

Practice-Based Research Networks: The Laboratories of Family Medicine

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Joseph LeMaster, MD, MPH, FAAFP

Associate Professor, Department of Family Medicine, University of Kansas Medical Center, Kansas City; Health Advisor/Public Health Officer, Johnson County Department of Health and Environment, Kansas

Dr. LeMaster earned his medical degree from the University of Kansas School of Medicine in Kansas City. After completing his family medicine training in 1988, he practiced full-time in the United States and in Asia, where he became fluent in the Nepali language. Subsequently, he earned his Master of Public Health (MPH) degree in epidemiology from the University of Washington in Seattle. In 2002, while working as an assistant professor at the University of Missouri in Columbia, he was an investigator on the Robert Wood Johnson Foundation-funded "Feet First" study, which found that moderate, supervised weight-bearing activity does not increase foot ulcer risk among those who have diabetic peripheral neuropathy. This study's results led the American Diabetes Association (ADA) to change its national recommendations on exercise for patients who have diabetic peripheral neuropathy. As part of a task force of national leaders in diabetic foot care, Dr. LeMaster also co-authored consensus guidelines for comprehensive examination of the diabetic foot which were published in leading journals of the endocrine and podiatric research communities. He has continued to investigate diabetic foot outcomes in his current position at the University of Kansas Medical Center (KUMC).

In 2011, Dr. LeMaster began pursuing a research agenda at KUMC to improve the quality of primary care in health care systems that serve refugee and immigrant populations. His recognition as an international expert on cross-cultural research benefiting migrant communities has led to multiple international invited lectures and visiting professorships at universities in countries including Canada, Ireland, and the Netherlands. He has also conducted and published epidemiological research clarifying risk factors for suboptimal outcomes during resettlement after forced migration. Since 2015, Dr. LeMaster has collaborated with a European Union-funded international research group that uses a participatory approach to implement and evaluate cultural competency training initiatives in primary care settings in five European countries. In addition, he has collaborated with primary care colleagues from the United States, Canada, and Europe to publish ethical and methodological guidelines on the conduct of participatory health research focused on primary care patients.

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Learning Objectives

1. Describe practice-based research and practice-based research networks.
2. Describe types of research conducted in practice settings and importance of practice-based research for family medicine and primary care.
3. Become familiar with resources to conduct productive practice-based research and drive innovation in family medicine and primary care.

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Audience Engagement System



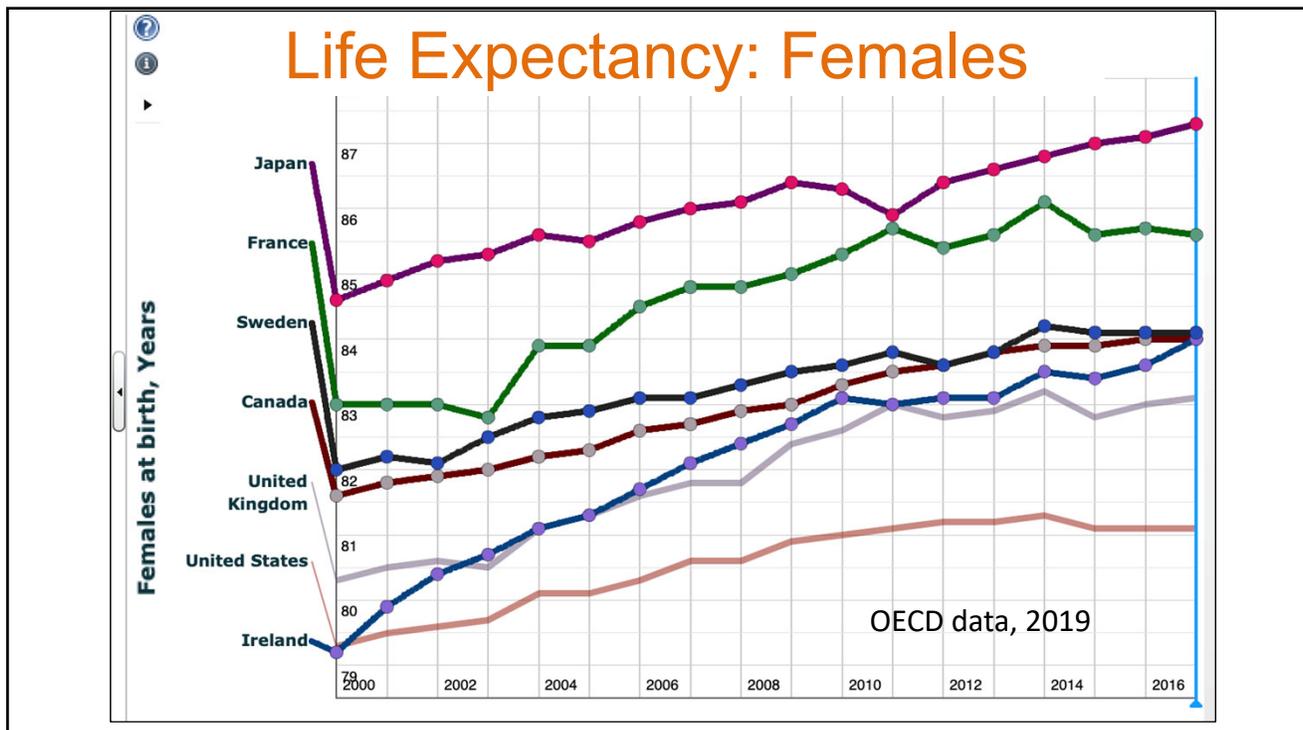
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The "Quadruple Aim"

