

PRACTICE-BASED RESEARCH NETWORKS: APPLICATION OF THE PBRN MODEL TO NON-PRIMARY CARE SETTINGS

TOOLS, RESOURCES, AND EVIDENCE

[Practice-Based Research Networks \(PBRNs\)](#)

originated as groups of primary care clinicians and practices working together to answer community-based health care questions and translate research findings into practice. The PBRN model engages clinicians in quality improvement activities and promotes an evidence-based culture in primary care practice. PBRNs are among the best settings for studying the process of care and the manner in which diseases are diagnosed, treatments initiated, and chronic conditions managed in a "real world" setting.



Summary Highlights:

- The 28 Affiliate PBRNs serve over 19 million patients across the United States.
- Affiliate PBRNs cover a wide range of non-primary care health care specialties such as dentistry, mental health, pharmacy, neurology, and alternative medicine.
- Affiliate PBRNs collaborate with Primary Care PBRNs by attending the [NAPCRG-PBRN Conference](#) and participating in the [PBRN bi-weekly digest](#)
- Important research done by the Affiliate PBRNs include studies such as [Pharmacists' perspectives on HIV testing, Smoking-cessation e-referrals, and the EXPECT Study](#) on the use of complementary and alternative treatments for chronic low back pain.

Primary care-based PBRNs have flourished in number, membership, and impact, and their successes in research and quality improvement have accumulated. Researchers and clinicians from other health care settings recognize the opportunity to apply this compelling model to the work that they do. Specialties such as dentistry, mental health, pharmacy, neurology, and alternative medicine are implementing the PBRN model and partnering with existing PBRNs to perform research and translate findings into practice.

As of May 2015, 28 non-primary care PBRNs serving over 19 million patients across the United States were [registered as part of the AHRQ-sponsored PBRN learning community](#). These networks are known as Affiliate PBRNs and range widely in terms of size and number of participating clinics, with some working with as few as four practices and others with as many as 35,000.

The missions of the Affiliate PBRNs are similar to those of a primary care-based PBRN, but tailored to their specific

setting. For instance the [Athletic Training Practice-Based Research Network](#) improves the quality of care and patient outcomes in athletes under the care of certified athletic trainers by studying injury surveillance, clinical outcomes, comparative treatment effectiveness, and economic analyses. The [Home Visiting Applied Research Collaborative](#) strives to strengthen the role of home visiting in improving child and family well-being and service systems by conducting national collaborative practice-based research.



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The “Where to Learn More” table at the end of this document identifies the Web site of each of the Affiliate PBRNs by specialty. Highlights of their exciting and innovative research in non-primary care settings are below.

Pharmacy

Pharmacy PBRNs address diverse topics affecting pharmacy professionals and customers. Recent research initiatives include medication safety, collaborative management between pharmacists and physicians, and disease screenings conducted in the community pharmacy setting. While some of these issues, including medication safety, are addressed throughout primary care PBRNs, Pharmacy PBRNs bring a unique perspective. Examples of innovative research initiatives conducted by Pharmacy PBRNs are described below.



Medication Safety Research Network of Indiana (Rx-SafeNet)

[Pharmacists' perspectives on HIV testing in community pharmacies:](#)

Rx-SafeNet, in collaboration with investigators from the Indiana University School of Public Health, conducted 17 semi-structured interviews with network pharmacists to ascertain their perspectives on integrating HIV testing into community pharmacy practice. Results of this study indicate that pharmacists may be open to expanding HIV testing into the community pharmacy setting. This has the potential to greatly increase the number of people aware of

their HIV status and link HIV-positive individuals with the appropriate health services they require.

University of Tennessee Pharmacist Practice Based Research Network (UT Pharm Net)

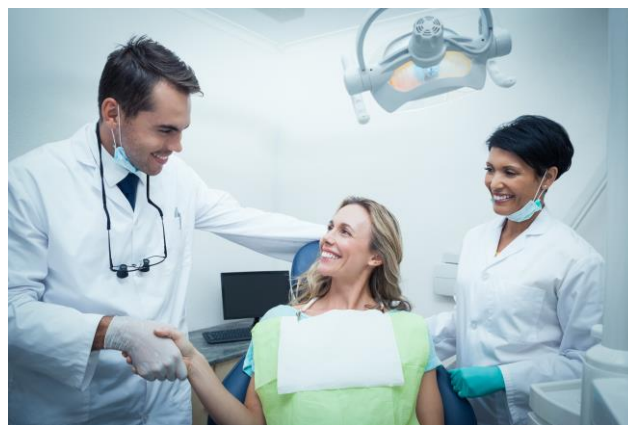
[Pharmacist-physician collaboration for diabetes care: cardiovascular outcomes:](#) UT Pharm Net enrolled 206 patients from seven practice sites to evaluate the effect of a pharmacist-physician collaboration on attainment of cardiovascular-related goals in patients with type 2 diabetes. The study results indicate that collaborative management has a positive impact on decreasing cardiovascular risk and assists patients in attaining national goals for blood pressure and cholesterol.

