

Using Evidence-Based Best Practices for Research Mentoring

BRC Curriculum Committee

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North American Primary Care Research Group

Quebec City, November 22, 2024

Agenda

- Introductions
- Why mentoring?
- *Table discussion*
- Evidence-based research mentoring: the National Research Mentoring Network
- Mentoring for research capacity building: the Building Research Capacity Fellowship
- Successful mentoring programs: Collaborative Scholarship Intensive
- *Table discussion*

Stephen K Stacey, DO, FAAFP

- Director of Osteopathic Education, La Crosse-Mayo Family Medicine Residency
- Assistant Professor of Family Medicine, Mayo Clinic School of Graduate Medical Education
- BRC Fellowship co-director & member of BRC Steering Committee



Melanie Steiner, PhD

- Assistant Professor of Clinical Family Medicine & Director of Research Development, Department of Family Medicine, Indiana University School of Medicine
- Investigator on NRMN Phase II U01 award on grant writing coaching
- CIMER-trained *Entering Mentoring and Culturally Aware Mentoring* facilitator
- Associate Director of health sciences-wide *Health Equity Leadership and Mentoring* (HELM) program at the University of Utah (2020-2024)
- BRC Fellowship Faculty & member of the BRC Curriculum Committee



INDIANA UNIVERSITY
SCHOOL OF MEDICINE

Kristin Boman, MPH

- University of Minnesota, Department of Family Medicine and Community Health's Primary Care Research Learning Network harmonizing practice-based research, education and clinical practice by:
 - Recognizing research questions that are important to practices, clinicians, and community members
 - Building capacity to do primary care research
 - Nurturing partnerships among clinicians, practices, patients and researchers
- Certified CIMER *Entering Mentoring* Trainer
- Over 18 years of experience in family medicine research



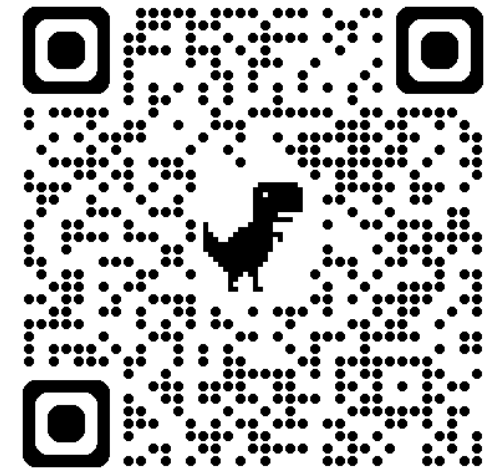
Primary Care
Research Learning Network

Building Research Capacity (BRC)

BRC offers support and guidance to family medicine departments to improve their research productivity and capacity

- BRC learning workshops
- BRC consultation service
- BRC fellowship

<https://www.adfm.org/programs/building-research-capacity-brc/>



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- Your department/practice
- Your role
- Your interest

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- **What type of department or practice do you represent? (check all that apply)**

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- **What describes your role best? (check all that apply)**

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National Research Strategy for Family Medicine (2023)

October 2023: National Research Summit hosted by North American Primary Care Research Group (NAPCRG) and Association of Departments of Family Medicine (ADFM)

“Our research infrastructure is not yet robust enough to lead research that informs improvement of practice and advancement of policy. As a specialty, our research punches far below the weight of our clinical role.”



Newton W, Asif IM, Weidner A. A Milestone for Promoting Research in Family Medicine. *Ann Fam Med.* 2023;21(6):564-566. doi:10.1370/afm.3067

Asif I, Weidner A, Elwood S. Toward a Unified and Collaborative Future: Creating a Strategic Plan for Family Medicine Research. *Ann Fam Med.* 2023;21(3):289-291. doi:10.1370/afm.2987

Pathways / Mentorship



Grow the family medicine research workforce by expanding pathways and strengthening mentorship

A1: Maintain, promote and contribute to a **database of family medicine research programs** to connect learners to research training opportunities