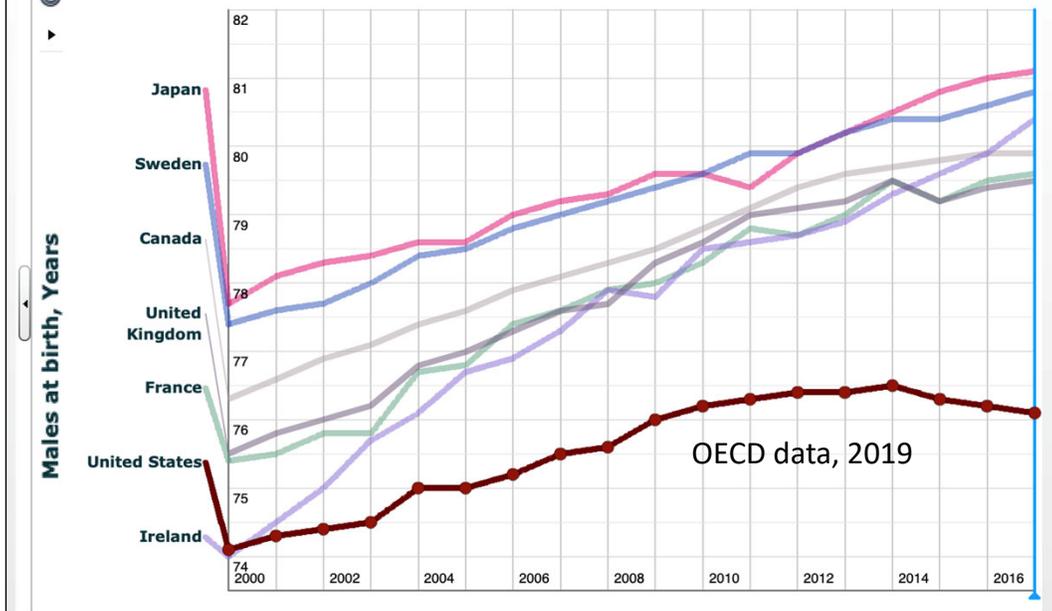
- Enhancing patient experience
- Improving population health
- Reducing costs
- Improving the work life of those who deliver care

How well have we done?

