showing a dramatic increase in maternal mortality from 2020-2021 among rural residents, and a doubling among American Indian/Alaska Native people. After these data were released, Katy worked closely with reporters at the *New York Times*, *CNN*, and *Kaiser Health News* to ensure representation of and focus on rural tribal communities in feature stories on maternal mortality and on rural obstetric unit closures.

Carrie Henning-Smith was honored with a University of Minnesota McKnight Presidential Fellowship for 2022-2025 in recognition of her work on rural health. Finally, Carrie was recently appointed to the Board of Directors for CentraCare, a major health care system serving central and western Minnesota. She was chosen for her rural health expertise. Her term started in September 2023.

RHRC research assistant Phoebe Chastain, MPH, was awarded first place in “Best Poster” for her work at the University of Minnesota School of Public Health Research Day. She also received the award for “Best Masters Project” in the Public Health Administration and Policy Program.

## Press Coverage

Our researchers maintain working relationships with media contacts and recent work has been covered by local media in rural communities as well as national media like *CNN*, *The New York Times*, *Kaiser Health News*, *NPR*, and more. Additionally, our staff works with offices from the broader University of Minnesota media relations, University of Minnesota School of Public Health's media relations office, and the OACA and CTSI media teams, to produce research summaries and media-oriented news releases to help amplify our products, and also to make direct connections with additional local & national reporters who cover rural health.

From January 2022 through July 2023, our research was cited in 59 different press pieces, including news articles, radio interviews, and television interviews. These range in reach from smaller local newspapers (e.g. *Park Rapids Enterprise*) to large national media outlets (*USA Today*, *CNN*, *National Public Radio*). We also leverage opportunities to share our research further in timely commentaries and op-eds published in major media outlets. Below is a complete list of media outlets in which our research was featured, 2022-2023:

- ABC News
- Bloomberg News
- Brainerd Dispatch
- CNN
- The Daily Yonder
- Duluth News Tribune
- Flatwater Free Press
- IndyStar
- Kaiser Health News
- KAKE (ABC affiliate in Kansas)
- KCUR (Kansas City Public Radio)
- Hartford Courant
- Louisiana Illuminator
- Med Page Today
- MinnPost
- MPR
- Ms. Magazine
- NATAL
- NBC News
- The New York Times
- Next Avenue
- North Carolina Health News
- Northern News Now
- NPR
- Ohio Capital Journal
- Park Rapids Enterprise
- Post Bulletin
- ProPublica
- Public News Service
- Radio Lab
- Red Lake Nation News
- Rural Horizons
- Rural Impact
- Salon
- Star Tribune
- The Current
- University of Minnesota
- US News & World Report
- USA Today
- Vox News
- WSAV (NBC affiliate in Savannah, GA)
- WSILTV (ABC affiliate in IL, MO, KY, and TN)



The New York Times

MPRnews



StarTribune



PROPUBLICA  
Investigative Journalism in the Public Interest

## Presentations, 2022-2023

Members of our team have presented at an array of unique events, from academic conferences to policy panels, including:

