Lessons and Challenges Engaging Rural Populations

Karen Ann Kehl, PhD, RN, FPCNMD, MHS
Chief, Systems and Models of Care Branch
Program Director at NINR

NIH PRAGMATIC TRIALS COLLABORATORY
Rethinking Clinical Trials®

Panelists

- Julie Fritz, PhD, PT
  - Nonpharmacologic Pain Management in Federally Qualified Health Centers Primary Care Clinics (BeatPain Utah)
- Richard Skolasky, MD
  - Advancing Rural Back Pain Outcomes through Rehabilitation Telehealth (ARBOR-Telehealth)
- Sebastian Tong, MD
  - Adapting and Implementing a Nurse Care Management Model to Care for Rural Patients with Chronic Pain (AIM-CP)
- Katie Hadlandsmyth, MD
  - Reaching Rural Veterans: Applying Mind-Body Skills for Pain Using a Whole Health Telehealth Intervention (RAMP)

Session Goals

- Share progress on ePCTs for the prevention and management of chronic pain in rural populations, describing challenges and lessons learned
- Begin communication that may lead to joint publications on methods and strategies, and/or future collaborations

NIH PRAGMATIC TRIALS COLLABORATORY
Rethinking Clinical Trials®

BEATPAIN Utah

BEATPAIN Utah: Nonpharmacologic Pain Management in Federally Qualified Health Center Primary Care Clinics

Lessons and Challenges Engaging Rural Populations

Pragmatic and Implementation Studies for the Management of Pain (PRISM)

NIH HEAL INITIATIVE

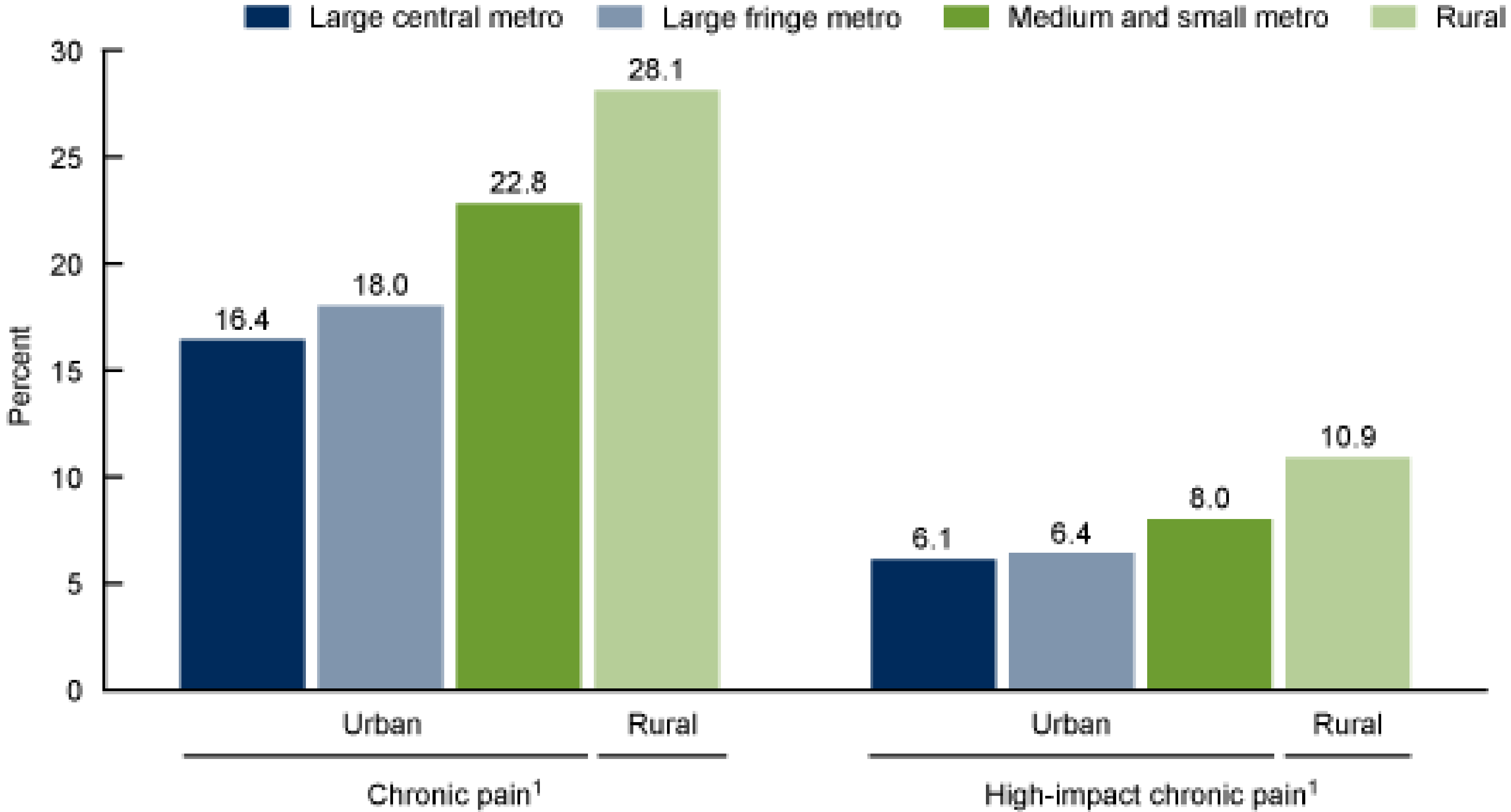
AUCH ASSOCIATION FOR UTAH COMMUNITY HEALTH

UNIVERSITY OF UTAH HUNTSMAN CANCER INSTITUTE

HEALTH UNIVERSITY OF UTAH

The percentage of adults with chronic pain in the past 3 months, and those fitting the definition of high impact chronic pain, increases as place of residence became more rural.

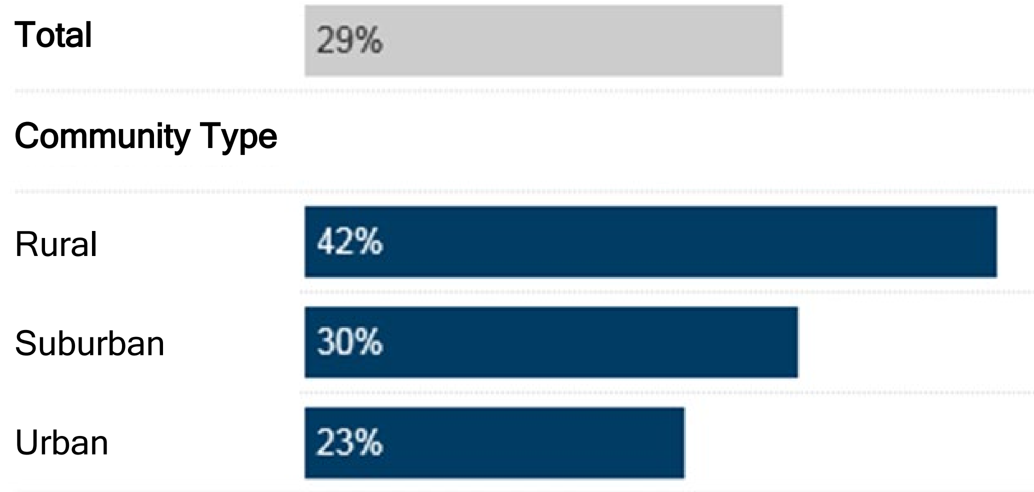
SOURCE: NCHS Data Brief No. 390, November 2020



Chronic pain is based on responses of “most days” or “every day” to the survey question, “In the past 3 months, how often did you have pain? Would you say never, some days, most days, or every day?” High-impact chronic pain is defined as adults who have chronic pain and who responded “most days” or “every day” to the survey question, “Over the past 3 months, how often did your pain limit your life or work activities? Would you say never, some days, most days, or every day?”