A2: Enhance and grow **pathways to participate in family medicine research** for

- medical students (e.g. expanding MD/PhD programs)
- residents (e.g. creating additional degree programs and fellowships)
- and family physicians (e.g. offering training opportunities)



A3: Create **structured mentorship** experiences inside and outside home institutions

A4: Normalize a **team science** approach by developing **cross-disciplinary partnerships with PhDs, interprofessional groups, and community based organizations**

A5: Promote a **"culture of curiosity"** among medical students and family medicine residency programs to ensure the workforce is well-equipped to **critically analyze and apply evidence**

3 areas of focus for building research:

- build **pathways and mentorship** programs to develop researchers
- create new kinds of **research infrastructure**
- drive **advocacy for funding** of research that matters to family medicine practice and policy

National Research Strategy for Family Medicine: 2024-2030		
VISION <i>Family Medicine research is whole-person, family, and community centered and improves health by enhancing health promotion, improving care for chronic diseases and advancing healthcare delivery, while including cross-cutting themes of health equity, technology, and team science</i>		
STRATEGIC PRIORITIES		
Pathways / Mentorship 	Funding & Advocacy 	Infrastructure 
GOALS		
Grow the family medicine research workforce by expanding pathways and strengthening mentorship	Increase funding for family medicine research and advocate for enhanced health policy and support	Build a national infrastructure for organizing and optimizing family medicine research opportunities
OBJECTIVES		
A1: Maintain, promote and contribute to a database of family medicine research programs to connect learners to research training opportunities	B1: Define and promote the value of family medicine research broadly	C1: Create partnerships and align the discipline with future advancements in healthcare delivery to be on the forefront of new research opportunities and changes in healthcare policy
A2: Enhance and grow pathways to participate in family medicine research for <ul style="list-style-type: none">• medical students (e.g. expanding MD/PhD programs)• residents (e.g. creating additional degree programs and fellowships)• and family physicians (e.g. offering training opportunities)	B2: Align advocacy efforts with the 2021 NASEM report and forthcoming action plan to build momentum and increase support for family medicine research, including the creation of an Office of Primary Care Research	C2: Utilize a repository of clinical data to answer key questions in primary care
A3: Create structured mentorship experiences inside and outside home institutions	B3: Continue advocacy to increase funding for AHRQ National Center for Excellence in Primary Care Research and support efforts to direct other sources of funding to primary care research (e.g. foundations, payers, venture capital and other federal agencies such as: PCORI, CDC, and HRSA)	C3: Increase accessible and integrated research models that produce clinically applicable research and evidence-base (e.g. optimize PBRNs, communities of practice, and consider other types of networks such as geographic and content networks)
A4: Normalize a team science approach by developing cross-disciplinary partnerships with PhDs, interprofessional groups, and community based organizations	B4: Advocate for increased funding for Departments of Family Medicine from institutional leadership	C4: Leverage Clinical and Translational Science Awards (CTSA) networks and create Centers of Excellence to increase family medicine research within institutions
A5: Promote a "culture of curiosity" among medical students and family medicine residency programs to ensure the workforce is well-equipped to critically analyze and apply evidence	B5: Identify and promote promising practices for chairs to support and fund research participation within their departments and institutions	C5: Design and utilize distinctive methodology such as pragmatic trials, participatory methods, community-based research, translational science, implementation research and dissemination, big data analytics and machine learning

At your tables...



~10 minutes:

- Introduce yourself to your table neighbors!
- *Identify a volunteer who will take notes and report back to the group*
- How can mentoring help advance your department's/practice's research mission and goals?
- Describe the mentoring landscape and its participants at your department/practice

~10 minutes:

- Report back to the whole group

What is research mentoring?

