

BRIEF REPORT

A Centralized Survey Model for Clinician Engagement in Practice-Based Research Networks (PBRNs)

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Background: Practice-Based Research Networks (PBRNs) facilitate important clinical research by connecting primary care clinicians with research opportunities. The West Virginia Practice-Based Research Network (WVPBRN), supported by the West Virginia Clinical and Translational Science Institute (WVCTSI), developed the Collective Outcomes Research Engagement (CORE) Survey to reduce barriers and support clinician participation in research.

Methods: The CORE Survey is an annual, centralized tool that combines investigator-driven questions into a single survey, aimed at reducing survey fatigue while supporting relevant research. Proposals are reviewed and selected based on relevance to primary care, feasibility, and alignment with WVPBRN priorities. The survey is distributed through the WVPBRN listserv using a snowball sampling approach. Investigators receive their results within 30 days to support analysis, dissemination, and grant development, with analytic support provided by network staff.

Results: From 2018 to 2023, the CORE Survey received 39 proposals, with 21 selected for inclusion. Resulting outputs include 4 peer-reviewed publications, 1 policy change, multiple local and national presentations, and data used in successful grant submissions. Response levels have remained stable, with 68 respondents in 2023.

Conclusion: The CORE Survey has become a sustainable and reproducible part of WVPBRN infrastructure that supports clinician-driven research across West Virginia. While research outputs vary year to year, the process has maintained steady engagement and contributed to a growing pipeline of scholarly activity. This model may benefit other PBRNs seeking to strengthen research participation in rural primary care. (J Am Board Fam Med 2025;38:1012–1017.)

Keywords: Community Health Centers, Practice-Based Research, Primary Health Care, Rural Health, Surveys, Questionnaires and West Virginia

Introduction

Practice-based research bridges the gap between medical research and clinical care. Findings from

practice-based research enhance the quality of care in community health settings and contribute to improved health outcomes.^{1,2} Although the benefits are clear, necessary resources to conduct this research are often limited, especially in rural areas. Clinicians in safety net clinics identified a lack of research generated from clinician questions, lack of appropriate funding, lack of clinician time, and lack of infrastructure as barriers to participation in research.³

Practice Based Research Networks (PBRNs) establish strong relationships between researchers and community clinicians. These partnerships improve health care delivery and outcomes as researchers and clinicians work together to develop more effective clinical approaches to address common health concerns.^{3–5} PBRNs create infrastructure to address the most pressing health issues within a particular geographic area and population.^{6–8} They offer support

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to clinics to manage national health care changes and rural health care challenges they face.^{2,9}

Reasons for clinicians' underinvolvement in research include the amount of time required for projects (which pulls away from the demands to treat their patients), and clinicians' own perceived lack of statistical and technical skills.^{7,8} Through the support of the West Virginia Clinical and Translational Science Institute (WVCTSI), founded in 2013, the West Virginia Practice-Based Research Network (WVPBRN) supports primary care research through a membership comprised of Federally Qualified Health Centers (FQHC's), Rural Health Clinics (RHCs), Critical Access Hospitals (CAHs), and academic clinics to improve health outcomes.

WVPBRN leadership identified challenges in collecting survey data due to low response rates and limited time among clinicians. To address this, the Collective Outcomes Research Engagement (CORE) Survey was developed as an annual, centralized survey combining questions from multiple clinicians-researchers. It aims to reduce survey fatigue, increase clinical questions, and gather pilot data for future research. The survey also enhances research quality and publication frequency across the network, this allows WVPBRN staff to mentor during proposal development and provide feedback to authors with opportunities to revise and resubmit.

Methods

The WVPBRN's CORE Survey mirrored the Council of Academic Family Medicine Educational Research Alliance (CERA) Survey model for survey design of a collaborative set of topics that are within the same survey.¹⁰ Modifying the model to fit the needs of the WVPBRN, the CORE Survey was developed as a compilation of survey questions from multiple clinicians and/or investigators from our PBRN relating to a variety of primary care topics in West Virginia. Clinicians and/or investigators submit proposal applications and undergo a review process to be chosen for inclusion in the annual CORE Survey. The proposals are reviewed by a protocol review team composed of academic and community clinicians across rural clinics, WVCTSI research staff and WVPBRN leadership. Each proposal submission includes a brief rationale for the project idea and how it can be translated into primary care practices. Submissions include a list of no more than 10 proposed questions and