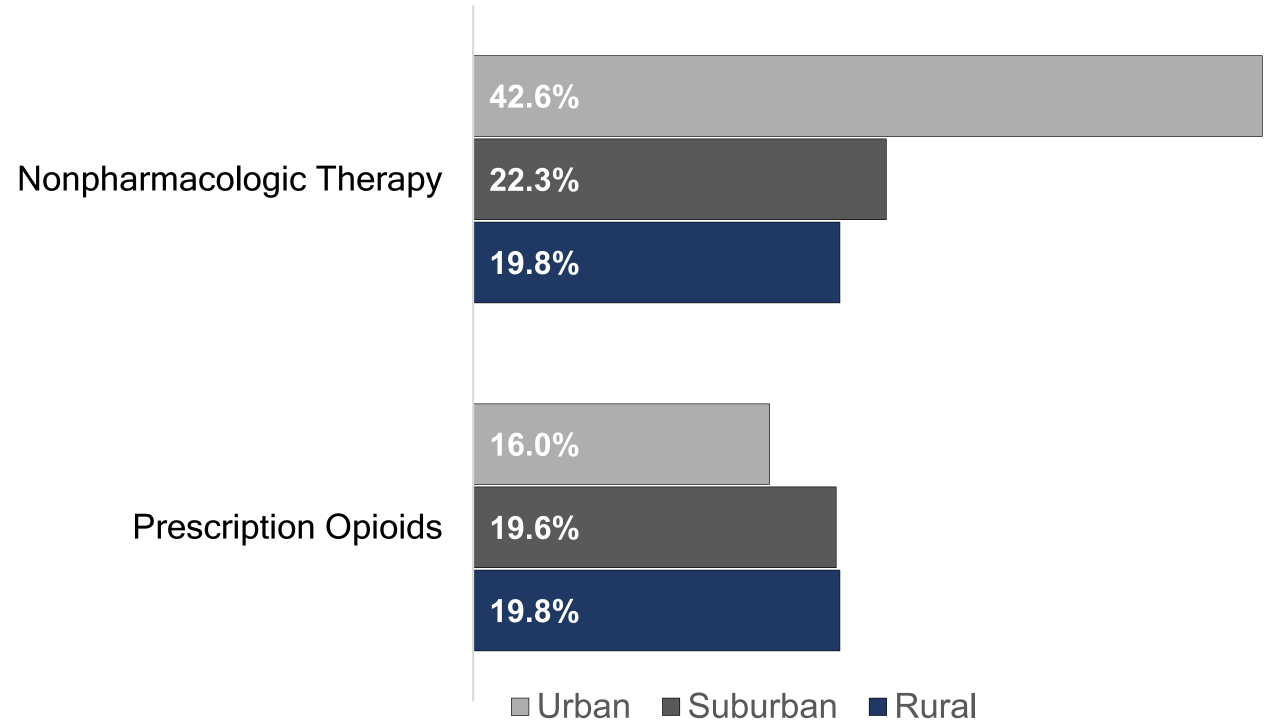
Pain Disparities in Rural Communities

Three in Ten Adults Say They Or Someone in Their Family Have Ever Been Addicted to Opioids

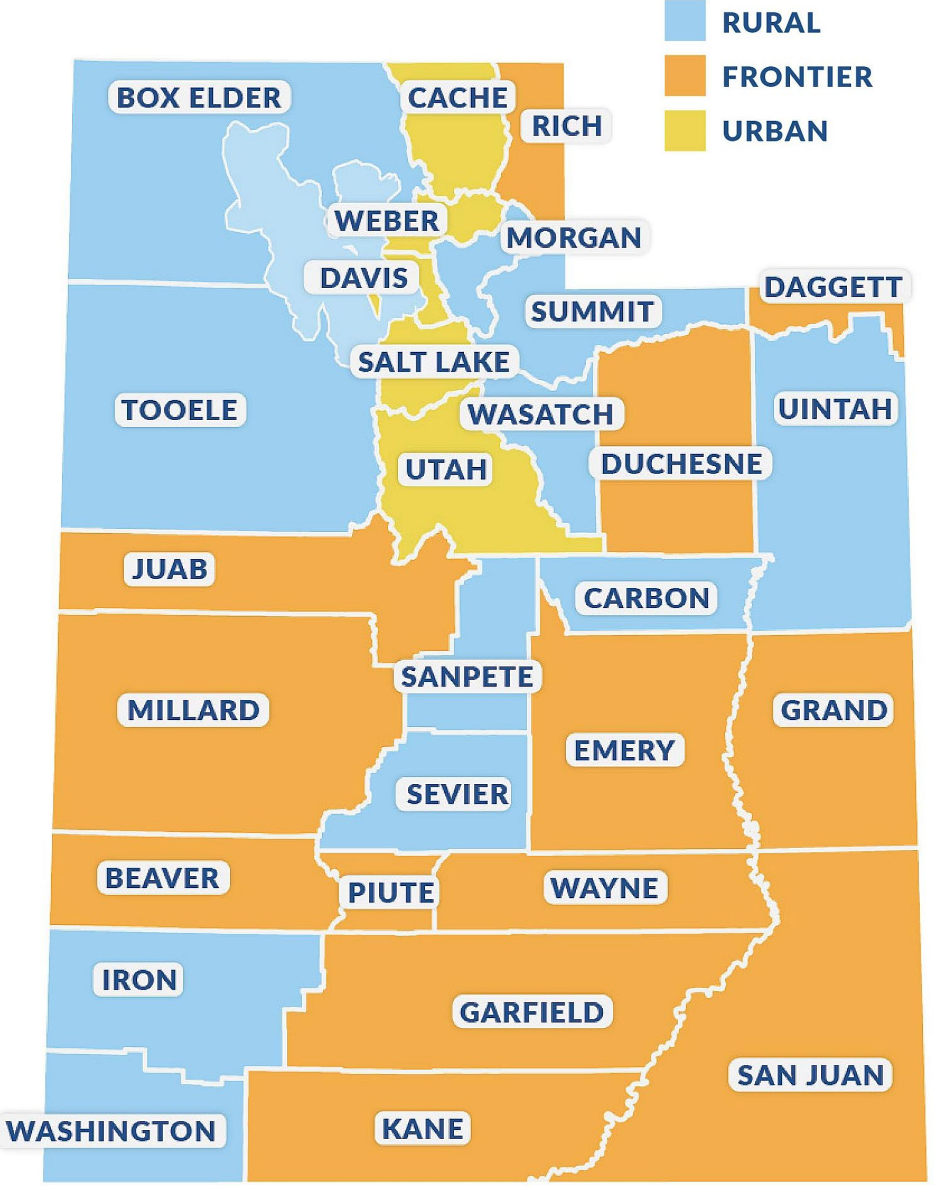


SOURCE: Kaiser Family Foundation Health Tracking Poll (July 11-19, 2023). Available from https://www.kff.org/other/poll-finding/kff-tracking-poll-july-2023-substance-use-crisis-and-accessing-treatment/

Prevalence of Coping Mechanism Use for Chronic Pain



Rafferty AP, et al. Rural, Suburban, and Urban Differences in Chronic Pain and Coping Among Adults in North Carolina: 2018 Behavioral Risk Factor Surveillance System. *Prev Chronic Dis* 2021;18:200352.



