Annual CAIRIBU Meeting
Crossing the Disciplinary Divide

The impact equation: Relative reach and efficacy of continence promotion efforts

Heidi Wendell Brown, MD, MAS, FACOG

December 4, 2020

DISCLOSURES

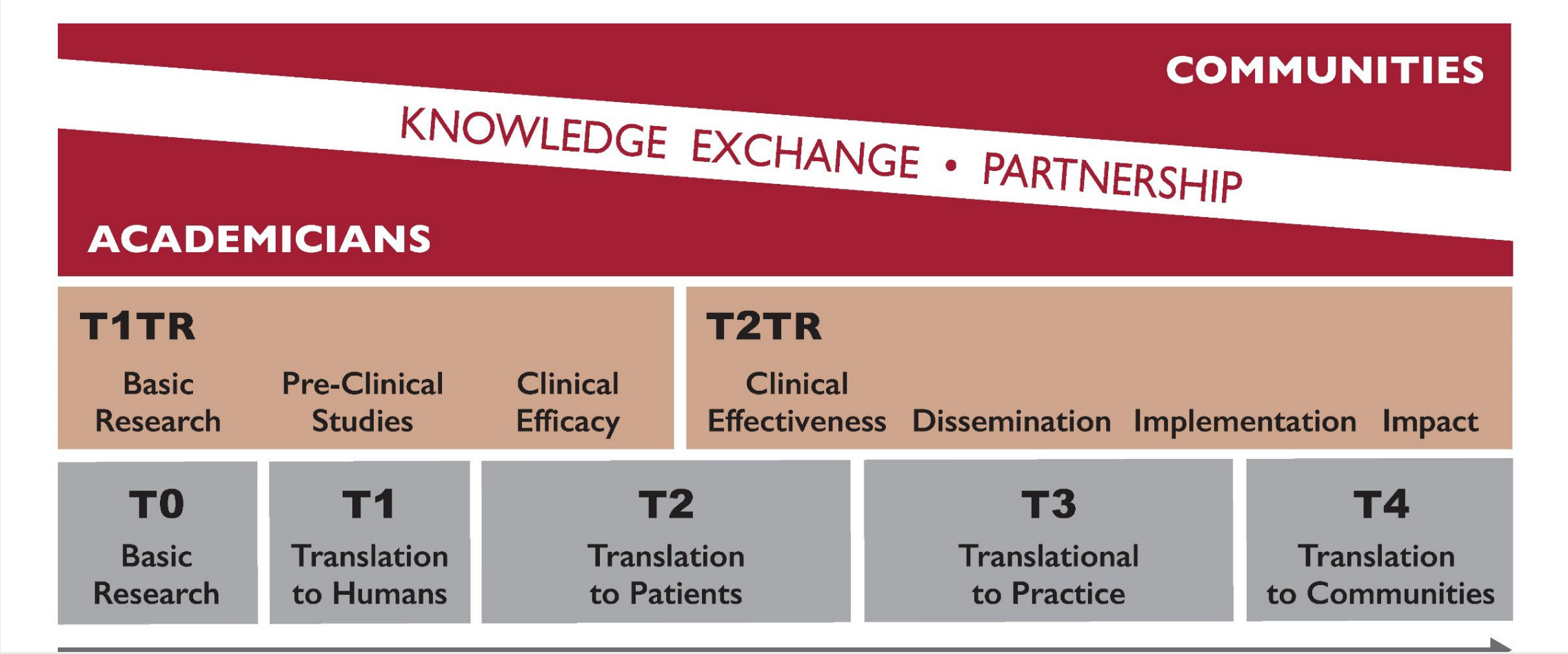
Recent Research Funding

- NIDDK (1U01DK106786) PLUS Consortium Pilot
- Wisconsin Partnership Program PERC Award (233 PRJ 25DJ)
- NIH CTSA (5UL RR025011) / NHLBI (1 RC2 HL101468)
- NIDDK (NIH K12DK100022)
- UW Institute for Clinical and Translational Research (ICTR) pilot

Financial relationships / Affiliations

- Consultant for Grand Rounds, Inc.
- Royalties from Up to Date, Inc. (Wolters-Kluwer, Inc.)
- Editorial board: Female Pelvic Medicine and Reconstructive Surgery

Translational Research Continuum



https://ictr.wisc.edu/what-are-the-t0-to-t4-research-classifications/

The gap between research and practice

The U.S. spends $130 billion annually on health research.

But it takes an average of **17 years** to translate 14% of original research into benefits for the public.

Slide courtesy of Melody Bockenfeld & Jane Mahoney

Most proven interventions do not get implemented.

One of our greatest challenges to achieving improved health for the public is closing the

gap between:

- What we know works to improve health
- And what we actually implement in community and clinical settings

Slide courtesy of Melody Bockenfeld & Jane Mahoney

Why doesn’t discovery → use?

- Intervention not ready for broad dissemination
- End users not aware of intervention
- Intervention not formatted for end-users
- Resources / infrastructure not in place to promote dissemination and maintenance

Dissemination & Implementation Lens

Impact = Reach x Efficacy

Impact = Effectiveness x Dissemination x Maintenance

Glasgow RE, et al. Evaluating the impact of health promotion programs: using the RE-AIM framework to form summary measures for decision making involving complex issues. Health Educ Res. 2006 Oct;21(5):688-94. Epub 2006 Aug 31.

Incontinence is a big problem.

More than 60% of women over 65 years old have bladder or bowel incontinence.

Increases risk for falls, nursing home placement, social isolation & depression.

Most women do not seek care.