- 100 Rural Women, Webinar, January 2023
- AcademyHealth Annual Research Meeting: Washington, DC, Jun 2022; Seattle, WA Jun 2023
- Alliance for Full Acceptance LGBTQ+ Health Education & Advocacy Summit, Virtual, Mar 2023
- Conference for Psych/Mental Health APRNs in Rural Minnesota: Culturally-Affirming Mental Healthcare for the LGBTQI+ Community, Sartell, MN, Apr 2022
- Grantmakers in Aging Rural Health & Aging Funding Community, Virtual, February 2022
- HRSA Annual Scholarly Intensive for Rural Programs, Virtual, January 2022
- HRSA Office of Intergovernmental and External Affairs Rural Health Equity Learning Series, Virtual, Jul 2022
- Interdisciplinary Association for Population Health Sciences Conference, Minneapolis, MN, Sept 2022
- Interdisciplinary Network on Rural Population Health and Aging (INRPHA) Rural Health and the Built and Social Environment (RHBSE) Working Group, Virtual, Apr 2023
- Iowa Community Health Conference, Des Moines, IA, October, 2022
- Iowa Rural Development Summit, Ames, IA, April, 2023
- Many Faces of Community Health Conference, Bloomington, MN, August 2023
- National Rural Health Association Annual Meeting: Albuquerque, NM, May 2022; San Diego, CA May 2023
- National Rural Health Association Health Equity Conference: Albuquerque, NM, May 2022; San Diego, CA May 2023
- Rural Health Advisory Roundtable with Representative Angie Craig, Virtual, Jan 2022.
- Rural Health Research Gateway Webinar, Virtual, Jan 2022
- National Rural Institute on Alcohol and Drug Abuse, Menomonie, WI, Jun 2022; Jun 2023
- The RTT Collaborative, Virtual, Jan 2022
- State Health Access Data Assistance Center (SHADAC) Research Meeting, Virtual, Jul 2022
- Stratis Health Rural Quality Advisory Council Meeting, Virtual, Apr 2022
- U.S. House Select Committee on Economic Disparity and Fairness in Growth, Washington, DC, Jul 2022
- U.S. Senate Committee on Agriculture, Nutrition, and Forestry, Virtual, Mar 2022
- University of Minnesota Office of Academic Clinical Affairs Mini Medical School, Virtual, Mar 2022
- University of Minnesota School of Public Health Division of Health Policy and Management Seminar Series, Virtual, March 2022
- University of Minnesota School of Public Health Research Day, Minneapolis, MN, April 2023
- University of Utah Family Caregiving Collaborative, Conversations with Caregiving Researchers Series, Virtual, September, 2022
- Washington University in St. Louis Center for Health Economics and Policy Collaborative Invited Presentation, Virtual, Jan 2022

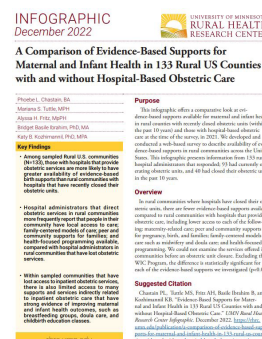
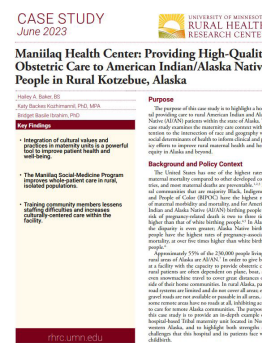
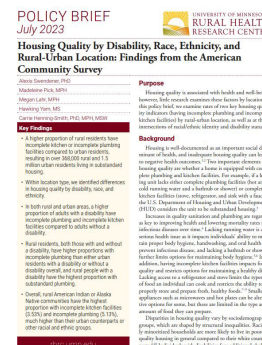


# PUBLICATIONS, 2022-2023

These publications come from current, recent, and affiliated research projects.

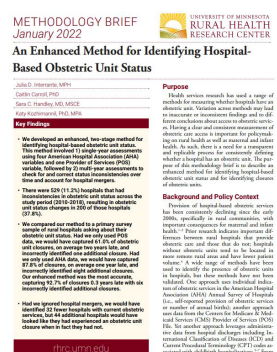
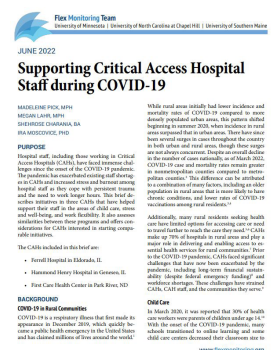
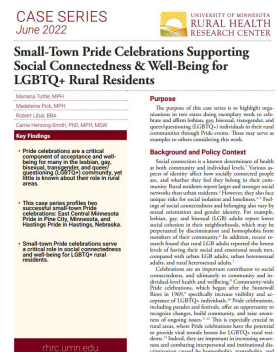
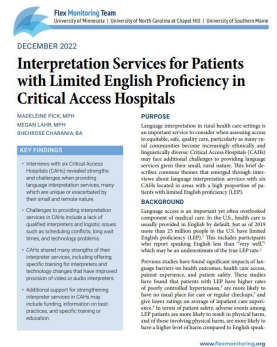
## Research Products