Dentistry

Dentistry PBRNs conduct a wide range of research to improve patient care and clinical practice related to oral health.

Research initiatives include dental caries and other disease management, clinician training, patient satisfaction, as well as behavioral health interventions. PBRN dental researchers have noted that a benefit to participating in a PBRN is the ability to conduct research that directly impacts the end user such as patients and practitioners. This has led to a change in the

mindset of dental practitioners by allowing them to incorporate research and quality improvement initiatives into their everyday practice and to see themselves as partners in the research process¹. Examples of research initiatives conducted by Dental PBRNs are highlighted below.



¹ Phone interview with Gregg Gilbert, DDS, National Dental PBRN. 2/17/15.

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South Texas Oral Health Network (STOHN)

[Oral Cancer Knowledge Assessment](#): This study attempts to assess current knowledge amongst dental professionals regarding oral cancer. This will help STOHN develop future educational programs in this area. The study is currently in the data collection phase.

The National Dental PBRN

[Smoking-cessation e-referrals](#): National Dental PBRN practices participated in a randomized controlled trial to assess the relative effectiveness of paper versus electronic referrals to a Web-assisted tobacco cessation program. Intervention practices using the e-referral system had higher smoker registration numbers and higher quit smoking rates than the control practices.

[Practice change toward better adherence to evidence-based treatment of early dental decay in the National Dental PBRN](#): This study examines the following three questions regarding Dental PBRN participation: Are practice patterns of providers with PBRN engagement in greater concordance with current evidence? Does provider participation in a PBRNs increase concordance with current evidence? Do providers who participate in PBRN activities disseminate knowledge to their colleagues? PBRN engagement was associated with practice change consistent with current evidence on treatment

“Participation in PBRNs allows dental practitioners to incorporate research and quality improvement initiatives into their everyday practice and to see themselves as partners in the research process.”

*Dr. Gregg Gilbert, Director,
The National Dental PBRN*

of early dental decay. The impact of PBRN engagement was most significant for the most-engaged providers and consistent with a spillover effect onto same-clinic providers who were not PBRN-engaged. PBRNs can generate relevant evidence and expedite translation into practice.

[Concordance between patient satisfaction and the dentist's view](#): In this study, the authors examined the dentist's view of the patient's experience and concordance with the patient's rating of satisfaction. Practitioners from 197 practices in The National Dental PBRN recruited consecutively seen patients who had defective restorations that were replaced or repaired to complete a satisfaction survey.

Mental Health

Improving direct patient care and cultivating training services for mental health providers are two of the areas of research conducted by PBRNs focused on mental health. Examples of active PBRNs working in this area include the South Texas Psychiatric Practice-Based Research Network, which conducted a study examining psychiatrists' encounters with difficult patients, and the Mo (Missouri) Therapy Network's examination of mental health clinicians' motivation to invest in training. Additional information on these research initiatives is provided below.

South Texas Psychiatric Practice-Based Research Network (STP PBRN)

[Difficult encounters with psychiatric patients](#): This cross-sectional study demonstrates that psychiatrists encounter difficult patients at a rate (15%) similar to that of primary care physicians. Mentoring programs and structured treatment interventions for the most difficult patient groups may assist all physicians who treat psychiatric patients, whether in specialty, family medicine, or other primary care settings.

Mo Therapy Network (MTN)

[Mental health clinicians' motivation to invest in training: Results from a practice-based research network survey](#): MTN conducted a Web-based survey of 318 network clinicians to examine factors that motivate clinicians to seek or forgo training ("deal breakers") and their willingness to invest time and money in training. Clinicians reported desire for

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training that teaches advanced as opposed to basic clinical skills, that covers an area they see as central to the needs of their clients, and that provides continuing education credit. Training that required clinical supervision or the use of a manualized intervention were not seen as deal breakers by most clinicians. However, the amount of time and money most clinicians reported being willing to invest in training fell far short of the requirements for learning most evidence-based treatments.

“PBRNs provide a valuable structure that allows clinicians and researchers to determine and then standardize best practices across a large number of patients and practices.”

*Dr. Demetrius (“Jim”) Maraganore,
Director, NPBRN*

Other Non-Primary Care Research Networks

As PBRNs in non-primary care settings thrive, researchers and clinicians continue to expand this model to new and innovative settings. Non-Primary Care PBRNs currently address a wide variety of non-primary care

services including athletic training, chiropractic services, home visiting services, dietetics, neurology, and massage therapy. Further examples are provided below.