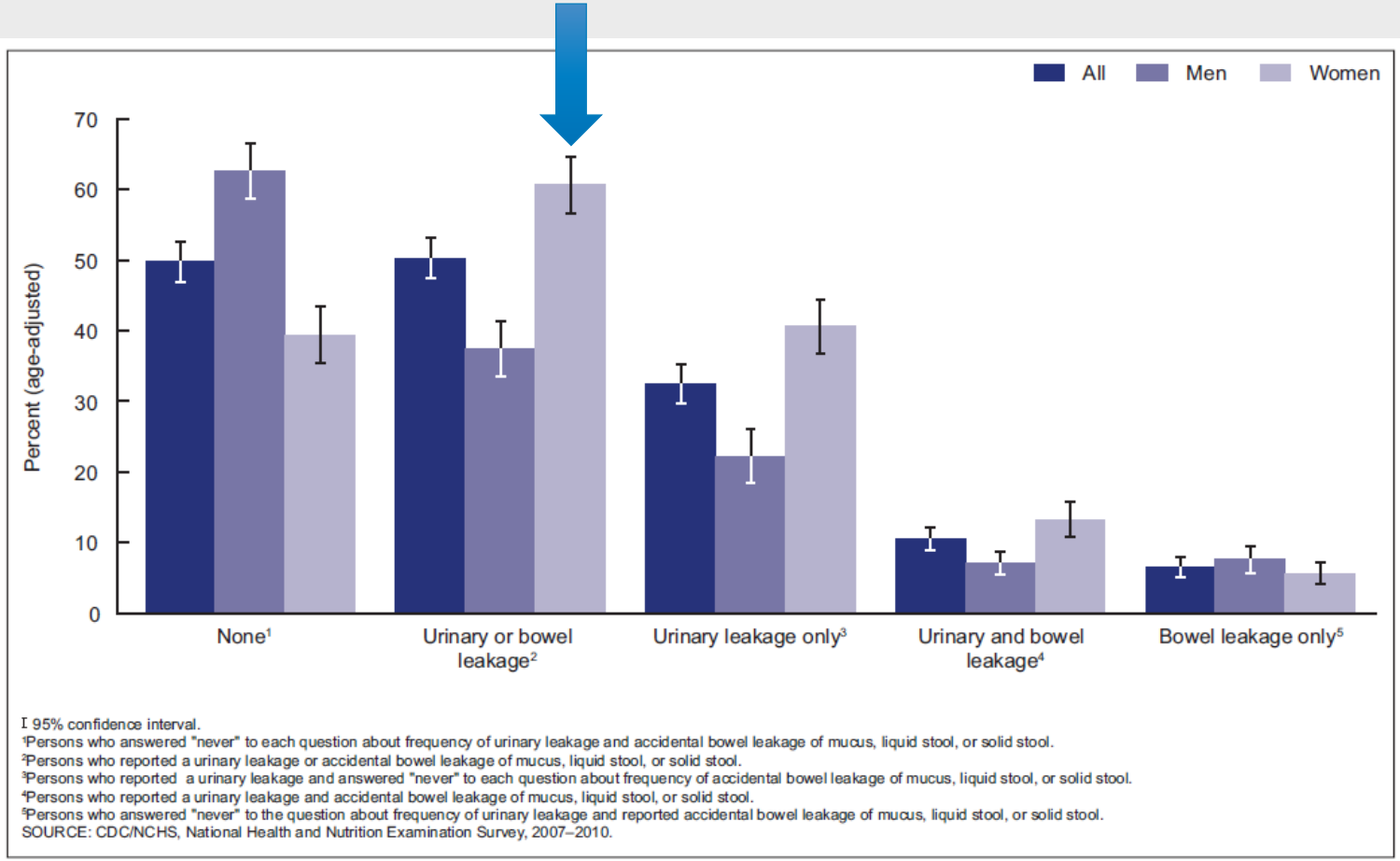
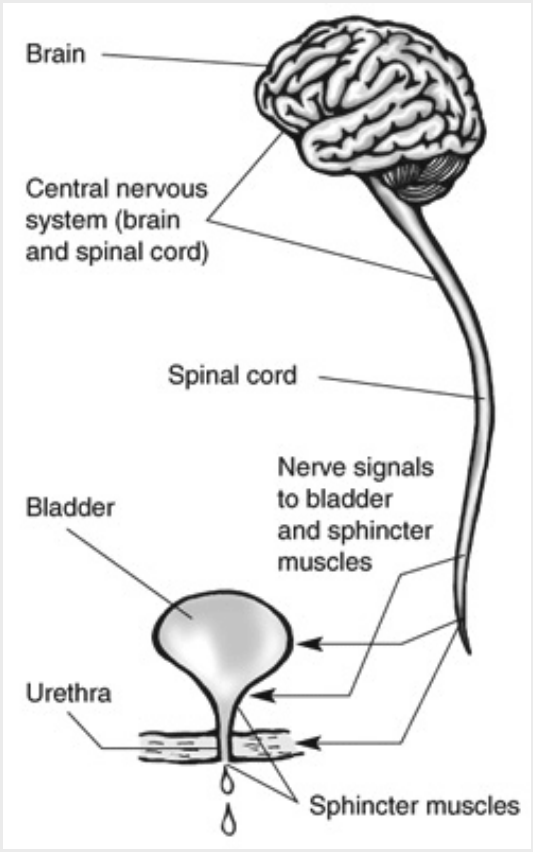


Figure 1. Age-adjusted incontinence among noninstitutionalized persons aged 65 and over, by type of incontinence and sex: National Health and Nutrition Examination Survey, 2007–2010

Gorina Y, et al. Vital Health Stat. 2014;3(36):1-24.

Effective solutions exist.



Classes that promote behavior change work.

https://www.ncoa.org/healthy-aging/chronic-disease/

Not syncing

Falls Prevention | Chronic Disease Management | 100 Million Healthier Lives | Senior Hunger & Nutrition | Aging Mastery®

Chronic Disease Management

Helping seniors manage their chronic conditions

Find a workshop near you | Go

Homepage > Healthy Living > **Chronic Disease Management**

182

Diabetes, arthritis, hypertension, lung disease. Chronic diseases like these can force seniors to give up their independence too soon. We distribute proven programs in-person and online that empower individuals to manage their own care and improve their quality of life.

2004: Bladder health classes work!