- **“Eight Postpartum Support Programs in Rural Communities Across the United States,”** *RHRC Case Study Series*, August 2023
- **“Differences in Residential Stability by Rural/Urban Location and Socio-Demographic Characteristics,”** *RHRC Policy Brief*, August 2023
- **“Housing Quality by Disability, Race, Ethnicity, and Rural-Urban Location: Findings from the American Community Survey,”** *RHRC Policy Brief*, July 2023
- **“State Differences in Recommended Components of Care Received During Postpartum Visits for Rural and Urban Residents, 2016-2019,”** *RHRC Policy Brief*, July 2023
- **“Two National-Level Organizations Supporting Rural Postpartum Health Across the United States,”** *RHRC Case Study Series*, July 2023
- **“Manilaq Health Center: Providing High-Quality Obstetric Care to American Indian/Alaska Native People in Rural Kotzebue, Alaska,”** *RHRC Case Study*, June 2023
- **“Distribution of Direct Care Workforce COVID-19 Funding Between Rural and Urban Counties in Minnesota and Illinois,”** *RHRC Policy Brief*, May 2023
- **“Indicators of Familial Social Support by Rurality and Gender Identity,”** *RHRC Policy Brief*, March 2023
- **“Crowded Housing and Housing Cost Burden by Disability, Race, Ethnicity, and Rural-Urban Location,”** *RHRC Policy Brief*, March 2023
- **“Rural School- and Community-Based Programs Supporting LGBTQ+ Youth,”** *RHRC Case Study Series*, February 2023
- **“Patient Transfers to and from Critical Access Hospitals During the COVID-19 Pandemic,”** *FMT Policy Brief*, February 2023
- **“Critical Access Hospital Workforce During COVID-19: Barriers and Facilitators for Recruiting and Retaining Staff,”** *FMT Policy Brief*, February 2023
- **“Care Coordination and Community Partnerships for Cancer Care in Critical Access Hospitals,”** *FMT Policy Brief*, January 2023
- **“Impacts of Critical Access Hospital Independence and System Ownership during the COVID-19 Pandemic,”** *FMT Policy Brief*, January 2023
- **“A Comparison of Evidence-Based Supports for Maternal and Infant Health in 133 Rural US Counties with and without Hospital-Based Obstetric Care,”** *RHRC Infographic*, December 2022
- **“Rates of Limited English Proficiency in Counties with Critical Access Hospitals,”** *FMT Policy Brief*, December 2022



## Research Products

- **“Interpretation Services for Patients with Limited English Proficiency in Critical Access Hospitals,”** *FMT Policy Brief*, December 2022
- **“MBQIP Quality Measures National Annual Report – 2021,”** *FMT Data Report*, December 2022
- **“Who Will Care for Rural Older Adults? Measuring the Direct Care Workforce in Rural Areas,”** *RHRC Policy Brief*, November 2022
- **“Delivery of Cancer Screening and Treatment in Critical Access Hospitals,”** *FMT Policy Brief*, October 2022
- **“Key Informant Perspectives on Supporting Health and Well-Being for LGBTQ+ Rural Residents,”** *RHRC Policy Brief*, September 2022
- **“Providing High-Quality Support to Pregnant People and Their Families in Racially Diverse Rural Communities,”** *RHRC Policy Brief*, July 2022
- **“Racial Inequities in the Availability of Evidence-Based Supports for Maternal and Infant Health in 93 Rural US Counties with Hospital-Based Obstetric Care,”** *RHRC Policy Brief*, July 2022
- **“Self-Rated Health Among Gay, Lesbian, and Bisexual Adults: Rural/Urban Differences,”** *RHRC Policy Brief*, July 2022
- **“Anxiety, Depression, and Access to Mental Health Care by Sexual Orientation and Rurality,”** *RHRC Policy Brief*, June 2022
- **“Improving Access to LGBTQIA+-Friendly Care in Rural Areas,”** *RHRC Case Study*, June 2022
- **“Small-Town Pride Celebrations Supporting Social Connectedness & Well-Being for LGBTQ+ Rural Residents,”** *RHRC Case Study*, June 2022
- **“Rural Community Organizations Building Inclusive Environments for LGBTQ+ Residents,”** *RHRC Case Study*, June 2022
- **“Prevalence of Chronic Conditions by Sexual Orientation and Rural-Urban Location,”** *RHRC Policy Brief*, June 2022
- **“Social and Emotional Support during the COVID-19 Pandemic by Sexual Orientation and Rurality,”** *RHRC Policy Brief*, June 2022
- **“Supporting Critical Access Hospital Staff during COVID-19”** *FMT Policy Brief*, June 2022
- **“Social Cohesion and Social Engagement among Older Adults Aging in Place: Rural/Urban Differences,”** *RHRC Policy Brief*, January 2022
- **“Evaluating the Rural HIV/AIDS Planning Program,”** *RHRC Policy Brief*, January 2022
- **“An Enhanced Method for Identifying Hospital-Based Obstetric Unit Status,”** *RHRC Methodology Brief*, January 2022