“Unlike medicine, law and most other professions (where systematized education is provided, and core knowledge and competencies are assessed through exams and rubrics), **research training is built around informal and minimally structured teaching and learning – a.k.a. mentoring.** Yet, the term ‘mentor’ conjures up widely varying mental models among those doing it as to: what it is; how it should be approached; the ‘right’ and ‘wrong’ ways to mentor; the appropriate boundaries between scientific and personal relationships; the degree to which it is altruistic, mentee-centric vs. constrained or driven by real-world needs of mentor as well as mentee; **and on and on.** Often, even in the most advanced approaches to teaching effective mentoring skills, one is asked to develop a ‘mentoring philosophy’, which, by the title alone, conveys a **philosophical foundation rather than one based upon empirical or research-based formulations.**” (McGee 2017)

National Research Mentoring Network

- Research mentoring: enhances productivity, self-efficacy, and career satisfaction; predictor of future success
 - Lack of mentorship: disproportionately affects researchers from backgrounds underrepresented in biomedical research
- NIH Diversity Program Consortium to advance the goal of developing, implementing, and assessing **evidence-based effective approaches to research mentoring** in biomedical, clinical, behavioral, and social sciences
- National Research Mentoring Network to disseminate best practices for mentorship training to standardize effective mentoring methods



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PROGRAM
CONSORTIUM**
Supported by the National Institutes of Health



NRMN
Mentoring to Diversify the
Biomedical Workforce

Mentoring relationships

- Reciprocal and dynamic
- Measured by the mentee's success in reaching individual milestones that allow them to progress to the next stage along the trajectory of a sustainable, satisfying career
- Building a mentoring relationship takes its own set of skills and knowledge



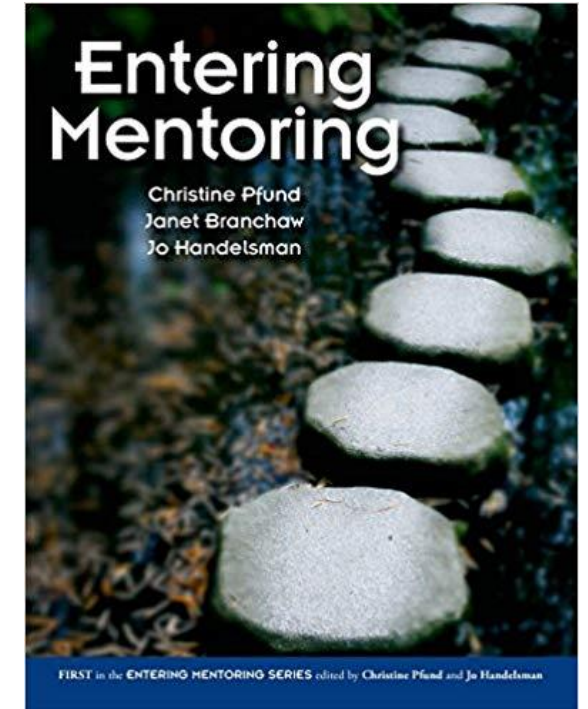
Mentoring competencies

Entering Mentoring

- Aligning expectations
- Maintaining effective communication
- Assessing understanding
- Fostering independence
- Promoting research self-efficacy
- Promoting professional development
- Reflecting on diversity and establishing a practice of inclusion

Culturally Aware Mentoring

NRMNnet.net & MyNRMN



Center for the Improvement of
Mentored Experiences in Research

NRMN grant writing coaching

- Grant writing: important component of mentoring
- Grant writing: complex but teachable skill that is best acquired through repetitive circles of practice over a sustained period of active project development, during which improvement is driven by the input of highly skilled practitioners
- NRMN Phase I: core features of successful grant writing coaching programs
- NRMN Phase II: variations (duration, mode)



Steps toward academic research & scholarship (STARS)

- PILOT: Jan 2025
- Manuscript writing coaching group for clinician educators
- 8 monthly didactic sessions + monthly coaching groups
- Based on needs identified in department-wide survey



McGee R. "Biomedical Workforce Diversity: The Context for Mentoring to Develop Talents and Foster Success Within the 'Pipeline'". *AIDS Behav.* 2016;20 Suppl 2(Suppl 2):231-237. doi:10.1007/s10461-016-1486-7

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Sorkness CA, Pfund C, Ofili EO, et al. A new approach to mentoring for research careers: the National Research Mentoring Network. *BMC Proc.* 2017;11(Suppl 12):22. Published 2017 Dec 4. doi:10.1186/s12919-017-0083-8