0022-5347/04/1713-1165/0
THE JOURNAL OF UROLOGY®
Vol. 171, 1165–1171, March 2004
Printed in U.S.A.
DOI: 10.1097/01.ju.0000111503.73803.c2

PREVENTION OF URINARY INCONTINENCE BY BEHAVIORAL MODIFICATION PROGRAM: A RANDOMIZED, CONTROLLED TRIAL AMONG OLDER WOMEN IN THE COMMUNITY

ANANIAS C. DIOKNO,* CAROLYN M. SAMPSELLE, A. REGULA HERZOG, T. E. RAGHUNATHAN, SANDRA HINES, KASSANDRA L. MESSER, CINDY KARL AND MARIA CLAUDIA A. LEITE

From the Department of Urology, William Beaumont Hospital (ACD, CK), Royal Oak and School of Nursing (CMS, SH) and Institute for Social Research (ARH, TER, KLM, MCAL), University of Michigan, Ann Arbor, Michigan

Why isn’t incontinence on this list?

https://www.ncoa.org/healthy-aging/chronic-disease/

Not syncing

Falls Prevention | Chronic Disease Management | 100 Million Healthier Lives | Senior Hunger & Nutrition | Aging Mastery®

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Diabetes, arthritis, hypertension, lung disease. Chronic diseases like these can force seniors to give up their independence too soon. We distribute proven programs in-person and online that empower individuals to manage their own care and improve their quality of life.

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K12 (2014 – 2019)

To assess feasibility of an evidence-based bladder continence promotion program adapted to:

- Target both bladder and bowel symptoms
- Be implemented by community members rather than healthcare professionals

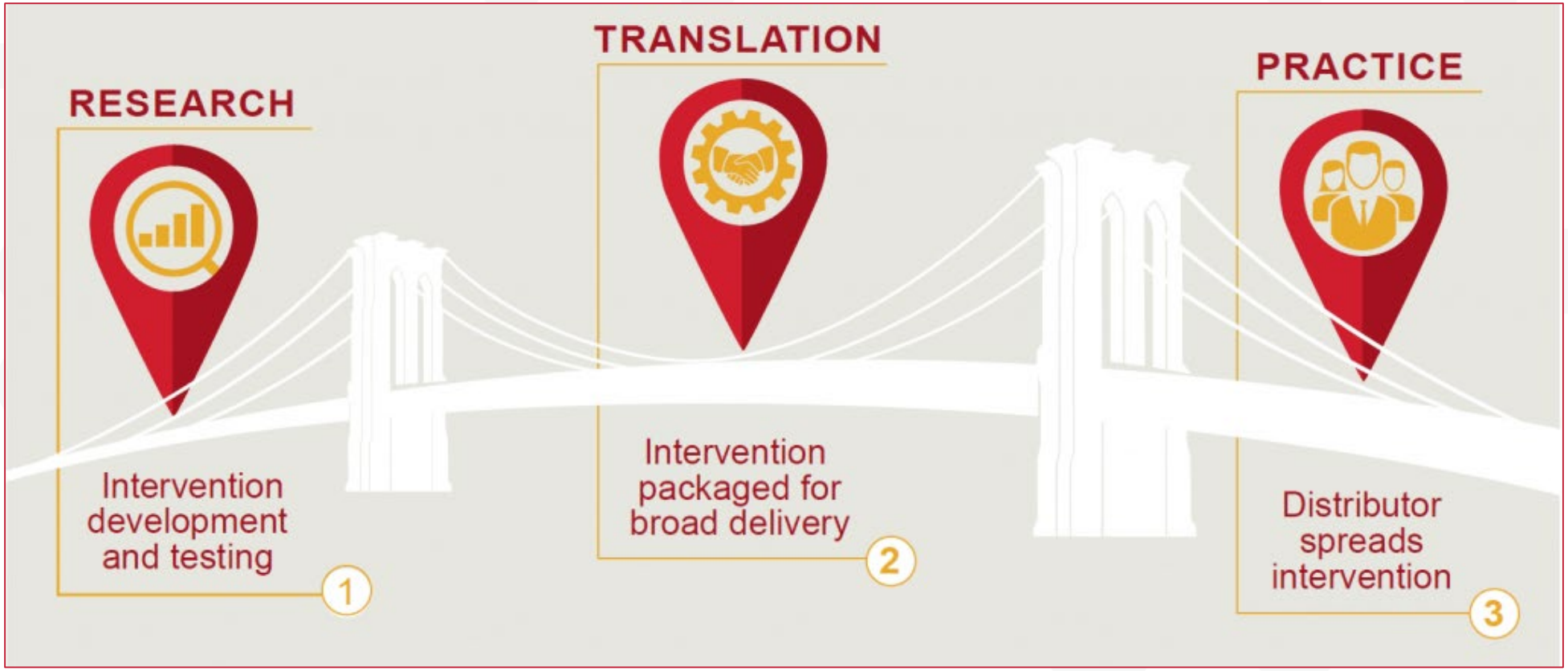
Harness existing dissemination infrastructure (WIHA)