## Journal Articles

- “Characteristics of Short-Term Acute Care Hospitals that Experienced a Ransomware Attack from 2016-2021,” *Health Affairs Scholar*, August 2023
- “Rural/Urban Differences in Rates and Predictors of Intimate Partner Violence and Abuse Screening among Pregnant and Postpartum United States Residents,” *Health Services Research*, August 2023
- “Access to Health Care for Transgender and Gender Diverse Adults in Urban and Rural Areas in the United States,” *Medical Care Research and Review*, August 2023
- “Multi-Sector Collaboration to Support Rural Aging,” *Public Policy & Aging Report*, August 2023
- “Rural-Urban Differences in Health Care Unaffordability,” *Journal of Rural Health*, July 2023
- “Racial Arrest Disparities in the United States by Rural-Urban Location and Region,” *Journal of Racial and Ethnic Health Disparities*, July 2023
- “Availability of Cancer Care Services and the Organization of Care Delivery at Critical Access Hospitals,” *Cancer Medicine*, July 2023
- “Obstetric Volume and Severe Maternal Morbidity Among Low-Risk and Higher-Risk Patients Giving Birth at Rural and Urban US Hospitals,” *JAMA Health Forum*, June 2023
- “‘Going Back in the Closet’: Addressing Discrimination Against Sexual and Gender Minority Residents in Long-Term Services and Supports by Providing Culturally Responsive Care,” *Journal of Aging & Social Policy*, June 2023
- “Factors Associated with Health Care Professionals’ Choice to Practice in Rural Minnesota,” *JAMA Network Open*, May 2023
- “Challenges and Recommendations for Improving Access to Evidence-Based COPD Management among Veterans: Rural Primary Care Provider Perspectives,” *Journal of General Internal Medicine*, April 2023
- “Incidental Sun Exposures as a Source of Sunburn among Rural Residents in the United States,” *Journal of Rural Health*, March 2023
- “Advancing the Age-Friendly Movement in Rural Communities,” *Journal of Aging Life Care*, February 2023
- “Who Will Care for Rural Older Adults? Measuring the Direct Care Workforce in Rural Areas,” *Journal of Applied Gerontology*, February 2023
- “Rural and Urban Differences in Insurance Coverage at Prepregnancy, Birth, and Postpartum,” *Journal of Obstetrics and Gynecology*, February 2023
- “Unmet Needs for Help with Mobility Limitations among Older Adults Aging in Place: the Role of Rurality,” *Journal of Aging and Health*, January 2023



