A Partnership of Two U.S. Research Networks to Improve Public Health

Robin C. Vanderpool, DrPH, Ross C. Brownson, PhD, Glen P. Mays, PhD, Richard A. Crosby, PhD, Stephen W. Wyatt, DMD, MPH

Introduction

Strategic collaborations are essential in moving public health research and practice forward,[1] particularly in light of escalating fiscal and environmental challenges facing the public health community. This commentary provides background and context for an emerging partnership between two U.S. networks, prevention research centers (PRCs) and public health practice–based research networks (PBRNs), designed to create an impact on public health practice. Supported by the CDC, PRCs are celebrating more than 25 years of transdisciplinary applied prevention research grounded in community and stakeholder engagement. Public health PBRNs, funded by the Robert Wood Johnson Foundation, conduct innovative public health services and systems research with public health agencies and community partners to improve public health decision making. By utilizing each of the networks' respective strengths and resources, collaborative ventures between PRCs and public health PBRNs can enhance the translation of applied prevention research to evidence-based practice and empirically investigate novel public health practices developed in the field. Three current PRC–PBRN projects are highlighted, and future research directions are discussed. Improving the interconnectedness of prevention research and public health practice is essential to improving health in the U.S.

Background

A recent special issue of the *American Journal of Preventive Medicine* focused on a renewed national research agenda for the field of public health services and systems research (PHSSR).[2] In that issue, Scutchfield and colleagues[3] concluded that directed funding, new types of researchers, and longitudinal data are essential to advance research efforts focused on the organization, financing, and delivery of public health services. The current commentary suggests an addition to this list of needs: strategic partnerships that link applied prevention research, public health practice, and PHSSR. Specifically, a partnership between the national network of prevention research centers (PRCs), which is the largest extramurally funded program of the CDC,[4] and public health practice–based research networks (PBRNs), one of the driving forces behind national, state, and local PHSSR.[5,6]

A partnership between these two networks could further enhance the bidirectional translation of prevention research to public health practice. Linkages between PRCs and public health PBRNs, as guided by the PHSSR agenda, would clearly help address the lack of progress in disseminating and implementing research-tested interventions and programs within the public health practice environment.[7,8] Similarly, such a linkage would contribute to the evaluation of practices and policies implemented in real-world public health settings that have not been previously researched for effectiveness, efficiency, equity, population impact, or cost.[6,9–11] This linkage may allow for an ultimate synergy between applied research and practice. The need for this synergy was best summarized by Larkin and Marks[12]:

> Research unapplied is sterile and hence an unwarranted use of funds and intellect; and just as surely public health practice ungrounded in science is equally fruitless, yielding little health value. Research and practice succeed only when they connect closely with each other.

In the current fiscal environment, where spending for governmental public health activities is declining, medical costs are increasing, and the nation is slowly recovering from the largest economic recession since the Great Depression,[13] the public health community is faced with formidable challenges. For example, public health has been greatly challenged by job losses, federal

From the Rural Cancer Prevention Center (Vanderpool, Crosby), Department of Health Behavior, the Department of Health Services Management (Mays), the Department of Preventive Medicine and Environmental Health (Wyatt), University of Kentucky College of Public Health, Lexington, Kentucky; and the Prevention Research Center in St. Louis (Brownson), Brown School, Washington University in St. Louis, and Division of Public Health Sciences, Department of Surgery and Alvin J. Siteman Cancer Center, Washington University School of Medicine, Washington University in St. Louis, St. Louis, Missouri

Address correspondence to: Robin C. Vanderpool, DrPH, Department of Health Behavior, University of Kentucky College of Public Health, 2365 Harrodsburg Road, Suite A230, Lexington KY 40504. Email: robin@kcr.uky.edu.