wiha
Wisconsin Institute for Healthy Aging

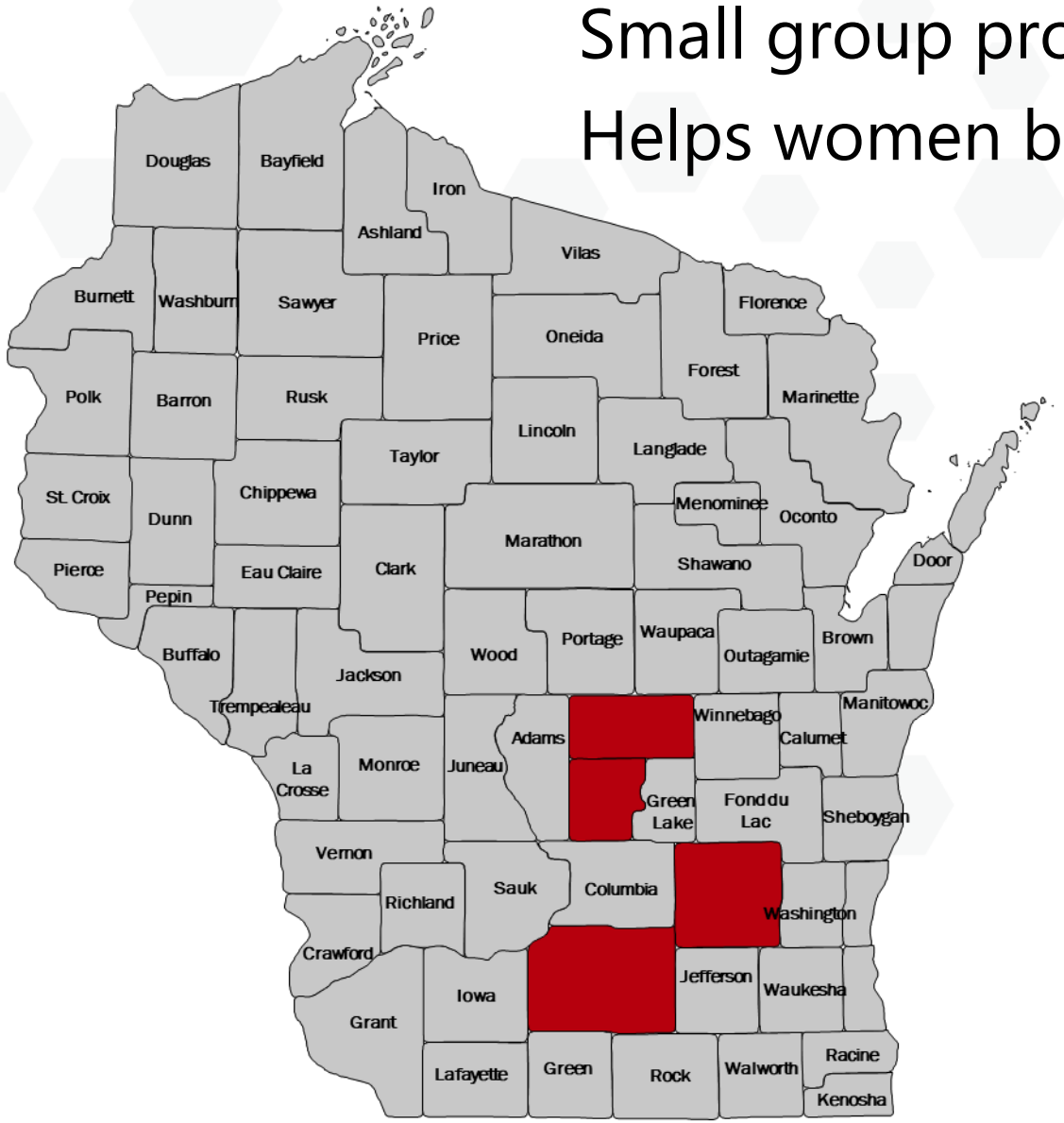
CAARN
COMMUNITY-ACADEMIC AGING RESEARCH NETWORK

Wisconsin Partnership Program
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

NIH



Mind Over Matter: Healthy Bowels, Healthy Bladder

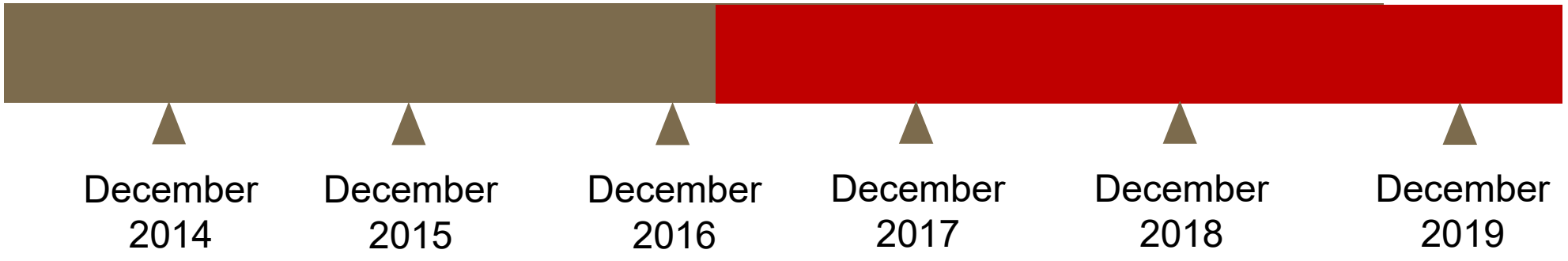


Small group program led by a community member

Helps women build skills and confidence to:

- Change behaviors to improve health
- Support and learn from one another
- Find professional help if needed

FROM 'CAN WE DO IT?' TO 'SHOULD WE DO IT?' AND 'HOW?'



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HYBRID EFFECTIVENESS-IMPLEMENTATION TRIAL

END USERS

- Symptoms
- Behaviors

ADOPTERS

- Implementation fidelity
- Adoption
- Maintenance

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Effectiveness-implementation Hybrid Designs

Combining Elements of Clinical Effectiveness and Implementation Research to Enhance Public Health Impact

Geoffrey M. Curran, PhD, Mark Bauer, MD,† Brian Mittman, PhD,‡ Jeffrey M. Pyne, MD,* and Cheryl Stetler, PhD‡*

Objectives: This study proposes methods for blending design components of clinical effectiveness and implementation research. Such blending can provide benefits over pursuing these lines of research independently; for example, more rapid translational gains, more effective implementation strategies, and more useful information for decision makers. This study proposes a "hybrid effectiveness-implementation" typology, describes a rationale for their use, outlines the design decisions that must be faced, and provides several real-world examples.

Results: An effectiveness-implementation hybrid design is one that takes a dual focus a priori in assessing clinical effectiveness and implementation. We propose 3 hybrid types: (1) testing effects of a clinical intervention on relevant outcomes while observing and gathering information on implementation; (2) dual testing of clinical and implementation interventions/strategies; and (3) testing of an implementation strategy while observing and gathering information on the clinical intervention's impact on relevant outcomes.

Conclusions: The hybrid typology proposed herein must be considered a construct still in evolution. Although traditional clinical effectiveness and implementation trials are likely to remain the most common approach to moving a clinical intervention through from efficacy research to public h… proposed hybrid designs could s… findings into routine practice.