18%
16%
14%
12%
10%
8%
6%
4%
2%
0%

Hispanic/Latino
Poverty Rate
<HS education
Unemployment rate

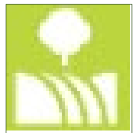
Rural Urban

Patient Profile

90% at or below 200% federal poverty level

56% identify as racial or ethnic minority

39% uninsured



33,742 rural Utahns

7,651 agricultural workers

8,355 persons experiencing homelessness

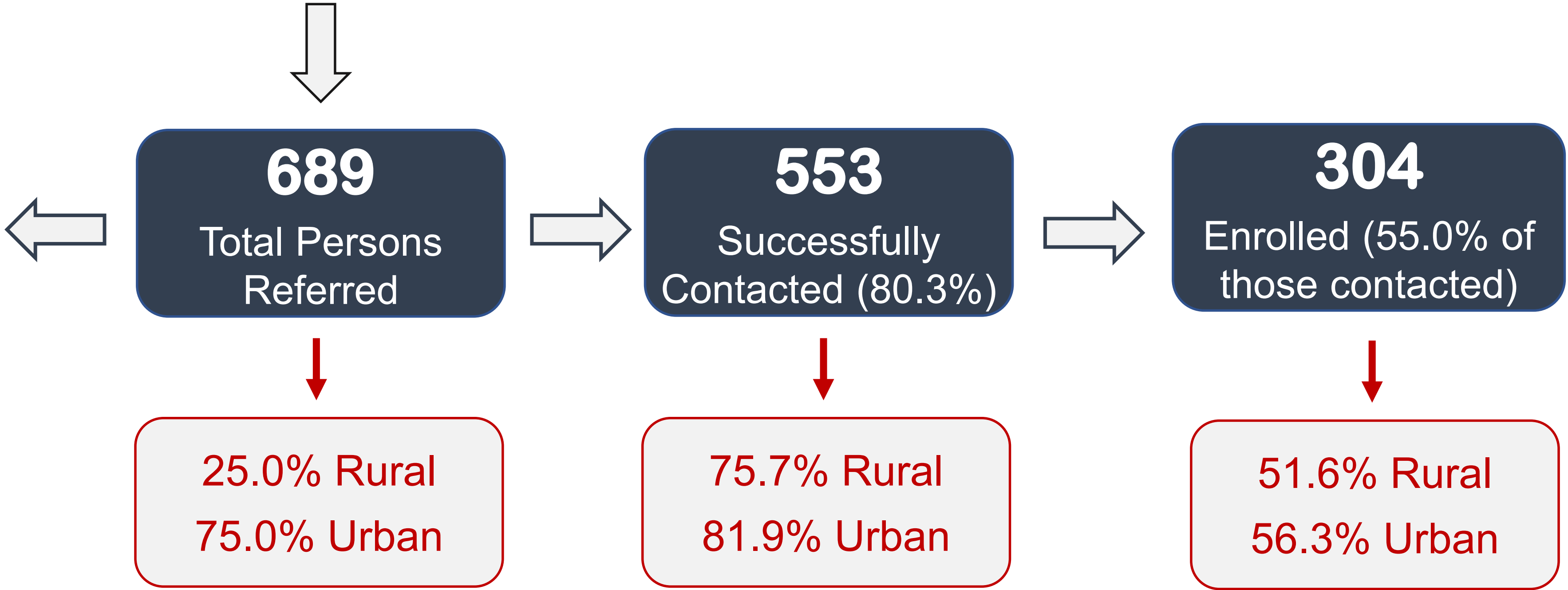
Fourth Street Clinic — Homelessness hurts. Health care helps.
Midtown Community Health Center
HealthWest
CHC Community Health Centers, inc.
Mountainlands Family Health Center
UtahPartners for Health — Mid-Valley Health Clinic — Providing Access to Healthcare to Those in Need
Carbon Medical Service Association, Inc.
Green River Medical Center — We care for you — Founded 1959
Enterprise Valley Medical Clinic
Family Healthcare
Wayne Community Health Centers, Inc.
UNHS

Box Elder, Cache, Rich, Weber, Morgan, Davis, Salt Lake, Summit, Daggett, Tooele, Wasatch, Duchesne, Uinta, Utah, Juab, Carbon, Sanpete, Millard, Emery, Grand, Sevier, Beaver, Piute, Wayne, Iron, Garfield, San Juan, Washington, Kane

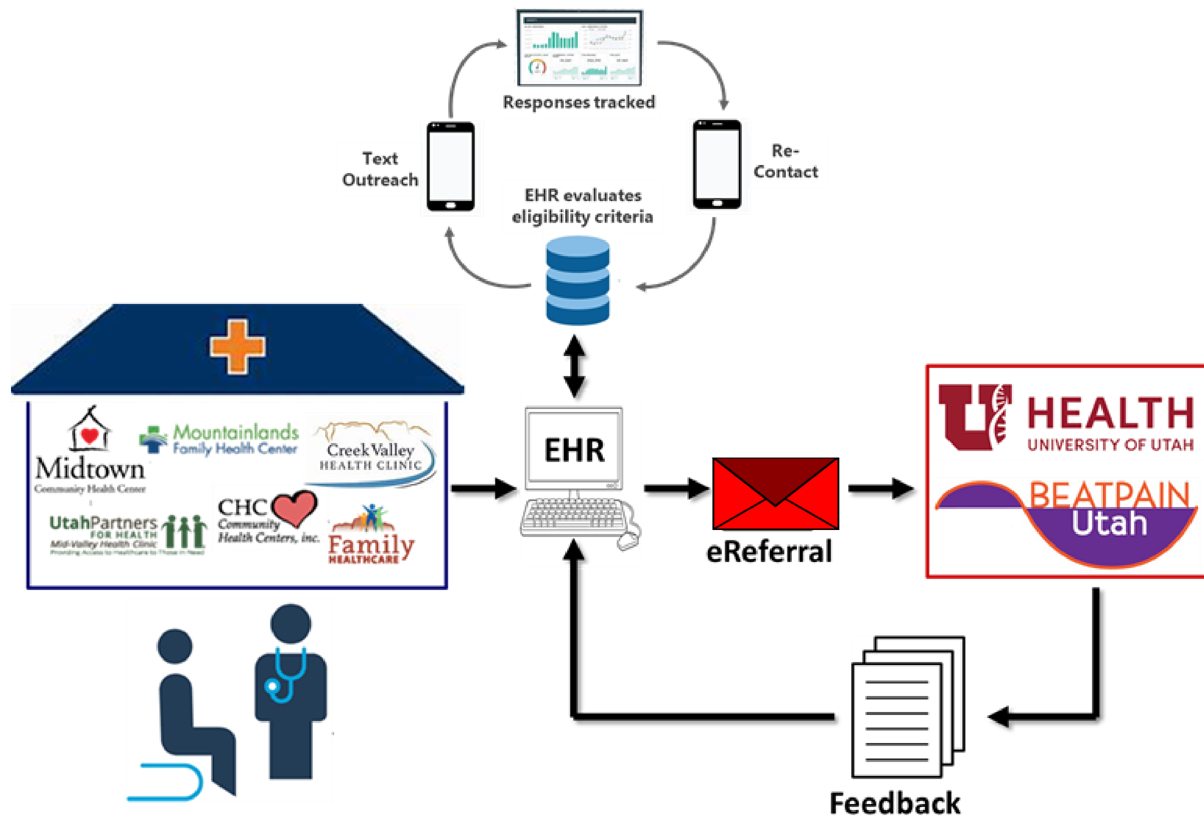
Providing a nonpharmacologic option for persons with chronic back pain using telehealth