MassageNet in partnership with Group Health Research Institute

EXPECT Study: Group Health Research Institute is conducting a research study on the use of complementary and alternative treatments for chronic low back pain. MassageNet is a recruitment partner and invites massage therapists to recruit patients for this study. Patients must be seeking massage therapy, chiropractic, acupuncture, or yoga for the treatment of chronic low back pain. The study team hopes the research will provide a better understanding of how patient expectations affect outcomes of treatment.

The Neurology Practice-Based Research Network (NPBRN)

Epic EMR Project: The NPBRN is currently working on a project to create a national practice-based network to improve health care quality by accelerating implementation of patient-centered outcomes research in neurology using the electronic medical record (EMR), and evidence to make health care safer and to improve health care efficiency.

Home Visiting Applied Research Collaborative (HARC)

Coordination between home visiting and medical homes:

Through this ongoing study, HARC is seeking to determine the level of coordination of home visiting programs with health care providers that serve mothers and children enrolled into the programs. Web-based surveys were completed by staff members representing 80 HARC sites, and phone interviews were conducted with 12 of those respondents. Results are being analyzed and will be disseminated in 2015.



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Where to Learn More

Affiliate PBRNs	
Pharmacy Networks	
American College of Clinical Pharmacy Practice-Based Research Network (ACCP PBRN) http://www.accpri.org/pbrn/ Location: Kansas (With 707 Practices Across 50 States)	Medication Safety Research Network of Indiana (Rx-SafeNet)* http://www.pharmacy.purdue.edu/rx-safenet/ Location: Indiana (With 168 Practices in 1 State)
Minnesota Pharmacy Practice-Based Research Network (Minnesota Pharmacy PBRN) http://www.mpha.org/associations/9746/files/PBRN/index.html Location: Minnesota (With 366 Practices in 1 State)	University of Tennessee Pharmacist Practice Based Research Network (UT Pharm Net)* http://pbrn.ahrq.gov/pbrn-registry/university-tennessee-pharmacist-practice-based-research-network Location: Tennessee (With 8 Practices in 1 State)
Dental Networks	
Evidence-Based Decisions in Dentistry Practice-Based Research Network (EBD-PBRN) http://www.ebd-pbrn.org/ Location: California (With 15 Practices Across 2 States and India, Italy, Portugal, and Brazil)	South Texas Oral Health Network (STOHN)* http://stohn.uthscsa.edu Location: Texas (With 65 Practices in 1 State)
Practice-Based Research in Oral Health network (PROH) http://www.ohsu.edu/proh/ Location: Oregon (With 184 Practices Across 2 States)	The National Dental Practice-Based Research Network (The National Dental PBRN or The Nation's Network)* http://NationalDentalPBRN.org Location: Alabama (With 750 Practices Across 50 States and the Territories of Guam, Puerto Rico, and Virgin Islands)
Mental Health Networks	
Missouri Therapy Network (MTN)* http://pbrn.ahrq.gov/pbrn-registry/mo-therapy-network Location: Missouri (With 800 Practices in 1 State)	South Texas Psychiatric Practice-Based Research Network (STP PBRN)* http://pbrn.ahrq.gov/pbrn-registry/south-texas-psychiatric-practice-based-research-network Location: Texas (With 72 Practices in 1 State)
Recovery Oriented Care Collaborative (ROCC) http://pbrn.ahrq.gov/pbrn-registry/recovery-oriented-care-collaborative Location: California (With 4 Practices in 1 State)	
Other Affiliate Networks	
Athletic Training Practice-Based Research Network (AT-PBRN) http://www.atpbrn.org Location: Arizona (With 66 Practices Across 12 States and Singapore) Network Type: Athletic Training	Massage Northern Ohio Practice-Based Research Network (MNO-PBRN) http://www.mnopbrn.weebly.com Location: Ohio (With 68 Practices in 1 State) Network Type: Massage Therapy
The Bravewell Integrative Medicine Research Network (BraveNet) http://www.bravewell.org/ Location: North Carolina (With 14 Practices Across 11 States) Network Type: Integrative Medicine	Ohio Valley Node (OVN) http://pbrn.ahrq.gov/pbrn-registry/ohio-valley-node-1 Location: Ohio (With 9 Practices in 1 State) Network Type: Integrative Medicine



