



Practice Based Research Networks

Research data generated by Practice-Based Research Networks (PBRN, or “Network”) provide valuable insights to the clinician seeking to treat patients based upon an evidence-based dentistry approach. The PBRN model seeks to organize large numbers of clinicians into a group who are able to investigate pertinent dental questions, disseminate this information in a wide variety of forums, and promote research-based clinical treatment among its members. There are over 100 Networks in operation in the United States across a range of disciplines, including medicine and dentistry, providing care to some 45 million patients.¹

Importantly, research undertaken by a PBRN utilizes data gathered from a diverse group of researchers. For example, a dental PBRN study might include several hundred researchers from all areas of the United States, with different practice models, experience levels, treatment philosophies, and schedules.² They collect data in a “real world” environment, with hygiene checks and busy clinic schedules and a clinical practice to maintain. Contrast this approach to a traditional randomized trial in a University setting. In the academic approach, the clinical work is typically performed by 1 or 2 master clinicians, in an ideal setting, with no time pressure and little financial constraints to generate clinic income. These study designs provide excellent evidence, but on occasion the results may not translate directly to the clinical practice setting. The Network research opportunities provide data which may track closely to the clinical experience of a dentist working in private practice. The PBRN produces “practical science” done for the benefit of everyday clinical practice.

Structurally, a Practice-Based Research Network contains a central administrative core surrounded by a large group of clinicians and other participants who gather the research data. Many Networks are funded by their respective agencies in the National Institutes of Health (NIH). Research questions are typically proposed by members of the Network, vetted through a submission process, and then organized into research trials. These investigations can be of virtually any research type, from surveys of large numbers of clinicians to longitudinal cohort studies to randomized controlled trials to test novel interventions. The hallmark of the PBRN study is that the research is done by the members of the network. Members of the network also serve as lead investigators of the trial to promote and design the study. The administrative core of the Network provides vital study support, such as statistical analysis, data base management, and IRB submissions. In this collaborative model, PBRNs link contemporary research topics with rigorous research methods to produce data that can be utilized for relevant clinical practice.³

It is the position of the American College of Prosthodontists (ACP) that all members should be actively encouraged to be involved in the collection and dissemination of data that can improve our evidence base and clinical care of patients. The ACP has been a leader in embracing evidence-based dentistry for many years. Such a commitment requires a simultaneous effort to produce and obtain quality evidence for basing clinical decisions. For many practicing clinicians, involvement in a Practice-Based Research Network is an ideal way to accomplish this goal.

References

1. Peterson KA, Lipman PD, Lange CJ, et al: Supporting better science in primary care: a description of practice-based research networks (PBRNs) in 2011. *J Am Board Fam Med.* 2012; 25:565-571
2. Makhija SK, Gilbert GH, Rindal DB, et al: DPBRN Collaborative Group. Practices participating in a dental PBRN have substantial and advantageous diversity even though as a group they have much in common with dentists at large. *BMC Oral Health.* 2009; 15:9-26
3. Nutting PA, Beasley JW, Werner JJ: Practice-based research networks answer primary care questions. *JAMA.* 1999; 281:686-688.



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