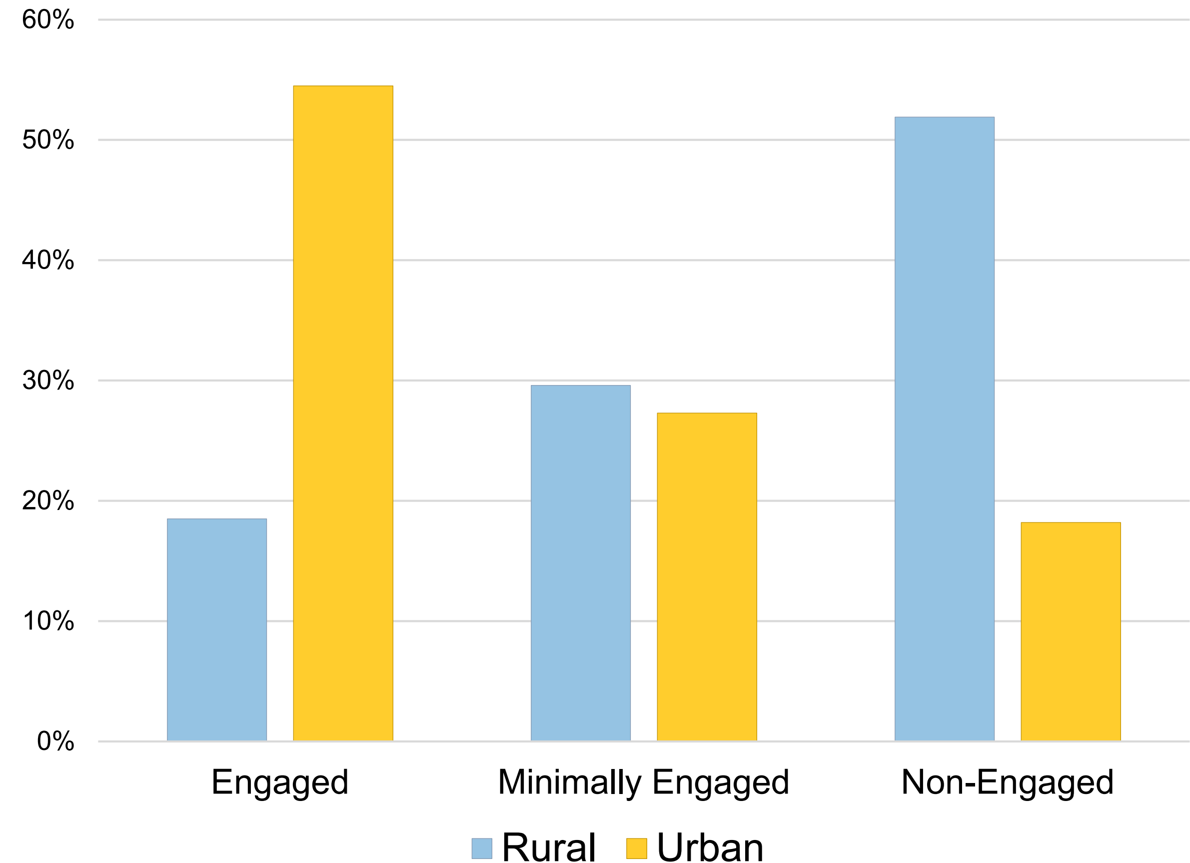
Providing a nonpharmacologic option for persons with chronic back pain using telehealth

	Rural	Urban
Age	52.0 (13.8)	51.5 (12.4)
Female	63.6%	63.6%
Hispanic/ Latino	22.2%	63.0%
SDoH (ADI>8)	66.7%	43.4%



Providing a nonpharmacologic option for persons with chronic back pain using telehealth





Some Lessons Learned

- ✓ Engaging rural clinics has proven more challenging than engaging rural participants
  - Resource and staffing issues disproportionately impact rural settings
  - Communication is more fragmented
- ✓ Unique perspectives on health care and telehealth among rural clinicians and patients
  - Importance of familiarity in patient-provider relationships
  - Concerns with privacy and confidentiality
  - Resourcefulness, frugality, partiality for self-reliance

Coombs, N.C., Campbell, D.G. & Caringi, J. A qualitative study of rural healthcare providers' views of social, cultural, and programmatic barriers to healthcare access. *BMC Health Serv Res* 22, 438 (2022).

Pullyblank K. A Scoping Literature review of rural beliefs and attitudes toward telehealth utilization. *West J Nurs Res*. 2023;45(4):375-384.

University of Utah

- Tom Greene
- Jincheng Shen
- Nora Fino

Biostatistics

- Kelly Lundberg

Psychiatry

- Guilherme Del Fiol
- Bryan Gibson
- Leticia Stevens

Biomedical Informatics

- Julie Fritz
- Anne Thackeray

Physical Therapy

AUCH

- Alan Pruhs
- Courtney Dinkins

Leadership

- Tracey Siaperas

Care Coordination

- Shlisa Hughes

Quality Improvement

Center for HOPE

- David Wetter

Director

- Melissa Hall Yack

Community Engagement

- Jennyfer Morales

Program Management

BeatPain Team

- Adrianna Romero
- Juliemar Medina
- Dania Iniguez

Research Staff

- Isaac Ford
- Laura Vinci de Vanegas
- Kate Addis
- Cynthia DeFrancesco
- Juan Paz Delgado
- Whitney Rokui

Physical Therapists

Duke University

- Adam Goode

Physical Therapy

ARBOR TELEHEALTH

Advancing Rural Back Pain Outcomes through Rehabilitation Telehealth (ARBOR-Telehealth)

MPIs: Richard L. Skolasky, ScD; Kevin McLaughlin, DPT

Funded by National Institute of Arthritis and Musculoskeletal and Skin Diseases (UG3AR083838)

Overview

ARBOR TELEHEALTH

Low Back Pain (LBP)

- Most common cause of disability in the US
- Largest driver of US healthcare spending growth
- Number one reason for opioid prescriptions

Physical Therapy (PT)

- First line treatment
- Cost-effective in reducing disability and pain
- Decreased risk of opioid use
- 7-13% of patients attend PT
  - Barriers surrounding travel, missed work time, etc.