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GYNECOLOGY

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Aging  
and Health



## Journal Articles

- “Perinatal Outcomes for Rural Obstetric Patients and Neonates in Rural-Located and Metropolitan-Located Hospitals,” *Journal of Perinatology*, December 2022
- “Drive Time and Receipt of Guideline-Recommended Screening, Diagnosis, and Treatment,” *JAMA Network Open*, November 2022
- “Association of Health Insurance, Geography, Race, and Ethnicity with Disparities in Receipt of Recommended Postpartum Care in the US,” *JAMA Health Forum*, October 2022
- “Racial/Ethnic Disparities in Postpartum Health Insurance Coverage among Rural and Urban US Residents,” *Journal of Women’s Health*, August 2022
- “Rural/Urban Differences in Access to Paid Sick Leave among Full-Time Workers,” *Journal of Rural Health*, July 2022
- “Inequities in Availability of Evidence-Based Birth Supports to Improve Perinatal Health for Socially Vulnerable Rural Residents,” *Children*, July 2022
- “Rural Health Disparities in Health Care Utilization for Dementia in Minnesota,” *Journal of Rural Health*, July 2022
- “Severe Maternal Morbidity and Mortality Risk at the Intersection of Rurality, Race and Ethnicity, and Medicaid,” *Women’s Health Issues*, June 2022
- “Association between Medicaid Expansion and Closure of Hospital-Based Obstetric Services,” *Health Affairs*, April 2022
- “Rural/Urban Differences in Mental Health and Social Well-Being among Older US Adults in the Early Months of the COVID-19 Pandemic,” *Aging & Mental Health*, April 2022
- “Social Isolation and Safety Issues among Rural Older Adults Living Alone: Perspectives of Meals on Wheels Programs,” *Journal of Aging & Social Policy*, May 2022
- “Approaches to Serving Rural Older Adults in State Plans on Aging: a Policy Content Evaluation,” *Journal of Applied Gerontology*, May 2022
- “Rural Hospital Administrators’ Beliefs About Safety, Financial Viability, and Community Need for Offering Obstetric Care,” *JAMA Health Forum*, March 2022
- “Direct Oral Anticoagulants and Warfarin for Atrial Fibrillation Treatment: Rural and Urban Trends in Medicare Beneficiaries,” *American Journal of Cardiovascular Drugs*, March 2022
- “Contact by Collection Agencies for Medical Debt: Rural-Urban Differences among Older and Younger Medicare Beneficiaries,” *Journal of Applied Gerontology*, February 2022
- “Farmer Mental Health in the US Midwest: Key Informant Perspectives,” *Journal of Agromedicine*, January 2022

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## OTHER COLLABORATIONS AND PARTNERSHIPS, 2022-2023

In addition to the three core programs under the RHRC umbrella (the RHRC Grant, the Flex Monitoring Team, and the Rural Health Program), our team is actively engaged in other rural-relevant research collaborations and partnerships designed to address and improve rural health. Examples of this work include:

- **Upper Midwest Agricultural Safety and Health Center (UMASH).** UMASH is a multi-institution collaboration funded by the National Institute for Occupational Safety and Health (NIOSH) with the goal of promoting health and safety for agricultural workers and their families. Carrie Henning-Smith is a co-principal investigator on a current UMASH **five-year project** focused on identifying contextual factors associated with help-seeking behavior for mental health.



- **Multi-Institution Collaboration to Identify Factors Associated with Rural Health Care Practice.** Carrie Henning-Smith is a lead collaborator in a partnership with researchers at the Minnesota Department of Health and multiple University of Minnesota schools and colleges (e.g., Medical School, School of Public Health, College of Education and Human Development) designed to identify factors associated with choosing to practice in a rural setting across types of health care professionals. This work recently resulted in a JAMA Network Open publication and a plenary presentation at the Minnesota Rural Health Conference. Hannah MacDougall (former Rural Health Program postdoc) recently joined this collaboration as well.



- The **Systems Thinking for Antiracist Research (STAR) Hub**, led by the Center for Antiracism Research for Health Equity at the University of Minnesota. Funded by the Robert Wood Johnson Foundation Policies for Action Program, Katy Backes Kozhimannil is a co-Principal Investigator with Rachel Hardeman. The STAR Hub aims to identify, analyze and share antiracist policy strategies and develop a body of evidence that can eliminate racial injustice and improve health and well-being in all communities. One project, led by Julia Interrante and Katy Backes Kozhimannil, uses an antiracist lens to examine intersectional identities and risk in postpartum health, with a focus on Hispanic and Indigenous people in rural and urban U.S. communities.





# Snapshots of Our Team, 2022-2023



*The June 2023 Minnesota Rural Health Association Conference provided an opportunity for Project REACH participant Jodi Tervo Roberts and her learning partners, Mariana Tuttle and Laurissa Stigen, to connect in person, alongside program manager Katie Rydberg.*



*Katy and research assistant Phoebe embrace at the 2023 School of Public Health Commencement, where Phoebe graduated with her MPH.*



*Left: Expert Work Group member Dr. Jen Bacani McKenney reuniting with Katy at NRHA, May 2023.*

