

The creation and development of the Dental Practice-Based Research Network

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Practice-based research networks (PBRNs) are consortia of practices committed to improving clinical practice through research and collegiality, and they have the potential to significantly and uniquely contribute to improving clinical practice. Therefore, they have continued to grow in number and size.¹⁻⁸ They include a diverse array of medical PBRNs and, more recently, dental PBRNs.⁹⁻¹⁵ Successes and failures of and lessons learned from medical PBRNs¹⁻⁸ provide an opportunity for new PBRNs, such as dental PBRNs, to plan their development accordingly.

The growth in PBRNs can be attributed to the advantages they offer, both to research and quality improvement¹⁶⁻¹⁸; to their ability to move scientific advances into daily practice quickly; and to their ability to bring practice-relevant topics onto the research agenda. Few reports in the literature, however, have been published on the function and structure of dental PBRNs, and this information is important to dental practitioners and academics who want to engage in PBRN research or begin a new PBRN.

The Dental Practice-Based Research Network (DPBRN) began in 2002 as the Alabama Dental Practice Research Network and was funded by a grant from the Univer-

ABSTRACT

Background. Practice-based research networks (PBRNs) are consortia of practices committed to improving clinical practice. They have become more common and include dental PBRNs. Few reports in the literature, however, have addressed the structure and function of dental PBRNs.

Methods. After initial development in Alabama, the Dental Practice-Based Research Network (DPBRN) now includes practitioner-investigators in seven U.S. states and three Scandinavian countries. Although most of the function and structure was developed at the inception of DPBRN, valuable input from practitioner-investigators has led to significant ongoing refinements.

Results. DPBRN practitioner-investigators have contributed to research at each stage of its development, leading to substantial improvements in study designs and customization of study protocols to their daily clinical practices. Practitioner-investigators also have helped refine the structure and function of DPBRN to foster the potential impact of research.

Conclusions. Practitioners from diverse settings are partnering with fellow practitioners and academics to improve daily clinical practice and meet the needs of clinicians and their patients in DPBRN.

Practice Implications. Dental PBRNs can improve clinical practice by engaging dentists in the development and implementation of studies that are of direct interest to them and their patients, and by incorporating findings from these studies into their daily clinical practice.

Key Words. Practice-based research network; dentistry; practitioner-investigators; clinical practice; multicenter studies.

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sity of Alabama at Birmingham (UAB). A key justification for establishing the network was shown in a community-based study that successfully recruited and collaborated with 297 dentists in Florida and Georgia.¹⁹ The Alabama network provided essential infrastructure development, a Web site to communicate with dentists, and data from a 101-item enrollment questionnaire that was completed by 845 of Alabama's approximately 1,900 licensed dentists. The dentists' responses to this questionnaire indicated substantial interest in participating in a dental PBRN, and they provided data about themselves and their practices that have since proved invaluable.

In 2003, we implemented the Dental Tobacco Control.Net: Improving Practice (National Institutes of Health [NIH] National Institute on Drug Abuse grant R01-DA-17971) project, which enrolled 190 dentists from Alabama, Florida and Georgia and demonstrated that dentists from the three-state area would participate successfully in a collaborative practice-based network. In 2004, we initiated the Alabama Dental Practice Research Network Development (NIH National Institute of Dental and Craniofacial Research [NIDCR] grant R21-DE-16033) project that funded a practice-based study of endodontic treatment and provided additional infrastructure support. These projects provided us with invaluable practical experience in organizing network activities and interacting with dentists and their staff members across a relatively broad geographic area.

We developed DPBRN in response to a 2004 initiative from NIDCR. In 2004, we collaborated with the University of Florida, which has a history of conducting restorative dentistry practice-based studies in Florida and Scandinavia.^{20,21} This collaboration resulted in a plan for enrolling dentists in Alabama, Florida, Georgia and Mississippi. We also collaborated with HealthPartners (HP) of Minneapolis and Kaiser Permanente Northwest/Permanente Dental Associates (PDA) of the greater metropolitan Portland, Ore., area. HP is a prepaid, multispecialty group that provides comprehensive health care. The HP Dental Group is staffed by 58 dentists at 16 clinic locations that serve about 100,000 enrollees. The PDA dental care program includes 110 dentists in 14 dental clinics in Oregon and Washington that serve about 180,000 members with dental benefits. The HP and PDA groups have conducted practice-based research, including joint

collaborative projects.^{22,23}

We also included a DPBRN Scandinavian region in Norway, Sweden and Denmark that was based administratively at the University of Copenhagen, Denmark. The Scandinavian region has had considerable experience in dental practice-based research and added to DPBRN's practitioner diversity and diversity of preventive dentistry treatment philosophies.^{20,21} It also has helped identify international variations in treatment, which can help refine questions and identify research priorities.²⁴

DPBRN competed for NIDCR funding and was awarded a grant for 2005 through 2012. Although most of DPBRN's function and structure was developed at its inception in 2005, valuable additional input from DPBRN practitioner-investigators has led to important refinements since then. We report on the status of these refinements in this article.

ADMINISTRATIVE STRUCTURE OF DENTAL PRACTICE-BASED RESEARCH NETWORK

The mission of DPBRN is "To improve oral health by conducting dental practice-based research and by serving dental professionals through education and collegiality." DPBRN is committed to maximizing the practicality of conducting research in daily clinical practice across geographically dispersed regions, so its structure is designed to focus some activities at the regional level (for example, close interactions with practitioner-investigators) and other activities that can be done on behalf of the entire network (for example, study development) at a central level. The DPBRN central administrative base is at UAB and includes the network chair office and the Coordinating Center. The network regions are PDA, HP/Minnesota, Florida/Georgia, Alabama/Mississippi and Scandinavia, with which all DPBRN practitioner-investigators are affiliated. Each region has its own budget subcontracted with the network chair, which allows for

ABBREVIATION KEY. CONDOR: Collaboration on Networked Dental and Oral Health Research. **DPBRN:** Dental Practice-Based Research Network. **EC:** Executive committee. **HP:** HealthPartners. **NIDCR:** National Institute of Dental and Craniofacial Research. **NIH:** National Institutes of Health. **PBRNs:** Practice-based research networks. **PDA:** Permanente Dental Associates. **UAB:** University of Alabama at Birmingham.

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