the plan for disseminating results of the survey information. The WVPBRN facilitates the protocol review on the submitted projects. Submission scores are based on 1) relevance to primary care, 2) quality of submission, 3) alignment with WVPBRN goals and priorities, 4) accessibility of survey responses, and 5) impact on future projects and practice implications using a 5-point Likert scale for each domain. The protocol review team selects the top 3 project proposals (for a total of 30 questions) that are most relevant and applicable to WVPBRN members. Submissions with the highest overall scores have their questions included in the final survey. Demographic questions collect site-level and respondent-level data to track membership trends over time. Starting in 2021 questions were added to differentiate responses from clinicians vs non-clinicians. The survey is approved by the West Virginia University Institutional Review Board (IRB# 2009104471).

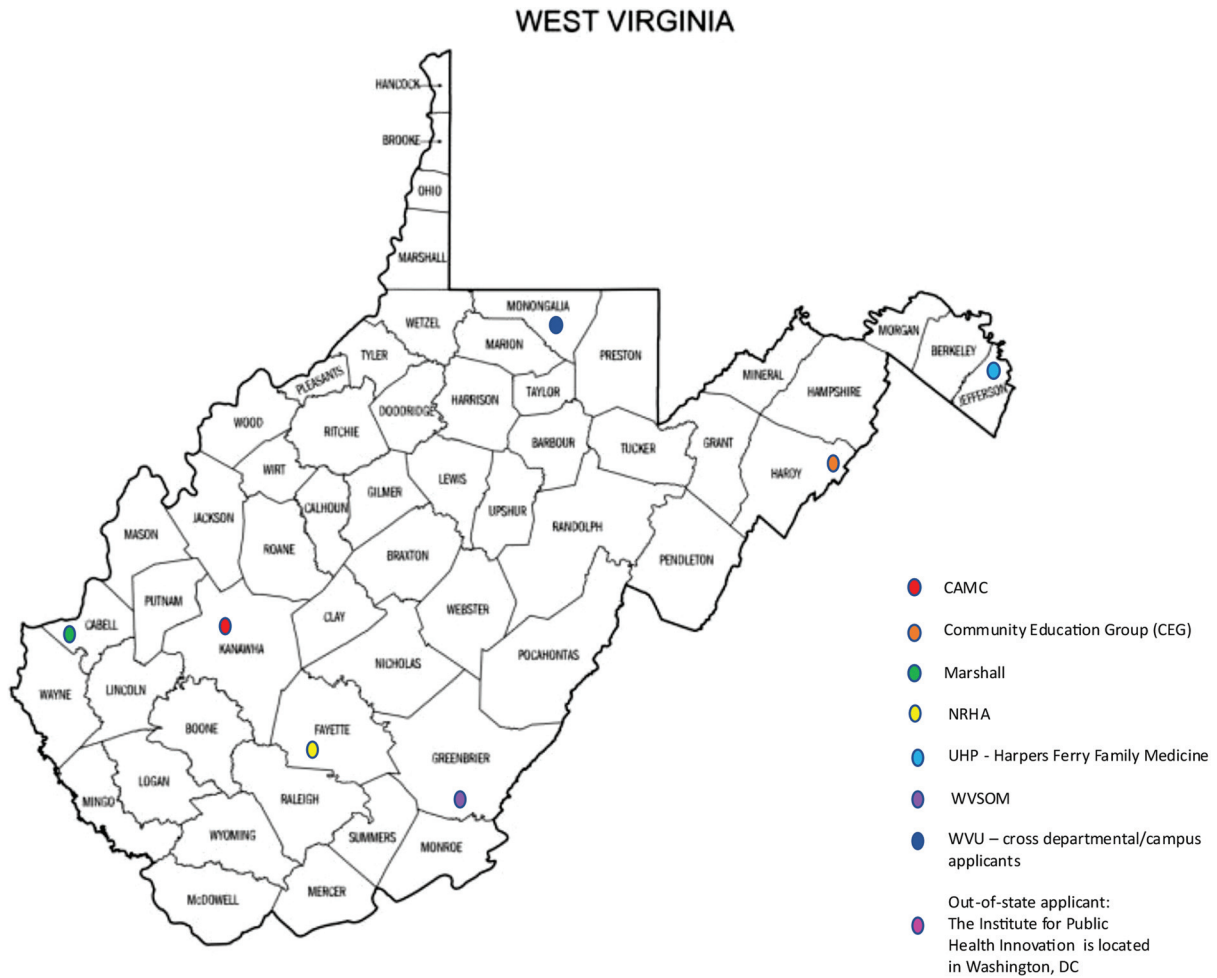
The survey is developed and evaluated, it is shared with all WVPBRN members to participate by using the WVPBRN listserv and then distributed across each organization by using a snowball sampling method. Clinicians and/or administrators of practices in the WVPBRN complete the survey electronically using the REDCap platform. The survey is distributed to all members, but questions are marked by relevance for clinicians, administrator, or both.