Key Words: diffusion of inno… clinical trials, pragmatic designs

(*Med Care* 2012;50: 217–226)

From the *Central Arkansas Veterans… of Psychiatry, University of Arkan… AR; †VA Boston Healthcare Syst… MA; and ‡Center for Implement… (CIPRS), VA Greater Los Angeles…

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Reprints: Geoffrey M. Curran, PhD, Department of Psychiatry, Division of Health Services Research, University of Arkansas for Medical Sciences, 4301 W. Markham St. #755, Little Rock, AR 72205. E-mail: currangeoffreym@uams.edu.

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Much has been written about the nature of health care science-to-service gaps both in general[1–3] and relative specifically to health promotion[4] and numerous medical specialties.[5–9] Thus far, the literature indicates that gaps between research and practice can result from multiple factors, including educational/knowledge deficiencies and/or disagreements,[10,11] time constraints for practitioners,[12,13] lack of decision support tools and feedback mechanisms,[13] poorly aligned incentives,[14] and a host of other organizational climate and cultural factors.[2,15,16]

In addition to these provider-level and systems-level barriers to rapid translation, Glasgow et al[4] and others[17–20] argue that the time lag between research discovery and routine uptake is also inflated by the dominant developmental approach; that is, one that encourages delimited, step-wise progressions of research through clinical efficacy research, then clinical effectiveness research, and finally implementation research. In addition, it has been suggested that current conceptions of research designs fail to "maximize clinical utility for practicing clinicians and other decision makers"[18]; for example, through a failure to focus on external validity or implementation-related barriers and facilitators to routine use and sustainability of "effective" practices.[4,21,22]

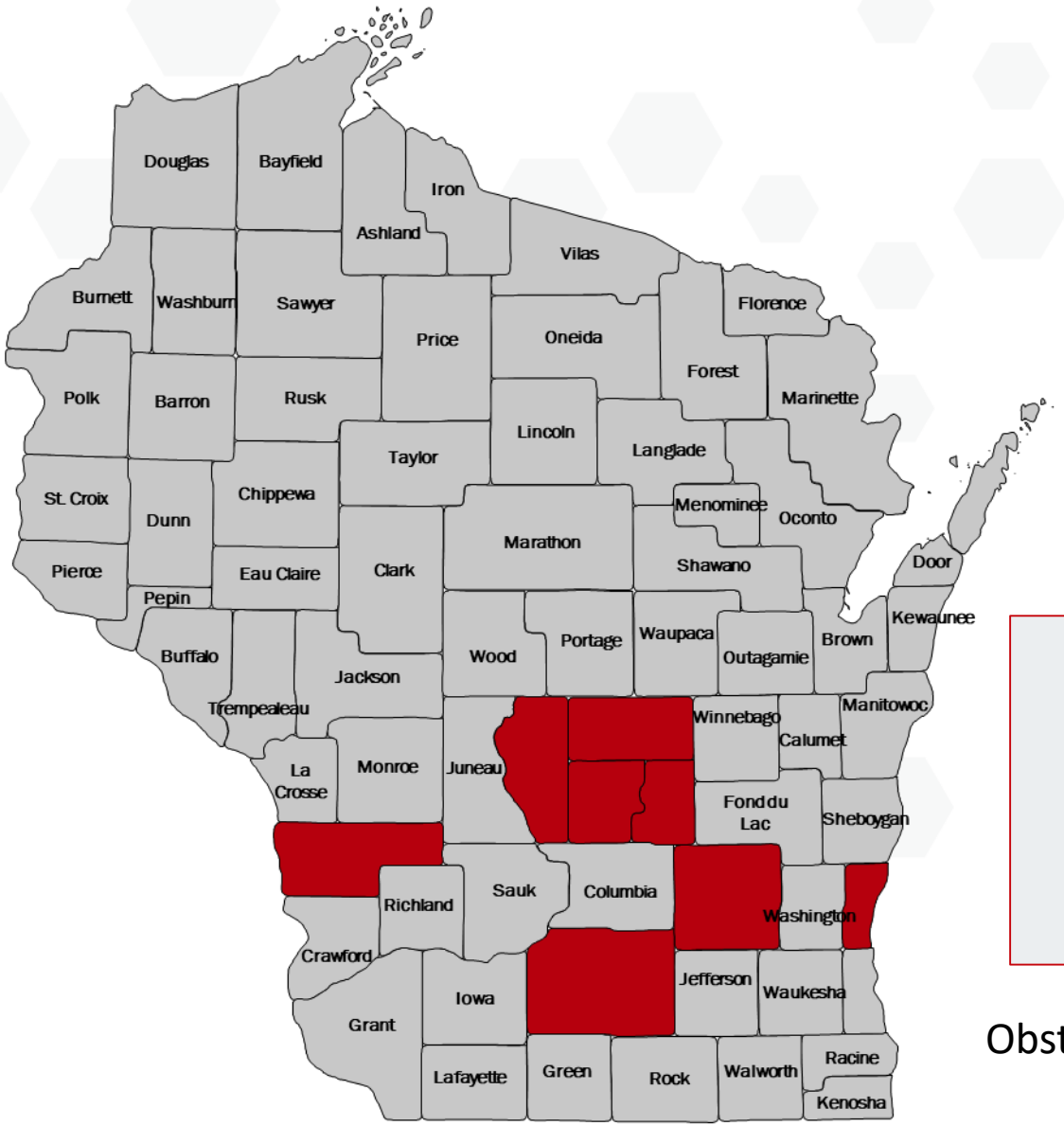
search. We propose that a blending of the design components of clinical effectiveness trials and implementation trials also is feasible and desirable. Such blending can provide benefits over pursuing these lines of research independently; for example, more rapid translational gains in clinical intervention uptake, more effective implementation strategies, and more useful information for researchers and decision makers. This study

hybrid studies to illustrate the concepts.

DEFINING TERMINOLOGY

Terminology in this study has been informed by a glossary provided by the Department of Veterans Affairs Quality Enhancement Research Initiative (VA QUERI)[22];

Aim 1: Effectiveness (It works!)