Overview

ARBOR TELEHEALTH

Rural Communities

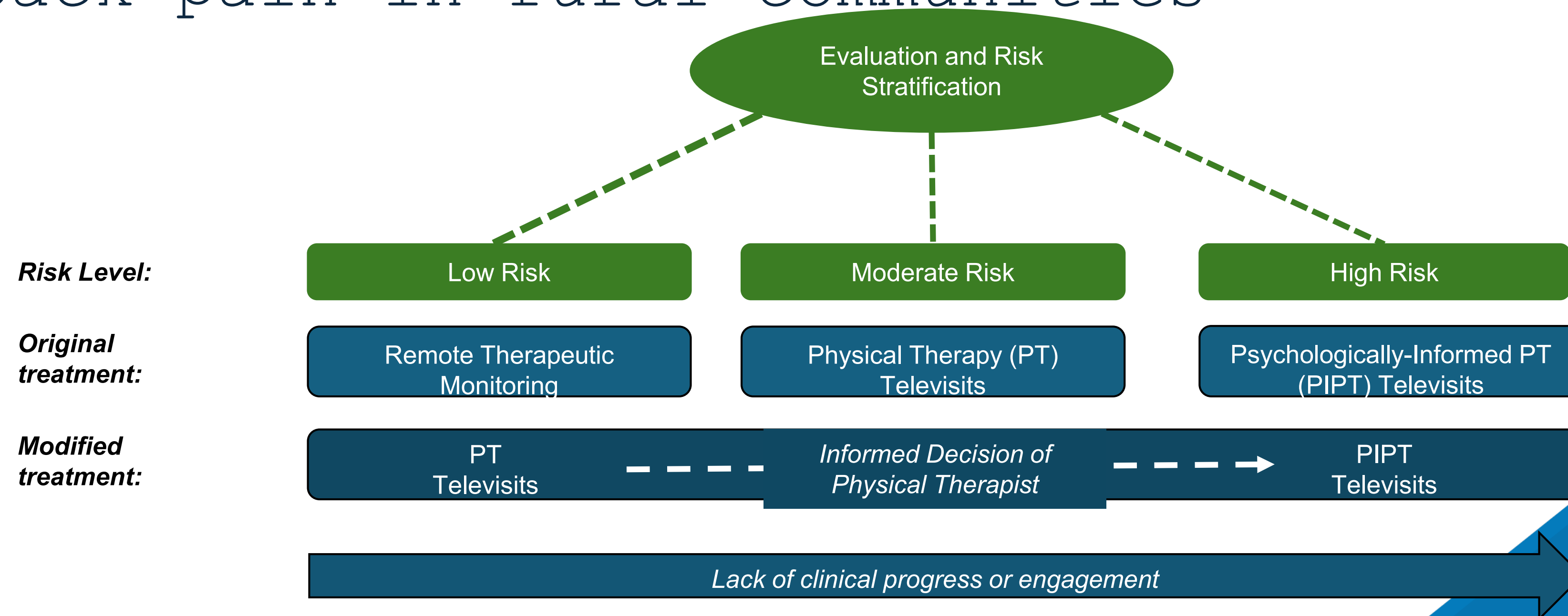
- 40% fewer therapists per capita
  - Longer distance to travel
- Fewer patients attend PT within 30 days of onset
- Higher rates of opioid use

Telehealth

- PT provided by televisits for first time during pandemic
- Reimbursed by CMS and most commercial insurances
- New code for remote therapeutic monitoring (RTM)
  - Asynchronous telerehabilitation using

Overall Objective

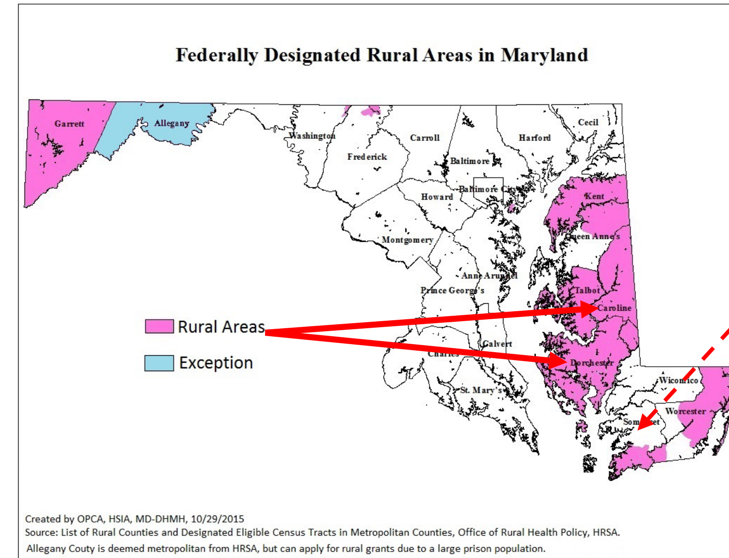
- To compare the effectiveness of a risk-informed telerehabilitation model to patient education to improve outcomes in patients with chronic low back pain in rural communities



ARBOR TELEHEALTH

Study Design

- Randomized clinical trial
  - RiSC Telerehabilitation
    - Delivered by TidalHealth
  - Patient Education
    - Delivered via website
- Patients
  - 434 with chronic LBP
    - No spine surgery past 12m
    - Primary care office visit
  - 8 weeks active treatment
  - 12 months follow-up



Nearest PT Clinic

Caroline County, MD

- *33,593 (pop'n est. 2023 Census)*
- *80.7% White, 13.8% Black, 8.9% Hispanic*
- *17.7% Age 65+ years*

Dorchester County, MD

- *32,897 (pop'n est. 2023 Census)*
- *66.4% White, 29.2% Black, 6.4% Hispanic*
- *23.1% Age 65+ years*

ARBOR TELEHEALTH

Potential Facilitators

Recruitment Strategy

- Eligible population
  - Adults (18+ years)
  - Present to primary care with diagnosis of back pain in last 90 days
  - ODI $\geq$ 24%
  - Pain NRS $\geq$ 4/10
- Established relationship with primary care clinic
- EHR based recruitment and fidelity assessment

Treatment Strategy

- Internet-based treatment
  - Broadband stipend ($25/month during active treatment)
- Logistically flexible
  - No need to travel to clinic
- Materials provided
  - Home exercise equipment (e.g., mat and bands)

Potential Barriers

ARBOR TELEHEALTH

Recruitment Strategy

- Patient may not be actively seeking treatment for back pain
  - Build rapport; Identify burden of back pain; Discuss treatment options
- Recruitment by Hopkins team – lack of trust with population
  - Partnership between Tidalhealth and JH
  - Consistent branding ARBOR-Telehealth in all communications
  - Treatment provided by

Recruitment Strategy

- EHR-based strategy
  - Technical challenges of sFTP transfer on monthly/daily basis
  - Epic programming team at partner institution

Potential Barriers

Treatment Strategy

- Internet-based treatment
  - Limited broadband access in rural communities
    - >90% household w/computer
    - ~85% household w/Internet
- Space needs
  - RC works to identify needs and provide solutions in advance
- Technical proficiency
  - RC walk through process in advance of first appointment

- Provider familiarity
  - Limited experience with delivery of telehealth visits
    - Will address with provider training
  - Limited experience with psychologically informed physical therapy
    - Will address with provider training

ARBOR TELEHEALTH

Community Engagement

Local Partners

- Tidalhealth
  - Research partner
  - Involved in development and implementation of program
- Maryland Rural Health Association
  - Community-based partner
  - *Educating and advocating for optimal health and wellness of rural communities and residents*