*Right: UMN RHRC affiliates (including staff, research assistants, Project REACH participants, and learning partners), enjoying some snacks and connect time at a local San Diego park during NRHA. From left: Hawking Yam, Lacey Loomer, Carrie Henning-Smith, Ann Bussey, Phoebe Chastain, Hannah MacDougall, Emily Sheffield, Katie Rydberg, Maddy Pick, and Julia Interrante.*



*Research assistant Bob Libal presenting his research on indicators of family support for transgender individuals in rural communities at the UMN SPH Research Day in April 2023.*



*Carrie and Katie on a beautiful late winter day in Morris, MN before the April 2023 Rural Collective meeting.*





Several RHRC team members traveled to Washington, D.C. in February for the 2023 National Rural Health Association Policy Institute. Left: Maddy Pick meeting with Minnesota District 02 Representative Angie Craig; Rep. Craig often invites Carrie or others from RHRC to share expertise on rural health issues. Middle: Maddy Pick, Katie Rydberg, and Megan Lahr gathered before the morning session. Right: Katie Rydberg and other Policy Institute participants, met U.S. Senator Amy Klobuchar to share thoughts on behalf of Sen. Klobuchar's rural constituents.



In November 2022, core members of the RHRC team met to reimagine our long-standing annual report in a way that is more inclusive of the broad reach and varying programs associated with our Center. This product is a result of the ideas from that meeting, fueled by yummy snacks and the creativity that comes from in-person gatherings.



Carrie presenting research on rural/urban differences in unmet needs for help with mobility limitations among older adults (part of the RHRC work on aging in place) at the Interdisciplinary Approaches for Advancing Population Health Equity Conference in Minneapolis, MN, September 2022.





*RHRC summer parties, where we invite everyone who lives locally in Minnesota to gather for food, fun, and to celebrate all we've accomplished in the prior year, have become a highly anticipated tradition. Pictured here, Katy and Carrie hold up a cake at the Taco Party we had in Katy's backyard, June 2022.*



*Carrie, Mariana, and Courtney after presenting on rural, LGBTQ+ health and well-being at the 2022 National Rural Institute on Alcohol and Drug Abuse in Menomonie, WI. We were invited back in 2023, during which medical student Austen Ott was able to share their research on the subject.*



*Lindsay and Julia reunited at the AcademyHealth Annual Research Meeting in Washington, DC., June 2022.*



*Research assistants Bob Libal (far left) and Abby Wenninger (second from right) celebrated PRIDE 2022 at the East Central Minnesota Pride in rural Pine City, Minnesota.*

## Acknowledgements

### Funding

We are grateful for generous funding support from the Federal Office of Rural Health Policy (FORHP). Part of the Health Resources and Services Administration, FORHP coordinates activities related to rural health care within the U.S. Department of Health and Human Services. For more information about all of the Rural Health Research Centers funded by FORHP, visit [www.ruralhealthresearch.org](http://www.ruralhealthresearch.org). To support our work: <https://give.umn.edu/giveto/ruralhealth>.

### Acknowledgment of Native Lands

The University of Minnesota Rural Health Research Center acknowledges the Dakota people, who are the First People of Mni Sota Makoce. The Dakota people have an ancient historical and contemporary spiritual connection to the land that the University of Minnesota Twin Cities was built and remains on. We commit ourselves to actions and practices that address the injustices from which our school benefits.

Today, the state of Minnesota is home to twelve federally and non-federally recognized Indigenous nations, including five Dakota Nations and seven Ojibwe Nations. Those nations include the Prairie Island Indian Community, Shakopee Mdewakanton Indian Community, Lower Sioux Indian Community, Upper Sioux Community, Mendota Mdewakanton Tribal Community, Bois Forte Band of Chippewa, Red Lake Nation, Leech Lake Band of Ojibwe, Mille Lacs Band of Ojibwe, White Earth Nation, Fond du Lac Band of Ojibwe, and Grand Portage Band of Lake Superior Chippewa.

### University of Minnesota Environment

Our Center is located within the University of Minnesota, and we benefit from the breadth of expertise available among our colleagues at the University. Our Center's home is the Division of Health Policy and Management in the School of Public Health.

### Photography

Kathleen Henning is a photographer who beautifully captures the awe-inspiring nature of rural places. Her work is reproduced with her permission on our website, and on the cover of this report.



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