<http://www.ihl.org/communities/blogs/the-triple-aim-or-the-quadruple-aim-four-points-to-help-set-your-strategy>



Life expectancy: Males



Comprehensive primary care

- Patient-centered care deals with mental emotional, social, as well as physical: all the patient's perceived needs
- Deep — addresses the full extent of all problems, e.g. acute and chronic care; ; injury and rehabilitation; support for self-management, care coordination, monitoring
- Long — entire trajectory from prevention to diagnosis to palliation, from the 'cradle to the grave'

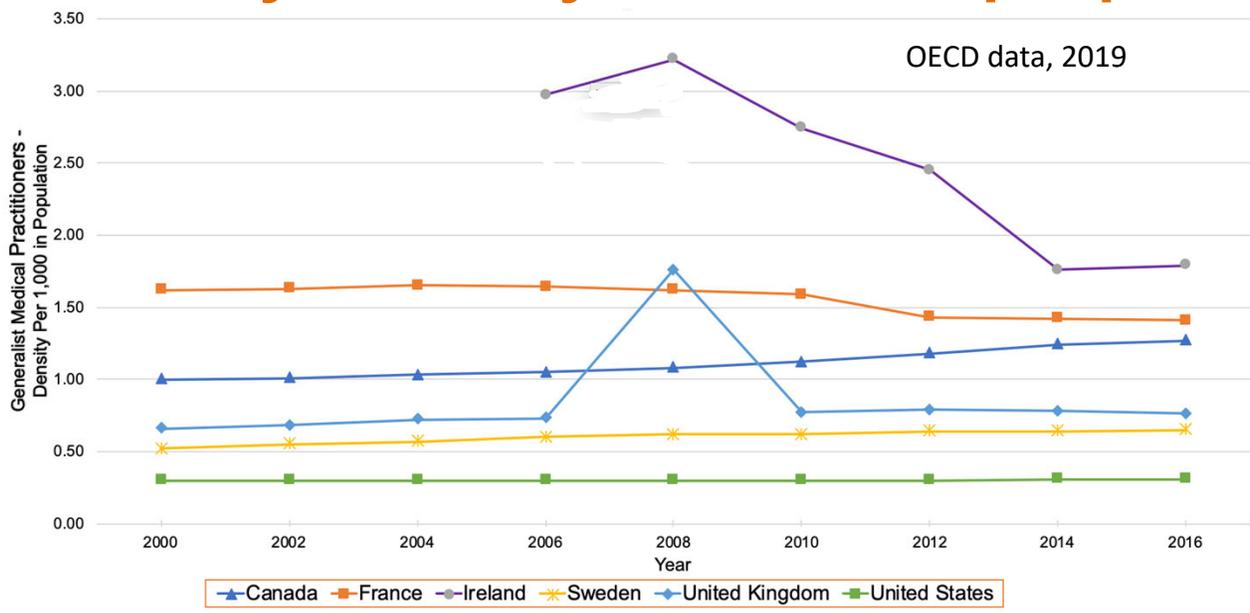
Publication No. 16(17)-0022-EF, 2016

The effect of primary care physician supply on life expectancy

1. Primary care physician growth has been flat since 2005 (in fact, in rural areas it is decreasing).
2. For every 10 additional PCPs/100k people, there is a 51 day increase in life-expectancy and a reduction (0.9-1.4%) in cardiovascular, cancer and respiratory mortality.
3. Other social determinants also matter:
 - Medicare enrollment: + 108 days
 - Less than high school education: -58 days
 - Self-reported black race: – 412 days

Source: Basu et al, [JAMA Intern Med.](#) 2019 Feb 18. doi: 10.1001/jamainternmed.2018.7624.

Primary Care Physician: 1000 people



Poll Question 1

Which of the following statements are true?

- a. Primary care physician supply in the US has been growing steadily since 2005.
- b. For every additional primary care providers per 100,000 population, there is an estimated 51 day increase in life expectancy
- c. For every additional 10 primary care providers per 100,000 population, there is an approximately 1% decrease in cardiovascular, cancer and respiratory mortality.
- d. Among OECD countries, the US has the highest density of primary care providers per 1000 people in the population.

How can Primary Care Research help?

[Primary Care Research and You](#)

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Poll Question 2

Which of the following is the primary benefit of participating in primary care research that links the patient's voice with primary care provider experience?