Stakeholder Interviews

- Mixed-methods approach
  - Surveys
    - Burden of back pain
    - Experience with PT
    - Perspectives on Televisits
  - Interviews
    - Patients, Primary Care, Physical Therapy, Organizational Stakeholders

Study Team

ARBOR TELEHEALTH

- Johns Hopkins
  - Richard L. Skolasky, Sc.D. (MPI)
  - Kevin McLaughlin, D.P.T. (MPI)
  - Elizabeth Colantuoni, Ph.D.
  - Stephen Wegener, Ph.D.
  - Tricia Kirkhart
- MedStar Health Research Institute
  - Kisha Ali, Ph.D.
- TidalHealth
  - Robert Joyner, Ph.D.
  - Jill Stone, D.P.T.
  - M. Patricia Chance, CRRC
  - Terri Hochmuth, D.N.P., M.S.N.-Ed, R.N.
- Maryland Rural Health Association
  - Jonathan Dayton, Director

Adapting and Implementing a Nurse Care Management Model to Care for Rural Patients with Chronic Pain (AIM-CP): *Lessons and Challenges Engaging Rural Populations*

Co-PIs: Sebastian Tong, MD, MPH; Kushang Patel, PhD, MPH

NIH Collaboratory Steering Committee Annual Meeting

May 9, 2024

UW Medicine
FAMILY MEDICINE

DISCLAIMER

- I live in a city of 4 million people

Our team

Investigative Team

- Kushang Patel, PhD, co-PI (gerontologist, epidemiologist, exercise expert)
- Dennis Ang, MD (rheumatologist, North Carolina site PI)
- Laura-Mae Baldwin, MD (practice-based research)
- Basia Belza, PhD, RN (nurse co-investigator, community engagement)
- Andrew Humbert, PhD (biostatistics)
- Tom Ludden, PhD (informatics)
- Stacy Shaw, PhD (clinical psychologist)
- Kari Stephens, PhD (clinical psychologist)
- Mark Sullivan, MD, PhD (pain specialist)
- Hazel Tapp, PhD (practice-based research)

Partners

- Atrium Wake Forest Health
- Clearwater St. Mary's: Kelly McGrath, MD
- Healthwest: John Holmes, PharmD
- Providence Northeast: Caleb Holtzer, MD
- Rural Resources: Cheri Peterson

Research Team

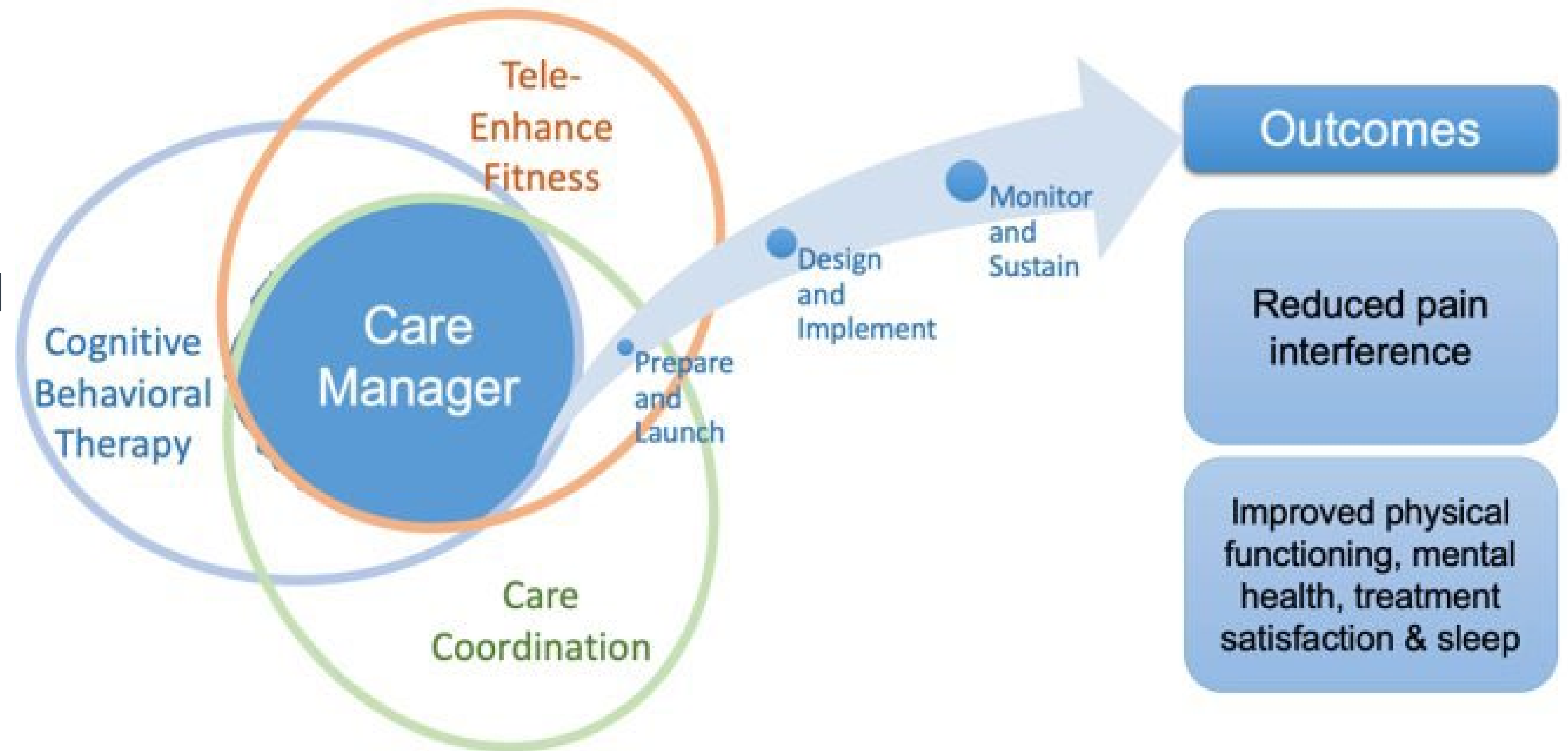
- Karina Cortez, BS
- Elise Hoffman, MPH
- Brennan Keiser, MSW
- Ajla Pleho, MPH

Overall Objective

- To adapt and test a nurse care management model to provide comprehensive care for patients with chronic pain in rural communities
- Long-term: reduce geographic disparities in pain-related outcomes through dissemination of this comprehensive approach to chronic pain management