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and state funding cuts, and managed care, as well as increased rates of preventable chronic disease, health disparities, and emerging health threats such as H1N1 influenza and natural disasters. Simultaneously, the public health practice community is trying to establish its role in federal healthcare reform, prepare for accreditation and quality improvement planning, and apply underutilized evidence-based public health (EBPH) practices such as those outlined in *The Guide to Community Preventive Services*[14] or *Cochrane Reviews*.[15]

As advocated by the IOM,[9] these activities cannot and should not be performed by an individual public health agency or in isolation. Scutchfield and Mays[16] suggested that coordinated, well-defined partnerships are pivotal to improving public health system performance. Public health–related partnerships may involve local and state health departments, government, academia, education systems, community organizations, private businesses, healthcare delivery agencies, and/or health associations. Partnerships can vary in nature depending on partners' capacity, available resources, incentive to participate, purpose, and function. Specifically, partnerships focusing on information exchange, planning and policy development, *and* implementation of programs and policies are more likely to directly influence public health outcomes than partnerships that focus on any of these aspects in isolation.[16] It is proposed here that this type of strategic partnership be formed between PRCs and public health PBRNs, as guided by PHSSR. This commentary describes how this proposed linkage may best be made and why the effort should be a priority.

U.S. Prevention Research and Public Health Practice Networks

Prevention research centers were established by Congress in 1984 to "undertake research and demonstration projects in health promotion, disease prevention, and improved methods of appraising health hazards and risk factors…and serve as demonstration sites for the use of new and innovative research in public health techniques to prevent chronic diseases."[17] The PRC program is administratively located in the CDC's National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. Funded PRCs are located in schools of public health and schools of medicine or osteopathy that have an accredited residency program in preventive medicine and are composed of academic researchers, community members, and public health partners.

Originally funded as a network of three sites, PRCs are now located at 37 universities across the country, serving nearly 30 million Americans and 103 partner communities.[18] PRCs work with minority and medically underserved communities to address health issues identified as "winnable battles" by the CDC, such as nutrition, physical activity, obesity, teen pregnancy, tobacco use, and HIV/AIDS, as well as cancer, diabetes, asthma, heart disease, elder health, epilepsy, adolescent health, and mental health disorders.[19] At the core of the PRC program is the transdisciplinary application, evaluation, and translation of prevention research to public health practice, grounded in community engagement.[4,18,20] It is one of the few nationwide networks that has developed a collaborative logic model to mobilize the work of the 37 individual centers.[21]

Prevention research centers are engaged in a variety of research activities, including, but not limited to, community-based intervention studies[22]; comparative effectiveness research (CER)[23]; NIH Clinical and Translational Science Award (CTSA) collaborations[4]; public–private alliances to improve public health[24]; international public health[25]; dissemination framework development[26]; thematic research and policy collaborations[27–29]; and systematic evaluation of PRC network activities.[30] In Fiscal Year (FY) 2011, the PRC network published 643 journal articles and 20 books or book chapters and conducted 729 scientific presentations.[31] PRC publications and presentations target multiple audiences, including researchers, public health practitioners, and policymakers.[32]

In addition to research and dissemination, PRCs are involved in training and mentoring the next generation of public health workers, as well as public health workforce development to further build capacity for science-based approaches to public health.[33] For example, in FY 2011, PRCs collectively trained and mentored almost 1800 students, ranging from high school students to postdoctorates.[31] PRCs offered formal public health training programs to more than 7800 individuals, including public health employees, community members, healthcare practitioners, and representatives of community and nongovernmental agencies.[31] The PRC program also maintains an online training catalog that is available to the larger public health community (www.cdc.gov/prc/training/practitoners/index.htm).

Since their inception nearly 3 decades ago, PRCs have made substantial contributions to public health through the conduct of applied intervention research, dissemination of evidence-based community interventions, creation of public health policy and environmental changes, public health training, community engagement, and provision of direct public health services.[4,30,34–36] However, in recent years, PRCs are being asked to do more work with decreased funding.[36] Given federal budget constraints and the escalating challenges to public