- A. Increase in practice revenue.
- B. Pursuing researchable ideas for primary care.
- C. Reducing stress in primary care practice.
- D. Increase in patient recruitment to our practice.

AAFP National Research Network (AAFP NRN)

Advancing Family
Medicine Through
Research and Partnerships

Who We Are

19 members of staff and leadership

- Clinicians & Researchers
 - MDs, DOs, PhDs
 - Family physicians, health services, social/behavioral scientists, informatics, statistics
- Project teams
 - Project managers, research assistants, data analysts, statisticians

We Are Seeking To...

- ✓ Lead the nation in practice-based research in primary care to develop new evidence and innovative models for “what works” in real-world settings
- ✓ Raise awareness and build engagement to promote the importance of primary care research
- ✓ Disseminate timely findings that deliver on the Quadruple Aim
- ✓ Discover new paths that advance the science and specialty of family medicine

Who We Work With

- Members of the AAFP NRN
 - 2,100 clinicians in over 1,300 practices
 - Small private offices, large health systems, FQHCs, and residencies
- 18 affiliated PBRNs across the country
- Outstanding researchers, multi-specialty, from academic and private research organizations

AAFP NRN Member Practices



Source: AAFP NRN

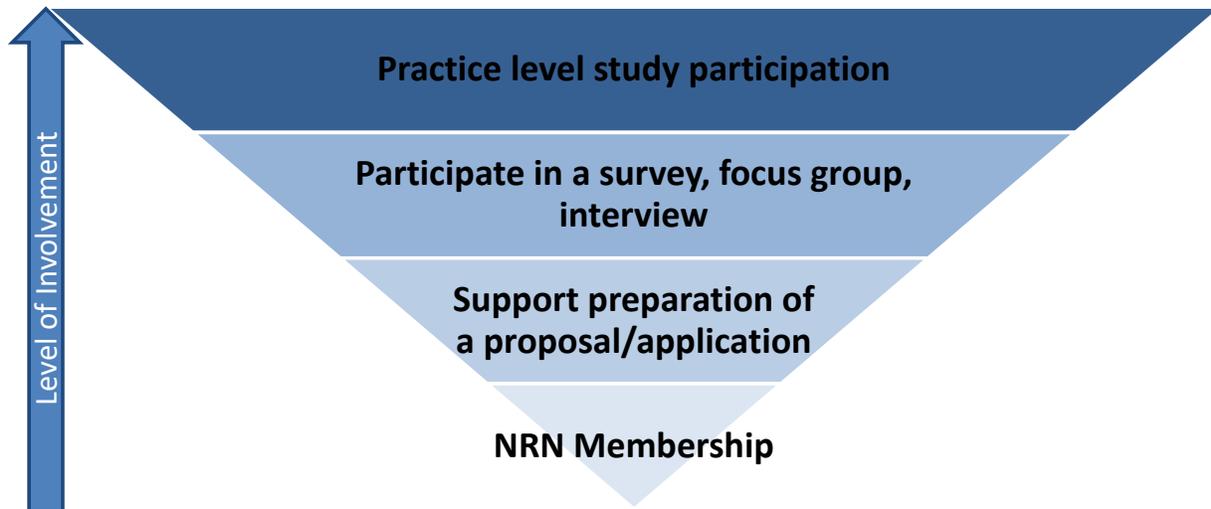
Active Studies

- 16 currently active studies
- Broad range of scope and scale
 - Ranging from 2 individual family physicians working with the AAFP NRN study team to 19 practices from across the country
 - Topics ranging from health equity education to comparative effectiveness of asthma rescue inhaler medications
- Diverse funding sources
 - Projects funded by federal, foundation, and industry



Source: AAFP NRN

Participation



Source: AAFP NRN

Benefits of Participation in NRN

- Broad membership base, wide reach, “representativeness”
- Strong relationships & connections to thought leaders & other stakeholders
- Synergy of mission with other FM organizations
- Connection with nation-wide and international primary care/ research networks, i.e. NAPCRG, WONCA, ICPHR, CAFM
- Alignment with trends and priorities of health care
- Volume of funding opportunities
- Staff competencies and professionalism

Communication

We...