Care Management Model

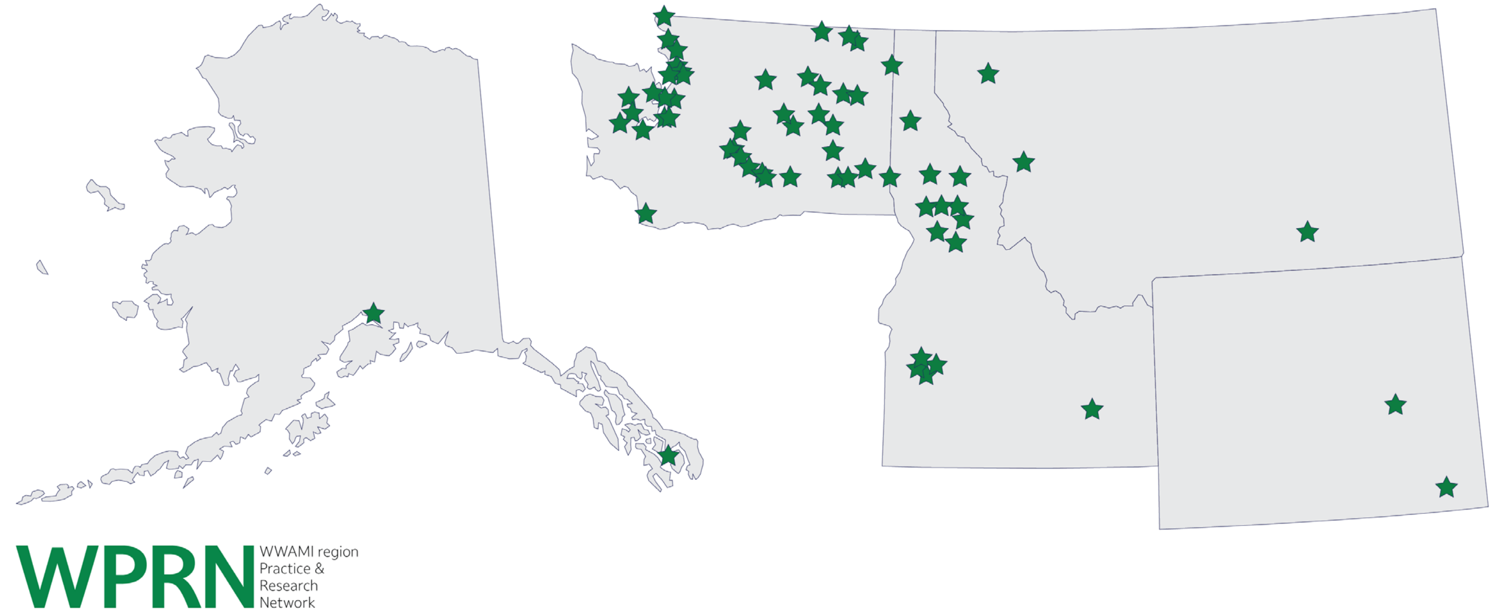
1. Care Coordination
2. Cognitive Behavioral Therapy
3. Remotely delivered *Enhance Fitness* exercise program

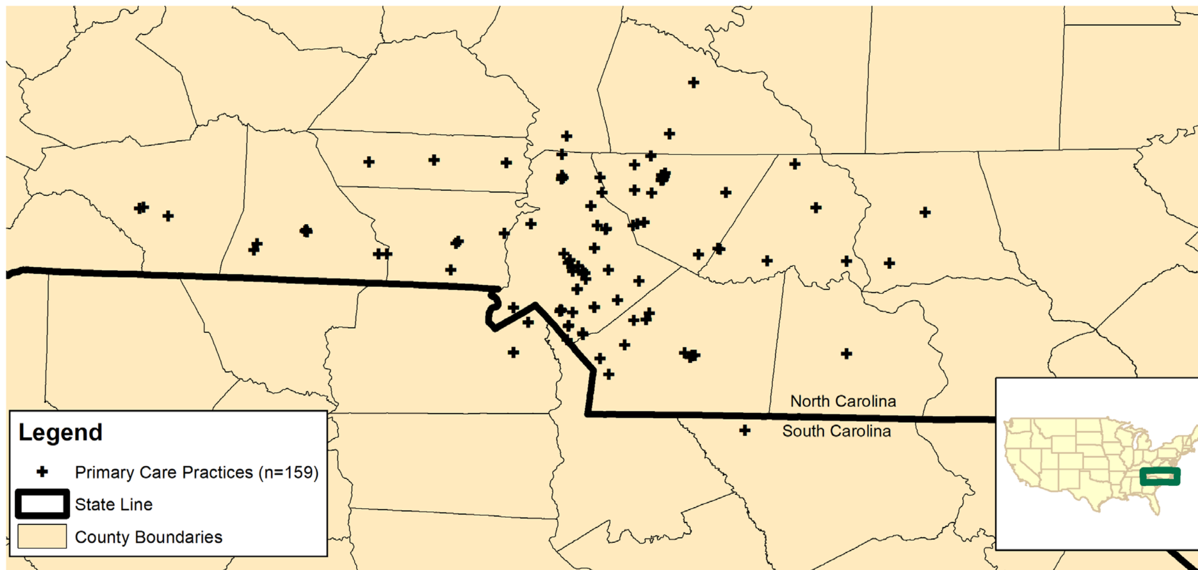


Intervention components

Individual component	Description
Care Coordination	• Assessing patients for social service, behavioral health and specialty care needs • Linking patients with community resources • Tracking and supporting patients when care received outside health system • Coordinating behavioral health and specialty care • Using PainTracker to develop goals of care, track progress and refine treatment plans
Cognitive Behavioral Therapy	• 6-10 weekly to every other week sessions with care manager to develop strategies to change maladaptive cognition and behaviors around pain
Tele-Enhance Fitness	• Instructor-led, group exercise program for 1-hour, 2-3 times weekly remotely delivered program

Settings





Challenges and Proposed Solutions

Category	Challenge	Proposed Solutions
Workforce	Nursing workforce shortage	• Flexibility in care manager background
	Overall workforce shortage	• Defer site participation • Discuss intervention as strategy to alleviate workforce shortage
Trust / Polarization	Urban-rural divide	• Use local staff for most contact • Staff and investigators who represent or understand rural issues • Build on existing relationships
	Framing of research outcomes / variables / interventions (e.g. CBT -> ”in your head”; gender vs. sex)	• Open listening / discussion • Build on existing relationships
Regulatory	Lack of familiarity	• Open discussions / conversations
	Different expectations	• Flexibility in trial design, identifying core elements of intervention

THANK YOU!

- National Institute of Nursing Research (UG3NR020930)
  - Karen Kehl, PhD, RN, FPCN
  - Alexis Bakos, PhD, MPH, RN

Sebastian Tong MD MPH

setong@uw.edu

UW Medicine
FAMILY MEDICINE

Reaching Rural Veterans: Applying Mind-Body Skills for Pain Using a Whole Health Telehealth Intervention (RAMP)

Katie Hadlandsmyth, PhD
Associate Professor
Department of Anesthesia
Carver College of Medicine
University of Iowa

Disclosures

- No relevant financial relationships to disclose.
- Off-label use will not be discussed in this presentation.
- Funding from the National Institute of Nursing Research (NINR), as part of the NIH HEAL Initiative (1UG3NR020929-01), with resources from the Minneapolis VA Health Care System and Iowa City VA Health Care System.
  The views expressed in this talk are those of the authors and are not necessarily endorsed by the NINR, NIH, U.S. Department of Veterans Affairs, or the United States Government.

