Measuring the Impact of Practice-based Research Networks (PBRNs)

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Practice-based research networks (PBRNs) continue their upward trajectory in scope and numbers, now engaging community practices that reach approximately 15% of the US population. In this issue, Peterson et al,[1] characterizes US PBRNs based on data from the 2011 Agency for Healthcare Research and Quality PBRN Resource Center's voluntary PBRN registration. The authors indicate that 143 active PBRNs were registered in 2011, representing an increase of 30 PBRNs from 2010 and doubling the number of networks registered in 2004. The median number of individual members in registered PBRNs was 170. On average, registered PBRNs conducted 4 studies during their history, however, more than half completed 8 or more studies and 22 reported completing more than 40 studies. Identified strengths were PBRN leadership and expertise in research design and project management. As in past years, significant challenges were lack of funds for infrastructure support, difficulty securing research grants, and struggles with providing compensation to PBRN members.

Clinical and Translational Science Awards (CTSAs) are a promising source of sustaining infrastructure support for PBRNs. The authors report that approximately one half of registered PBRNs are affiliated with a funded CTSA; however, research productivity and capacity of CTSA-affiliated PBRNs were not significantly different from PBRNs not affiliated with a CTSA. This may be due to minimal CTSA funds being allocated to CTSA-affiliated PBRNs and misconceptions on the part of CTSA leaders about the role of PBRNs in clinical and translational research.[2] The current emphasis by the National Institutes of Health on collaboration between CTSAs may present opportunities for networks with less productive CTSA relationships to partner with PBRNs with strong relationships with a CTSA. CTSAs that provide significant levels of support to PBRNs effectively demonstrate to other CTSAs the value of PBRNs in clinical and translational research, which may lead to increased CTSA support of PBRNs.

Peterson's PBRN registry report provides reasons for optimism about the stability of networks, as rates of network attrition appear to be minimal. Since 2008, only 4 PBRNs are reported to have disbanded, 2 merged, and 1 no longer met eligibility requirements. This improvement in network permanence suggests steady advancement from a previous era when PBRNs were more ephemeral. Further contributions to the durability of networks is robust PBRN leadership, which was identified as a significant strength by two thirds of registered PBRNs.

Evaluation of the scope and impact of PBRNs is essential for the continued growth and development of the field. In its current state, the PBRN registry is a useful tool for documenting the state of networks, but it has the potential to become a powerful evaluation mechanism that advances the field through what it measures. It is important to recognize that many PBRNs have evolved into multifaceted health improvement networks[3] that not only conduct research but also engage in quality improvement,[4–7] practice change,[8,9] continuing education,[10] maintenance of board recertification,[11] clinician retention,[12]

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community engagement,[13] and research training.[11] These emerging roles are creating new opportunities for PBRNs and changing the face of practice-based research, and corresponding processes and outcomes should be measured. Developing registry data fields that capture PBRN activity in these areas will enable a more comprehensive account of all that PBRNs are achieving.

Assuring PBRN member engagement is essential in an ever-changing health care environment in which clinicians face increasing time pressures and have decreasing autonomy. A core value of PBRNs has been the engagement of network members in reflective inquiries about practice that lead to researchable questions and collaborative partnerships. The participatory engagement of clinicians in research has been unique to PBRNs, leading to high levels of member investment and better translation of research into practice.[14] Historically, the primary vehicles of engagement have been clinician-led "bottom-up" studies in which the study ideas of network members are developed and implemented with the support of PBRN leaders and staff.[15] This contrasts with "top-down" PBRN studies led by academic investigators. It may be useful for the registry to capture the proportion of studies of each type to permit characterization across PBRNs and to identify best practices for member engagement. Equally important will be the measurement of newer methods of engaging PBRN clinicians, including participation in PBRN-led quality improvement collaboratives, maintenance of board recertification learning groups, and the use of social media.

Finally, the PBRN registry has the potential to evolve into a uniform evaluation template that guides the internal assessment process within individual PBRNs, which is a significant area of need in many networks.[16] It may be beneficial for the PBRN community to develop a shared, comprehensive PBRN evaluation tool built on the foundation provided by the existing PBRN registry. A registry-based evaluation tool would enable individual-level PBRN benchmarking and guidance of network improvement efforts. Aggregate-level registry evaluation data could be a powerful tool for raising the awareness of policymakers and influencing prioritization of funding for PBRNs.

What we choose to measure has far-reaching implications.[17] The uniform, systematic evaluation of network activities and aggregation of evaluation data has the potential to significantly advance the field of practice-based research. The national PBRN registry provides a platform for an evaluation framework that can demonstrate the impact of PBRN research, prove the value of research networks, and enhance the influence of PBRNs.

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