- Share our results broadly
- Publicize opportunities
- Develop collaborations and community



Collaboration

- Contribute to the development and implementation of practice-based research projects



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Sponsorship



- Grants (federal and foundation)
- Contract research projects
- Partners provide funding for agreed upon projects or initiatives
- Exploring options for unrestricted contributions

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Family Medicine Discovers: **Rapid Cycle Scientific Discovery and Innovation**

- To develop a Rapid Cycle Scientific Discovery and Innovation (**RapSDI**) practice-based research track
- Led by the **AAFP Foundation** and the **AAFP NRN** in collaboration with the other key family medicine organizations in the US
- Part of a multi-pronged strategy to build the capacity for family medicine scientific discovery and innovation.

RapSDI Program Overview

- Create infrastructure for submission of ideas and questions that meet the following criteria:
 1. **Relevant and responsive** to our members' priorities and interests
 2. Address **scientific & clinical** questions that have high potential impact to advance the knowledge base of the specialty of Family Medicine
 3. **Bubble up** directly from Foundation members and Champions, NRN members, AAFP members, other FM stakeholders and partners
 4. **Feasible** to accomplish within a ~15 month timeline

Poll Question 3

Which of the following is NOT a criterion for research ideas that may be funded by RapSDI?

1. Address **scientific & clinical** questions that have high potential impact to advance the knowledge base of the specialty of Family Medicine
2. **Bubble up** from AAFP members and other Family Medicine stakeholders and partners
3. **Feasible** to accomplish within a 5 year timeline

Building PCOR* capacity with Newcomer patients in Practice-based Research Networks

*PCOR= Patient-centered Outcomes Research

“Language discordance” and healthcare utilization

- Issues when people are “language discordant” with their health care providers:
 - More infrequent visits and follow-up
 - Inappropriate diagnoses/treatment prescribed
 - More medication errors/poorer adherence to regimens
 - Higher Emergency Department use
 - Longer hospitalizations
 - Less patient satisfaction

Source: Brisset et. al. Patient Educ Couns (2012): [dx.doi.org/10.1016/j.pec.2012.11.0008](https://doi.org/10.1016/j.pec.2012.11.0008)

PCORI Eugene Washington “Completing the CIRRACLE”

- Patients prefer their PCP to be first point of contact for referrals (94%) and care coordination (89%)*
- Can we design interventions that are culturally appropriate, build trust, and improve patient and clinician ownership (including families; continuity; broad-scope; relational)?
- AAFP NRN practices serve these populations

Grumbach et al, *JAMA*. 1999;282(3):261-266.

Preparatory pilot work

- 2018 “Patient Engagement in Family Medicine” patient survey
 - Physicians must lead efforts to engage patients in decisions about clinical operations re:
 - 1) improving patient experience and
 - 2) improving quality
 - How best to operationalize this engagement in practices remains unclear

Preparatory pilot work

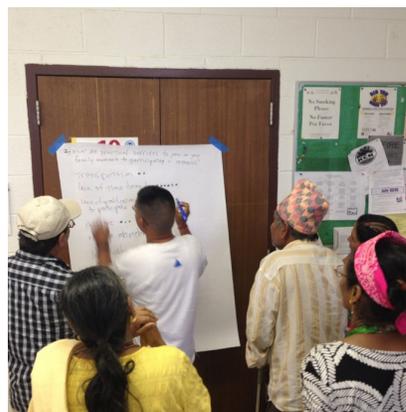
- 2015-18 PCORI Pipeline Tier 1-3 project: used participatory World Cafés to identify and prioritize health care topics that participants considered most important (physicians, patients, health system stakeholders)



13 World Cafes over 18 months

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- **45-55 participants per World Café**
- **Linguistic communities stayed together to answer each question, and assign joint priority to identified issues**



“Completing the CIRRCLE” project goals

1. Develop a **consensus-based operational plan** by engaging practice clinicians to get ready to participate in the co-design of PCOR relevant to LEP patients, in monitoring its conduct, and in disseminating its results; and
2. Evaluate and prioritize existing **PCOR-related capacity-building resources** that are culturally-relevant, accessible and responsive to the needs of AAFP NRN practices that serve LEP patients.