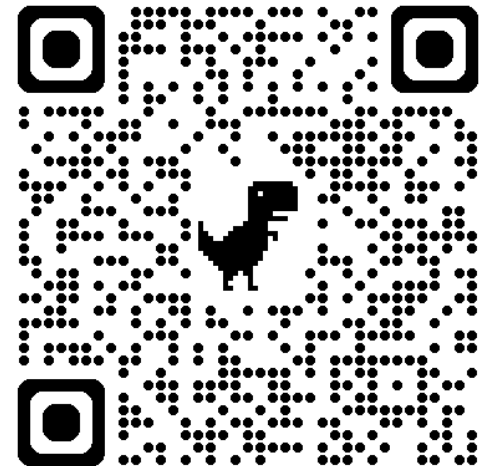
Weber-Main AM, McGee R, Eide Boman K, et al. Grant application outcomes for biomedical researchers who participated in the National Research Mentoring Network's Grant Writing Coaching Programs. *PLoS One.* 2020;15(11):e0241851. Published 2020 Nov 9. doi:10.1371/journal.pone.0241851

Weber-Main AM, Engler J, McGee R, et al. Variations of a group coaching intervention to support early-career biomedical researchers in Grant proposal development: a pragmatic, four-arm, group-randomized trial. *BMC Med Educ.* 2022;22(1):28. Published 2022 Jan 10. doi:10.1186/s12909-021-03093-w

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BRC Fellowship

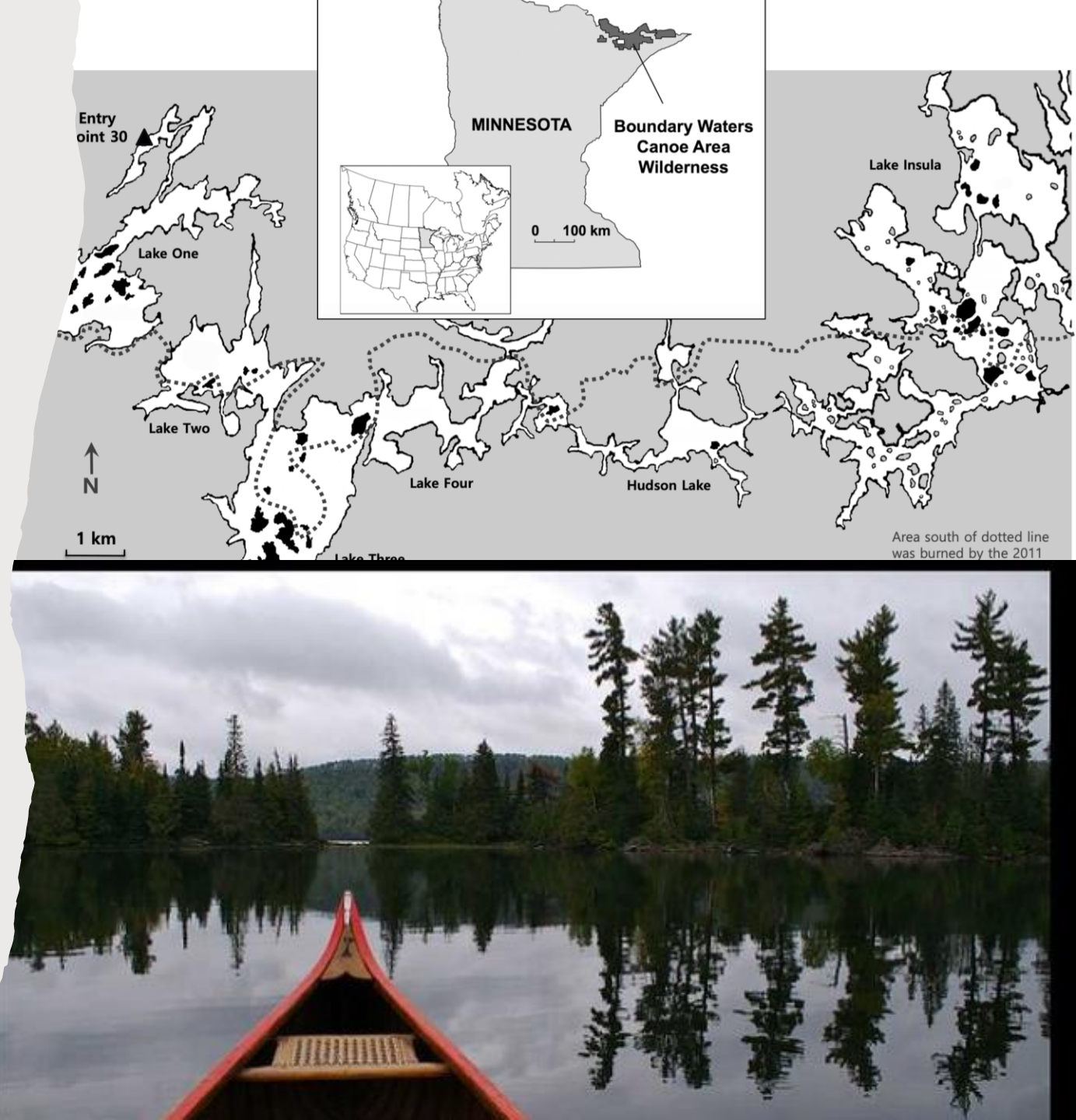
- **Purpose:** Equip individuals to lead research capacity building in their institutions
- **Qualifications:** Change agents with leadership and research organizational skills
- **Aims:**
 - Coaching and mentorship
 - Peer support network
 - Strategic plan development