Investigators whose questions are selected for the survey have exclusive access to their portion of the survey results within 30 days after the conclusion of the survey to perform their own analysis. The WVPBRN and WVCTSI staff support investigators with that analysis as needed. The results are shared with the investigator first to allow publishing and proposal development. WVPBRN can access the survey data after 120 days of survey completion for use if desired. The network provides broader dissemination to members via newsletters, infographics, and the annual WVPBRN meeting.

Results

We have successfully reached and maintained our goal of reducing surveys from 4 to 6 a year before 2016 to 1 in 2017 forward. From 2018 to 2023, the CORE Survey process received 39 project submissions, of which 21 were selected for inclusion. Though a majority of submissions were generated from West Virginia University, members affiliated

Figure 1. Sites submitting questions to West Virginia practice based research network Collective Outcomes Research Engagement (CORE) Survey. Abbreviations: CAMC, Charleston Area Medical Center; CEG, Community Education Group; NRHA, National Rural Health Association; UHP, Harpers Ferry Family Medicine; WVSOM, West Virginia School of Osteopathic Medicine; WVU, West Virginia University.



with 8 different health care organizations across West Virginia also participated in submissions, illustrating broad interest and involvement from a geographically variable group (Figure 1). The accepted

survey proposals came from primarily practicing clinicians, with 10 from academic practices and 5 from community practices, and the additional 6 selections came from dedicated researchers.

Table 1. Annual CORE Applications and Response Demographics

Year	Applications Reviewed	Count of Unique Application Sites	Accepted Surveys Unique Member Site Count	Selected	Clinician Responses	Administrator Responses	Unique Member Site Count	Responses
2018	6	3	2	3	NA	NA	3	37
2019	8	3	2	3	NA	NA	3	70
2020	8	3	2	5	NA	NA	3	102
2021	7	2	2	4	59	7	2	66
2022	5	2	1	3	60	4	2	64
2023	5	1	1	3	61	7	1	63

Abbreviation: CORE, Collective Outcomes Research Engagement.

Table 2. Range Of Research Interests among West Virginia Practice Based Research Network (WVPBRN) Members

Year	Project Topic	Academic Clinician/ Community Clinician/Researcher	Outcomes
2018	Weight Management Guideline Based Practice in West Virginia (WV) Primary Care Clinics	Academic Clinician	Publication
2018	Quality Measures and Clinician Patient Relationship	Community Clinician	Presentation
2018	Attitudes and Practice Regarding Screening and Treatment for Hepatitis C in WVPBRN	Academic Clinician	Grant Submission
2019	Care of the Heart Failure Patient in the Primary Care Setting	Researcher	Presentation
2019	Hepatitis C Screening Patterns for Baby Boomers in the Primary Care Setting in WV	Academic Clinician	Publication ¹¹
2019	Assessing Primary Care Clinicians Knowledge of the Psoas Muscle in Low Back Pain	Community Clinician	Program Development
2020	Reducing Stigma Among Pre-Contemplative Non-Adopters of Medication Assisted Therapy in Rural Primary Care	Academic Clinician	Presentation
2020	Trends in Positive Urine Drug Screens Opioid, Methamphetamine, and Cocaine in West Virginia University Comprehensive Opioid Addiction Treatment Clinic Patients	Community Clinician	Presentation
2020	Prostate Cancer Screening in West Virginia: Primary Care Clinicians Practice and Comfort	Academic Clinician	Presentation
2020	Needs Assessment to inform Rural Obesity Medical Education for Primary Care in West Virginia	Academic Clinician	Publication ¹²
2020	Health Pandemic Preparedness in Primary Care	Community Clinician	Publication ¹³
2021	Clinician Experience with Patient Portal Messaging	Community Clinician	Presentation
2021	Assessment of Cognitive Impairment in West Virginia	Researcher	Policy Change, Presentation
2021	Clinician Perception of Patients' Diabetes Distress and Diabetes Self-Management During the COVID-19 Pandemic	Researcher	Publication, ¹⁴ CTSI 50k Pilot Grant
2021	Barriers to Participating in West Virginia Clinical Translational Science Institute Project ECHO (Extension for Community Healthcare Outcomes)	Researcher	Presentation
2022	Increasing Awareness of Gender Affirming Care	Academic Clinician	Presentation
2022	Screening for Childhood Trauma in Adulthood: Perspectives of Appalachian Primary Care Clinicians	Researcher	Presentation
2022	Increasing Awareness of Options of Phantom Limb Pain after Amputation	Academic Clinician	Presentation
2023	Women's Reproductive Healthcare in WV Primary Care Clinics	Researcher	Presentation
2023	Management of Chronic Pain and Opioid Use Disorder in Primary Care	Academic Clinician	Presentation
2023	Perspectives of Appalachian Primary Care Clinicians on Evidence-Based Obesity Treatment Options	Academic Clinician	Presentation