Urogynecology: *Original Research*

Small-Group, Community-Member Intervention for Urinary and Bowel Incontinence

A Randomized Controlled Trial

Heidi W. Brown, MD, MAS, Emilie J. Braun, BS, Meg E. Wise, PhD, MLS, Shannon Myers, CWP, Zhanhai Li, PhD, Emmanuel Sampene, PhD, Sierra M. Jansen, MD, D. Paul Moberg, PhD, Jane E. Mahoney, MD, and Rebecca G. Rogers, MD

OBJECTIVE: To evaluate the effects of Mind Over Matter: Healthy Bowels, Healthy Bladder, a small-group intervention, on urinary and bowel incontinence symp-

at 4 months. Validated instruments assessed incontinence, self-efficacy, depression, and barriers to care-seeking. Intent-to-treat analyses compared differences
oups. Target sample size, based on an
mprovement rate of 45% in treated women
e control group, 90% power, type I error of
nticipated attrition of 25%, was 110.
mong 121 women randomized (62 treatment
ontrol group), 116 (95%) completed the 4-

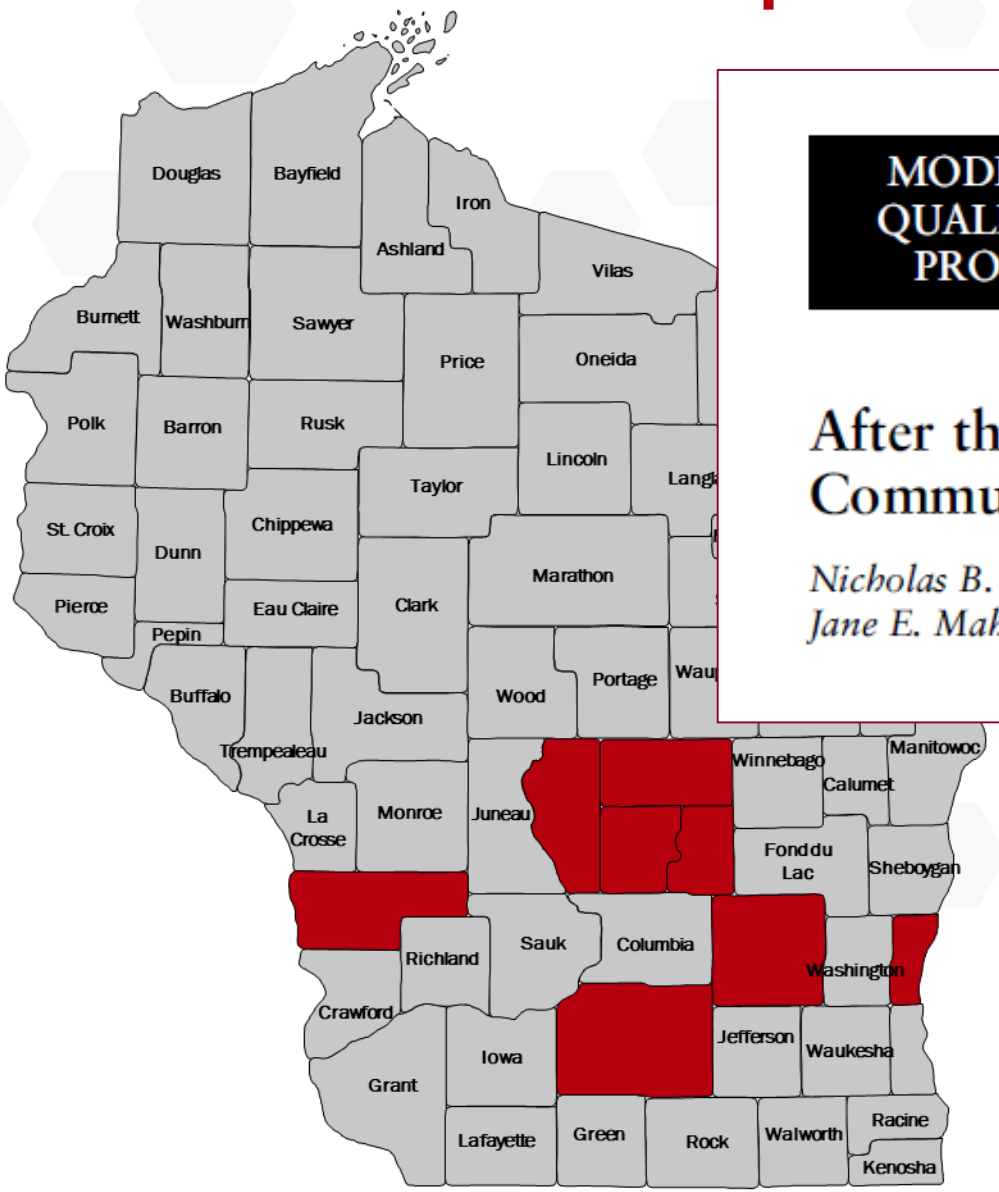
Bladder – 9 fold

Bowel – 4 fold

Obstet Gynecol. 2019 Sep;134(3):600-610.

WISCONSIN MEDICINE

Aim 2: Adoption & maintenance (Yep!)

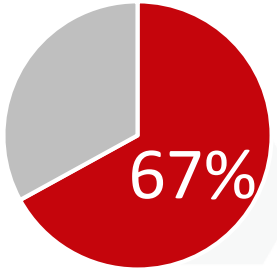


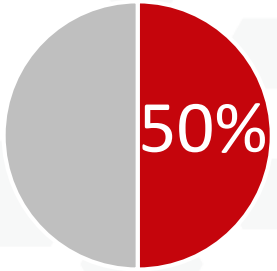
MODELS OF GERIATRIC CARE, QUALITY IMPROVEMENT, AND PROGRAM DISSEMINATION

After the Randomized Trial: Implementation of Community-Based Continence Promotion in the Real World

Nicholas B. Schmuhl, PhD, Katie A. Brow, MPH,† Meg E. Wise, PhD,‡ Shannon Myers, CWP,§ Jane E. Mahoney, MD,¶ and Heidi W. Brown, MD, MAS**