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Affiliate PBRNs	
<p>Center for the Advancement of Healthcare Education and Delivery Network (C-AHEADNet) http://www.cahead.org Location: Colorado (With 10 Practices in 1 State) Network Type: Family Medicine</p>	<p>Neurology Practice-based Research Network (NPBRN)* http://pbrn.ahrq.gov/pbrn-registry/neurology-practice-based-research-network Location: Illinois (With 8 Practices Across 8 States) Network Type: Neurology</p>
<p>Dietetics Practice Based Research Network (DPBRN) http://eatright.org/members/dpbrn Location: Illinois (With 1400 Practices Across 50 States and Australia, Bermuda, Greece, India, Israel, Jordan, Malawi, Norway, Saudi Arabia, Philippines, Singapore, and Sweden) Network Type: Nutrition/Dietetics</p>	<p>Palo Alto Medical Foundation Research Institute (PAMFRI) http://www.pamf.org Location: California (With 44 Practices in 1 State) Network Type: Mixed (a combination of family medicine, internal medicine, pediatrics, nursing, and other specialties)</p>
<p>Home Visiting Applied Research Collaborative (HARC)* http://www.hvrn.org Location: Maryland (With 184 Practices Across 41 States and the Territories of Guam, Puerto Rico, and Virgin Islands) Network Type: Home Visiting</p>	<p>Post-Acute Therapeutics and Health (PATH) Clinical Research Institute (PATH Clinical Research Institute) http://pbrn.ahrq.gov/pbrn-registry/post-acute-therapeutics-and-health-path-clinical-research Location: Washington (With 900 Practices Across 43 States) Network Type: Mixed (a combination of family medicine, internal medicine, pediatrics, nursing, and other specialties)</p>
<p>The International Chiropractic Pediatrics Association PBRN (ICPA PBRN) http://icpa4kids.com/research/pbrn.htm Location: Pennsylvania (With 3500 Practices Across 50 States and the Territories of Guam, Puerto Rico, and Virgin Islands) Network Type: Chiropractors</p>	<p>Podiatry Research Network (PRN) http://pbrn.ahrq.gov/pbrn-registry/podiatry-research-network Location: Texas (With 5 Practices in 1 State) Network Type: Mixed (a combination of family medicine, internal medicine, pediatrics, nursing, and other specialties)</p>
<p>Improvement Science Research Network (ISRN) http://www.ISRN.net Location: Texas (With 135 Practices Across 50 States) Network Type: Nursing</p>	<p>Scripps Health PBRN (SH) http://pbrn.ahrq.gov/pbrn-registry/scripps-health-pbrn Location: California (With 5 Practices in 1 State) Network Type: Mixed (a combination of family medicine, internal medicine, pediatrics, nursing, and other specialties)</p>
<p>Massachusetts School Nurse Research Network, Inc. (MASNRN) http://masnrn.org Location: Massachusetts (With 112 Practices in 1 State) Network Type: Nursing</p>	<p>West Virginia Practice Based Research Network (WVPBRN) https://pbrn.ahrq.gov/pbrn-registry/west-virginia-practice-based-research-network Location: West Virginia (With 53 Practices in 1 State) Network Type: Family Medicine</p>



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Affiliate PBRNs

MessageNet Practice Based Research Network
(MessageNet)*

<http://www.massagenet.org>

Location: Illinois (With 617 Practices Across 43 States, the Territories of Guam, Puerto Rico, and Virgin Islands, and Australia, Barbados, Canada, Cyprus, Dominican Republic, France, India, Indonesia, Italy, Malaysia, New Zealand, North Korea, Philippines, Saudi Arabia, Singapore, South Korea, Spain, St Lucia, and United Kingdom)

Network Type: Massage Therapy

*Featured in this summary.

For more information on these and other AHRQ-registered PBRNs, visit the [PBRN Registry](#). Use the PBRN Registry [advanced search feature](#) to search for networks by location, type of network, health conditions of interest, and geographic coverage.



Citations

Dentistry

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Funding: Grants U01-DE-16746, U01-DE-16747 and U19-DE-22516 from the National Institute of Dental and Craniofacial Research, National Institutes of Health

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Mental Health

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Pharmacy

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Funding: the Tennessee Department of Health

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Funding: The Indiana Clinical and Translational Sciences Institute to Dr. Beth Meyerson at Indiana University School of Public Health-Bloomington (ICTSI NIH/NCRR grant no. TR000006)

Other Non-Primary Care Topic Areas

<http://www.expectstudy.org/>.

Funding: NIH

<http://www.hvrn.org/harc-projects.html>

Funding: Funded through the Home Visiting Research Network. The Home Visiting Research Network is supported by Cooperative Agreement UD5MC24070 from the Maternal, Infant, and Early Childhood Home Visiting (MIECHV) Research Program, Maternal and Child Health Bureau, Health Resources and Services Administration, Department of Health and Human Services.



For more information about the AHRQ PBRN Resource Center, please visit pbrn.ahrq.gov or e-mail PBRN@ahrq.hhs.gov.