Abbreviation: CTSI, Clinical and Translational Science Institute.

The CORE Survey quickly established response growth and experienced an increase in responses during the COVID-19 pandemic in 2020. We attribute this to individuals having more availability to

respond to surveys. There has been sustained increase from the initial 43 respondents to 68 in 2023. Starting in 2021 clinician vs nonclinician showed only 4 to 7 nonclinician responses in a year

(Table 1). This maintained level of engagement among clinicians and administrators suggests the CORE Survey has been effective at addressing barriers to clinician participation in survey research.

Table 2 highlights the range of research topics investigated through the CORE Survey, which span chronic disease management, behavioral health, clinician training needs, and innovative care delivery models. This range shows the evolving priorities of West Virginia primary care clinicians along with the relevance and adaptability of the CORE Survey mechanism in capturing and promoting clinician-driven research.

Conclusions

The CORE Survey has become a successful component of yearly WVPBRN activities, leading to increased question proposal submissions, publication submissions, and preliminary data for grant applications. The data collected from the CORE Survey produces valuable insight on the practices and care found at rural primary health clinics in West Virginia while providing clinicians and researchers increased opportunities to explore their research ideas. The consistent and time-saving format has increased overall survey research engagement from our Network membership and has provided informative data that benefits primary care in West Virginia.

The growth of survey responses has stabilized over the past 3 years. We are currently considering additional recruiting avenues such as direct outreach from start of survey instead of primarily using e-mail listserv and partnering with other state organizations for distribution. The higher response rate in 2020 is attributed to the survey being conducted in spring during the height of COVID-19. The use of snowball surveying has been both a limitation and benefit for the CORE Survey. The main limitation of a non-probability survey is that it prevents the calculation of response rates. The listserv is disseminated to 314 individuals at our 131 clinical sites. We recognize that this listserv could be incomplete due to the ever-evolving nature of our membership and in certain health systems using the gate keeper model for distributing e-mails. However, we have maintained 20 to 30% response rate from 2019 to 2023. By using key contacts at each health system in the network to do outreach to their clinicians and administrators, we can survey the most current membership without

increasing administrative burden on WVPBRN. The WVPBRN leadership plans to improve reach of CORE Survey via partnerships, exploring biannual surveys and potential incentives for participation with the goal of expanding membership, increase research involvement, and developing a more complete listserv. This includes the potential collaboration with state medical groups, such as the West Virginia Academy of Family Physicians (WVAFP), for dissemination of surveys to their members.

The CORE Survey has contributed to the research pipeline within the Network. Four selected projects have led to peer-reviewed publications, while others have supported grant applications to National Institute on Drug Abuse (NIDA) and a funded WVCTSI pilot grant. In addition, several projects have been presented at local and national forums, including the North American Primary Care Research Group (NAPCRG), demonstrating the survey's role in elevating local research to a broader academic audience. One project notably informed state-level policy changes to enhance clinician training in cognitive assessments.

This CORE Survey format is easily reproducible and could be useful to other networks. We have found the benefits of having a recurring survey of network membership include increased survey participation and research opportunities for clinicians, in an environment with limited time and resources for research. In addition, this survey provides data on a very local level for the membership served by the PBRNs.

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