Poll Question 4

Which of the following statements is false?

- a) A patient-facing interventions targets changes in patient behaviors and/or health outcomes
- b) Practice-facing interventions target access to or quality of care in healthcare
- c) Implementation Science studies how interventions are applied in ideal settings

Possible interventions

1. Patient-facing: interventions that target changes in patient behaviors and/or health outcomes
2. Practice-facing: interventions that target access to or quality of care in practice situations
3. Implementation Science studies: evidence-based interventions applied in real practice settings

Possible interventions

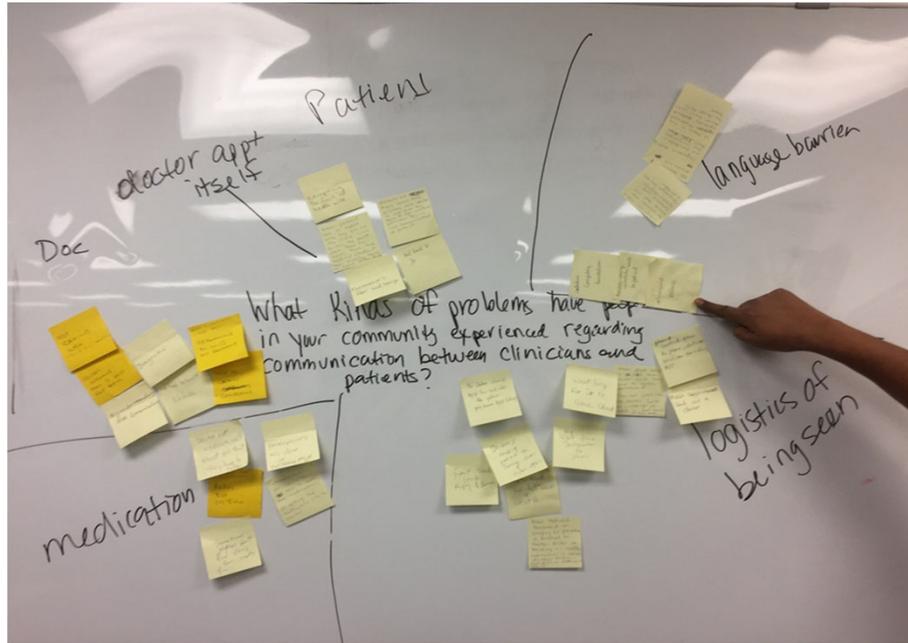
1. Patient-facing: Use of bilingual CHWs to improve completion of diabetes self-care goals e.g. exercise, as well as intermediate health outcomes e.g. HbA1c
2. Practice-facing: Implementation of a tested intervention to improve use of language interpreters in primary care

Project Approach

- Clinical sites taking part will move forward together during this project to develop and submit full-scale PCOR study proposals, either to PCORI, NIH or other potential funders.
- No upfront decision re: a particular research question or project— we use a planning process that helps us decide together what types of project could be done

Participatory Learning in Action (PLA)

- Developed from R. Chamber's work in the Global South as a response to unequal power between patients and healthcare personnel
- Uses visual as well as verbal methods to summarize and prioritize participant input
- Goes deeper than the World Café into all participant perspectives and with more interaction than rapid methods
- Good approach to discuss 1 question deeply



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Practice Recommendations

Contact the NRN...

1. ...if interested in participating in emerging practice-based research projects as a participating site.
2. ...if interested in learning more about RapSDI to design your own project

In Summary

- PBRNs provide the opportunity to participate in primary care research deliver on the promise of primary care
 - Meeting the Quadruple Aim
 - Working on eliminating disparities
 - Having fun while doing it
 - Interested? Contact the AAFP NRN!

Contact Information

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 - AAFP NRN's - <https://www.aafp.org/nrn>

Questions



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