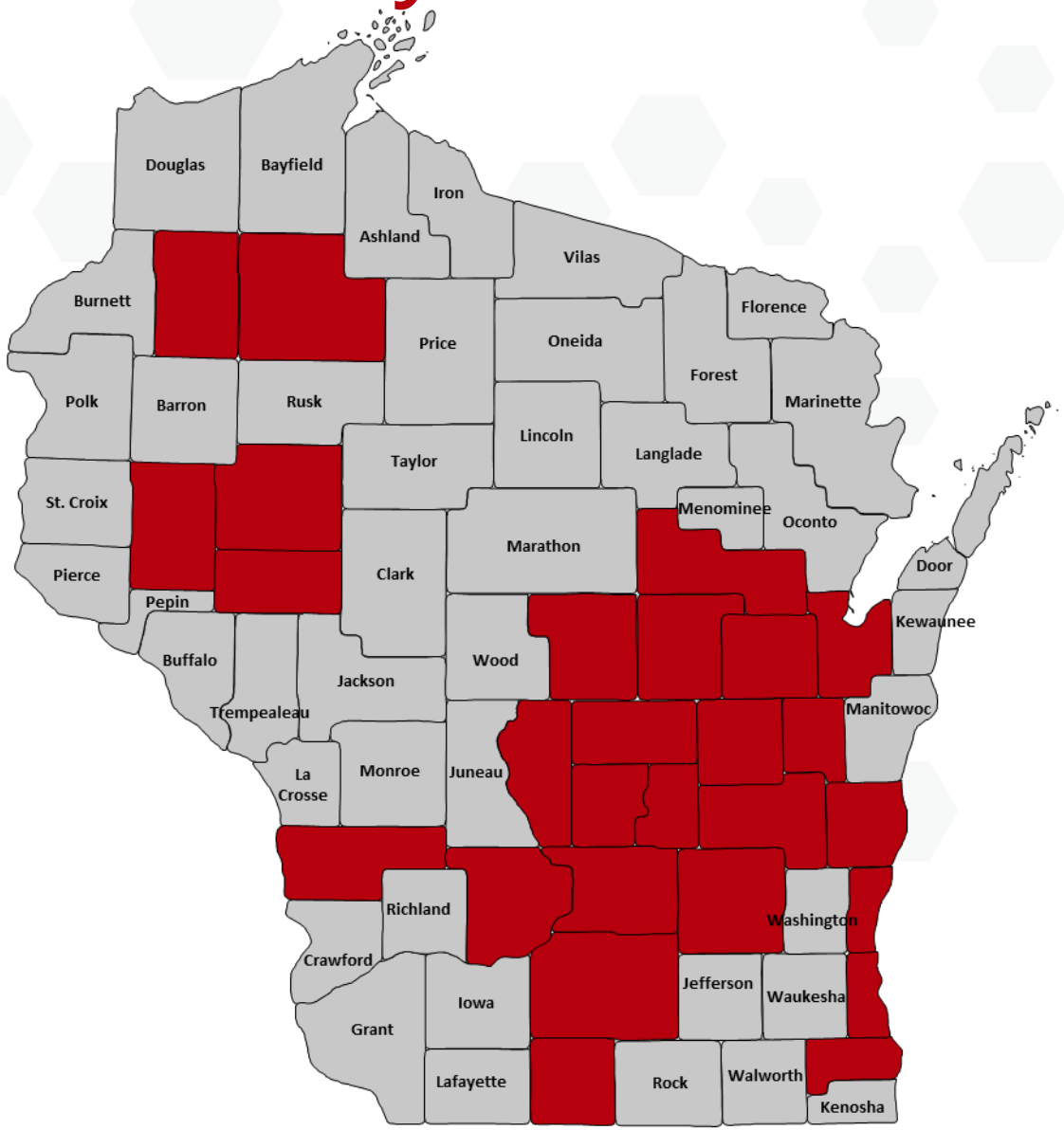
J Am Geriatr Soc. 2020 Aug 17. doi: 10.1111/jgs.16771.