"Collaborative Scholarship Intensive" A Guided Pathway into Research for Clinicians

Kristin Boman
University of Minnesota

- Housed in the Department of Family Medicine and Community Health at U of Minnesota
- Created in 2015 by a group of faculty and staff to help clinical faculty with skill development for scholarship & research related to promotion and tenure
- 80 participants to-date





Consider the systems, policies, and regulations involved with conducting research, i.e., DUA, IRB, HIPCO, UFRA, SPA, "right-sizing" projects for clinical environments, etc.

Program Structure

- Synchronous and asynchronous training
- Work time, including meetings with the director, research facilitators, research faculty, and other experts



Research Mentors

- **Director**
 - Katie Loth, PhD, MPH, RD, LD, Associate Professor of Research and Vice Chair for Faculty Affairs guides the 6-month program
- **Research Facilitators**
 - Research staff who are based in residency clinics and walk alongside participants throughout the program
 - They provide research support and leadership to develop and operationalize research projects within the PCRLN throughout the project lifecycle including, but not limited to:
 - idea refinement
 - development of study materials
 - regulatory needs
 - project implementation
 - manuscript review
 - facilitating connections with people & resources





CIMER *Entering Mentoring* Concepts + CSI Roles

	Director	Research Facilitators
Aligning Expectations	x	x
Assessing Understanding	x	x
Cultivating Ethical Behavior	x	x
Fostering Independence	x	x
Maintaining Effective Communications	x	x
Promoting Research Self-Efficacy	x	x
Promoting Professional Development	x	
Reflecting on Diversity & Establishing a Practice of Inclusion	x	x

Additional Coaching & Mentoring Roles

- **Research Faculty**
 - Share research knowledge & skills, curriculum/teachers, sponsorship
- **Research Services Hub**
 - Qualitative, quantitative, and survey consultations
- **CSI Cohort & Alumni**
 - Peer mentoring
 - Community of Practice coming soon!
- **Patient Partners**
 - Coming soon!



Acknowledgements



Primary Care
Research Learning Network

- Katie Loth, PhD, MPH, RD, LD
- Rebekah Pratt, PhD
- Jill Bengtson, MPA
- Marah Aqeel, MS
- Mary Earm, RN
- Sherri Fong, MPH
- Hamdi Ali, MPH
- Abdifatah Haji, MBBS
- Mary Anne Powell, MPH

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At your tables...

- *Identify a different person to take notes and report out*
- What are your next steps to strengthen research capacity through mentoring?
- Which ideas would you like to realize?