RAMP

Acknowledgements

Co-PIs: Diana Burgess, PhD and Roni Evans, DC, PhD

Research Team: Co-Investigators: Robin Austin, John Ferguson, Alex Haley, Brent Leininger, Marianne Matthias, Brent Taylor, Stephanie Taylor; Consultant: Greg Serpa

Project staff: Ann Bangerter, **Lee Cross**, Emily Hagel Campbell, **Mallory Mahaffey**

Known Barriers for Rural Veterans Utilizing CIH for pain

- Lack of awareness and knowledge among clinicians and patients
- Need for clinician referral
- Support to successfully engage in CIH self-management
- Demand for CIH providers often outstrips supply
- Lack of availability of CIH/Whole Health pain care services outside of main VA medical centers

Rural Veterans: Applying Mind-Body Skills for Pain (RAMP)

Goal: To improve pain management and reduce opioid use among rural patients in the VA healthcare system

- The RAMP program is a cohesive, scalable multi-component CIH intervention that addresses Veterans' needs and overcomes existing barriers to pain care
- RAMP is designed to be implemented within the VA through its nationwide Whole Health System initiative
- We will collaborate with Veteran patients, VA health system partners, and Veteran serving community partners

RAMP Study Overview

Phase 1 UG3 (2 years): **Engagement activities** including developing & working with multi-level advisory panels (n = 35-50) & pilot study (n = 40)

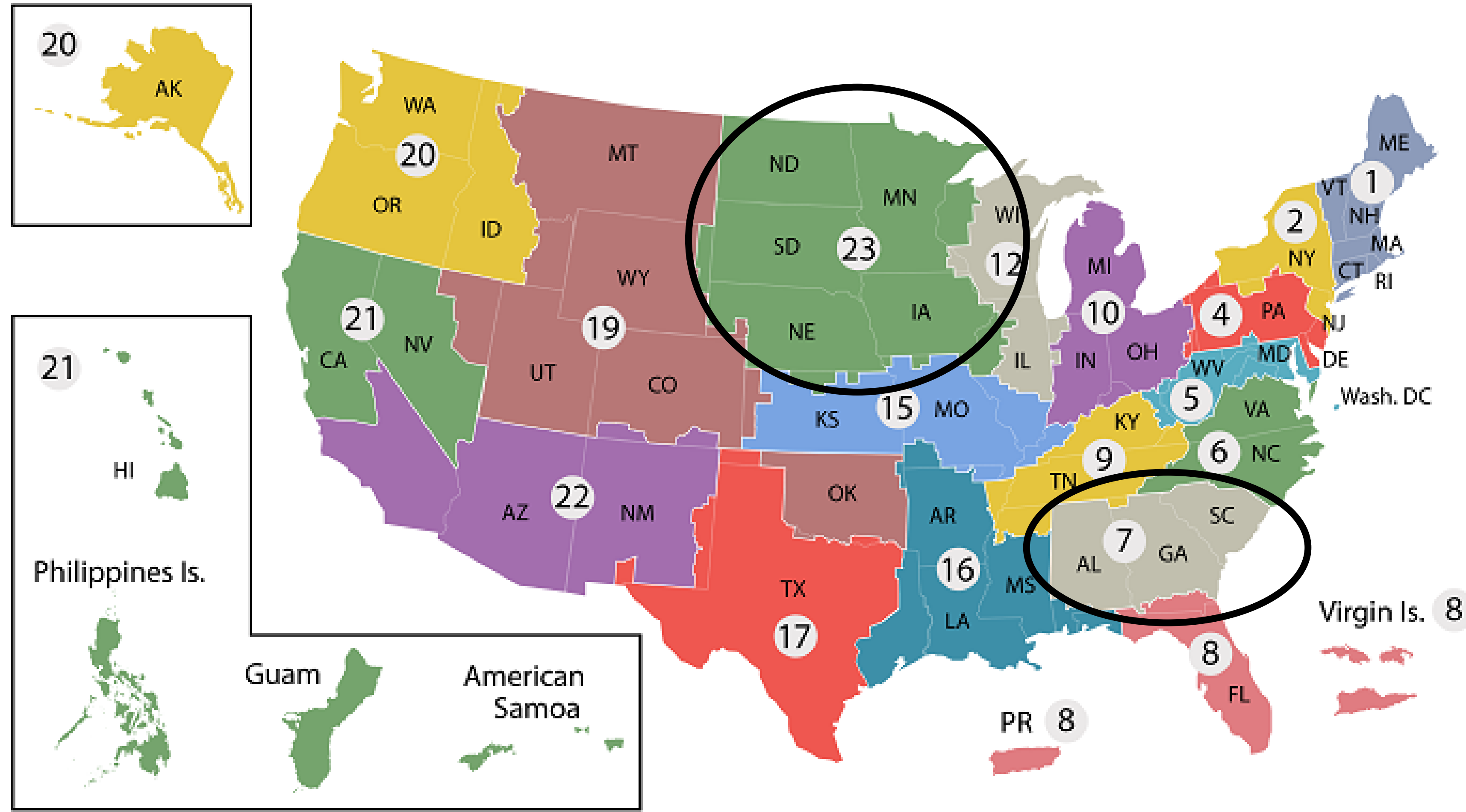
Phase 2 UH3 (3 years): **Hybrid Type II Effectiveness Implementation Pragmatic Clinical Trial**

1. Assess **effectiveness** of cohesive mind-body intervention delivered by Whole Health coaches via telehealth (RAMP), at improving pain and secondary outcomes among rural VA patients with chronic pain (n = 500)

2. **Implementation**. Work iteratively with multiple levels of advisors (patients, community partners, VA healthcare system leaders and staff; n = 35-50) to co-develop, evaluate intervention implementation strategies used in the trial and adapt these strategies to scale up RAMP within the national VA healthcare system
   a. **Mixed-methods assessment** of facilitators/barriers, RAMP use, etc.
   b. **Co-creation** of plausible implementation strategies to scale up RAMP
   c. **Budget impact analysis**

RAMP

Recruiting from VISN 23 and VISN 7



Advisor Engagement Plan

Patient Partners

- RAMP Engagement Panel and other ongoing Veteran Engagement Panels

Community Partners

- Non-VA Community Organizations (VFWs, American Legions, national organizations serving marginalized groups, etc.)

VA Health Care System Partners

- National VA Program Office Leaders
- VA Medical Center Leaders & Staff
- VA Community Based Outpatient Clinics

Patient and Community Organization Panels

Community Advisor Panel (CAP)

- Alaska Veterans Organization for Women (AVOW: Alaska)
- The Unquiet Professional (National)
- Invisible Wounds Project (Minnesota)
- The Warrior Alliance (Georgia)
- Alabama Veteran (Alabama)
- Veteran and Military Support Alliance (Maryland)

Veteran Engagement Panel (VEP)

- 11 Veterans confirmed
  - 1 tentative (max: 12)
  - 55% women
  - 45% from minoritized racial and ethnic groups
  - Range of ages (36 – 74)
  - Range of geographic locations

RAMP

Internal Advisors- National to Local

- Whole Health
  - Building the infrastructure for WH coaches to deliver RAMP
  - National approval and local buy-in
- Pain Management
  - National approval
  - Connection with local programs (e.g., Telepain)
- Office of Rural Health
  - National support
  - Local resources (e.g., GROVE)

RAMP

Discussion Question

1. What are some creative strategies for enhancing participation rates among representatives from community organizations, to participate in an engagement panel?

This has been a challenge for our study, and we have tried:

- Using our Veteran/patient experts to connect us with organizations
- Casting a wide net and reaching out to a lot of organizations
- Referrals from participating organizations to other organizations

Questions