WISCONSIN MEDICINE

First year of dissemination



22 counties

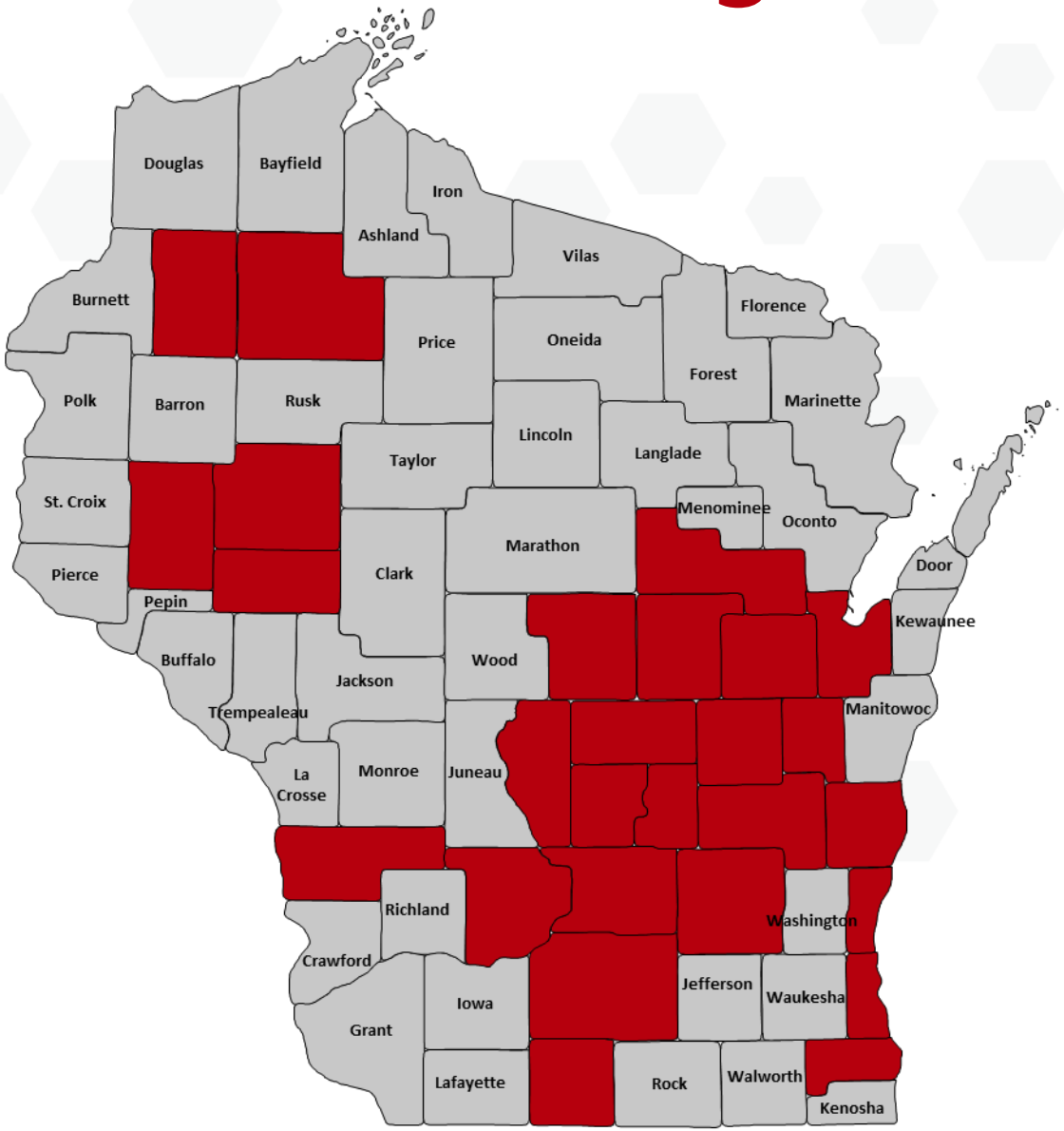
282 women

wiha

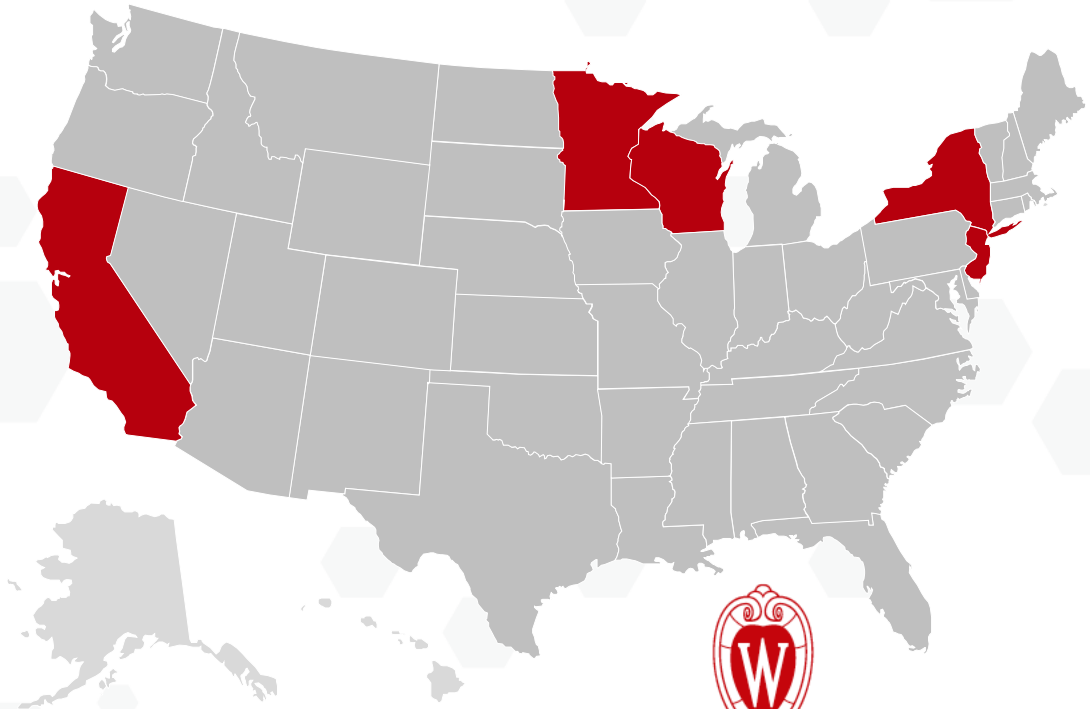
Wisconsin Institute for Healthy Aging

WISCONSIN MEDICINE

And moving on…



ncoa
National Council on Aging



WISCONSIN MEDICINE

Eligible for Older Americans Act Funds

Health Promotion

PROGRAM AREAS

*** Coronavirus 2019 ***

Overview

Aging and Disability Networks

Alzheimer's Disease and Dementia

Connecting People to Services

Consumer Choice and Control

It is understood that evidence-based disease prevention and health promotion programs reduce the need for more costly medical interventions. Formula grants are available under the Older Americans Act.

Disease Prevention and Health Promotion Services

(OAA Title III-D)

Authorizing Legislation: Section 361 of the Older Americans Act (OAA) of 1965, as amended.

Background on Definition of Evidence-Based Programs

States that receive Older Americans Act funds under Title III are required to spend those funds on evidence-based programs to improve health and well-being, and reduce disease and injury. Since 2003, the aging services network has been steadily moving towards wider implementation of disease prevention and health promotion programs that are based on scientific evidence and demonstrated to improve the health of older adults. The FY 2012 Congressional

The Impact Equation

Impact = Reach x Efficacy

Impact = Effectiveness x Dissemination x Maintenance

Aim 3: D&I ?

Glasgow RE, et al. Evaluating the impact of health promotion programs: using the RE-AIM framework to form summary measures for decision making involving complex issues. Health Educ Res. 2006 Oct;21(5):688-94. Epub 2006 Aug 31.

THANK YOU

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Jane Mahoney
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Maureen Smith

Research Staff
Robin Wasielewski
Emilie Braun
Lisa Grady
Chris Savard
Maria Villalon Landeros

Trainees
Dani Westenberg
Lizzy Meller
Jenny Christl
Maxine Knetter
Maria Macco

Academic Collaborators
Meg Wise
Melissa Constantine
Kris Penniston
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QUESTIONS?

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