

University of Kentucky

From the Selected Works of Glen Mays

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Public Health Delivery and Cost Studies

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2013 Request for Proposals

Proposal Deadline: March 20, 2013



Robert Wood Johnson Foundation

PUBLIC HEALTH DELIVERY AND COST STUDIES: USING PRACTICE BASED RESEARCH NETWORKS TO IDENTIFY THE COMPONENTS AND COSTS OF EFFECTIVE PRACTICE

PURPOSE

Public Health Practice-Based Research Networks (PBRNs) is a national program of the Robert Wood Johnson Foundation (RWJF) that supports researcher-practitioner networks dedicated to discovering ways to improve the delivery of public health services. A public health PBRN brings multiple public health agencies together with research partners to design and implement comparative studies in real-world practice settings.¹ The Public Health Delivery and Cost Studies Award will support selected PBRNs in implementing studies designed to identify the costs of delivering high-value public health services, and to elucidate the delivery system characteristics that influence the effectiveness, efficiency, and equity of these services. Two categories of awards are available. Category One awards will support focused studies of up to 12 months in duration that estimate the costs of delivering specified public health services, and compare these costs across multiple public health settings within a PBRN using a standard methodology. Category Two awards will support larger comparative studies of up to 18 months in duration that investigate how delivery system characteristics influence the cost of delivering public health services and the effectiveness and/or equity of delivering these services. The Public Health PBRN National Coordinating Center at the University of Kentucky College of Public Health will coordinate the studies and facilitate the use of standardized approaches to enable data from the individual studies to be pooled for comparative analysis across large numbers of practice settings.

BACKGROUND

The scope and scale of public health activities vary widely across communities, as do the institutional and financial arrangements used to produce these activities. However, important gaps in knowledge exist about the causes and consequences of this variation, the degree of alignment with community needs and preferences, and the effects on population health. Efforts to improve the quality, efficiency, and outcomes of public health practice require an in-depth understanding of how these activities are produced and delivered within communities. Very little empirical evidence currently exists concerning what economists and management scientists term the *production functions* for public health activities—the mechanisms through which the inputs of time, money, labor, and information are transformed into programs, services, and policies designed to protect and promote health.

There is also a critical gap in scientific and professional knowledge concerning resources required to deliver a basic set of public health protections for a defined community or population group.² This

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evidence is essential for informing policy decisions that seek to determine the amount and distribution of funding needed to maintain effective public health activities across the United States, and for formulating sound economic justifications for investments in public health strategies.^{3,4} This evidence is also required to guide the financial management decisions of public health agencies, to improve forecasting and prioritizing of resource needs, and to evaluate the efficiency and cost-effectiveness of specific public health strategies.⁵ The lack of systematic knowledge about the costs of delivering public health services—and the factors that influence these costs—has forced policy and administrative decision-makers to rely much more on historical precedent than on empirical data to establish fiscal priorities, financing mechanisms, and operating budgets in public health.⁶ Recognizing these issues, a recent Institute of Medicine study on public health strategies to improve health identified a high-priority need for studies that explicate the components and costs of a minimum package of public health services that should be available in every community.⁷

Finally, the costs incurred in delivering public health services are shaped in part by the structure and operation of the delivery system, by the characteristics of the populations served, and by the nature and quality of the services provided.⁸ The delivery system for public health services comprises a complex mix of governmental agencies at local, state, and federal levels, together with contributing organizations in the private and voluntary sectors and with community members themselves. Research is needed to identify with greater specificity how the characteristics of these delivery systems—including their size and scope of activity, division of roles and responsibilities among contributing organizations, and methods of using human capital and technology—influence the cost, quality, and equity of public health service delivery.

THE PROGRAM

This program will provide public health PBRNs with research funding to implement studies that identify the costs of delivering public health services, and that elucidate the delivery system characteristics that influence the effectiveness, efficiency, and equity of these services. Up to 12 projects may be selected to receive funding. Two categories of awards will be available: 1) 12-month projects to receive funding of up to \$50,000 each, and 2) 18-month projects to receive funding of up to \$150,000.

Category One: Cost Measurement and Comparison Studies

Studies in this category will identify one or more public health services (described in more detail below) and use a standard cost-estimation methodology to measure the costs of delivering the service(s) in at least four different practice settings represented in the PBRN network over a defined period of time. One or more established cost-estimation methods commonly employed in the health and social sciences should be used, such as direct observation methods, time-and-motion methods, random time sampling, activity logs, key informant surveys, and analysis of administrative records.^{9,10} Studies funded under this solicitation should employ methods to accurately distinguish fixed and variable costs and to break down costs into standard components, including personnel, non-personnel, and indirect/overhead costs. In cases where staff and/or equipment are shared across multiple services, studies should use established methods for allocating these costs to their component services. In addition, the studies funded under this

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solicitation should define and measure units of service delivered in order to estimate unit costs for each practice setting. Methods for verifying the validity and reliability of cost measures should be included in the research design for each study. Once cost measurement activities are complete, studies should implement comparative analyses that characterize patterns of variation in the costs of service delivery across participating practice settings, and that identify major sources of variation in costs such as those attributable to underlying factors and economies of scale and scope.

Category Two: Delivery System Comparison Studies

Studies in this category will employ the same methods of cost measurement and estimation used in Category One studies, but will implement these methods within more elaborate research designs and analytic strategies to investigate how delivery system characteristics influence the cost, effectiveness, equity, and/or value of delivering services. These studies may include a larger number of practice settings in their designs in order to test specific hypotheses about system characteristics, and the effects of these characteristics on service delivery. Additionally, these studies may collect measures of service delivery reach, effectiveness, and/or equity alongside measures of cost in order to explore the inter-relationships among these factors and examine how they collectively determine the value of public health services.

Category Two studies should focus on delivery system characteristics that have been identified as priority areas of study in the recently developed National Agenda for Public Health Services and Systems Research (PHSSR) developed by the Robert Wood Johnson Foundation and the U.S. Centers for Disease Control and Prevention (CDC).¹¹ Characteristics to be studied may include alternative organizational structures for service delivery (e.g. free-standing vs. umbrella agencies), inter-organizational and multi-organizational models for service delivery (e.g. public-private partnerships and multi-agency shared-service arrangements), alternative staffing models for public health services, and the use of information and communication technologies in public health service delivery. Studies should give priority to investigating how these delivery system characteristics influence the costs of delivering public health services; however, it may also be important for studies to examine non-financial measures of service delivery performance such as reach, effectiveness, acceptability, and equity. Examples of the types of questions to be addressed by this category of studies include:

- Are there economies of scale and economies of scope in the delivery of public health services, and if so, which bundles of services are most efficient to deliver at which scales of operation?
- How do vertical (state-local) and horizontal (local-local) relationships among governmental public health agencies influence the cost and capacity of delivering public health services? How do regional delivery models and multi-agency shared-service arrangements influence the cost of delivery?
- Under what circumstances can public health services be delivered more efficiently under centralized state delivery models, decentralized local delivery models, and shared state-local models respectively?

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- How do the costs of delivering public health services vary with the reach, effectiveness, and equity in delivering these services? What are the trade-offs and synergies among these alternative elements of service delivery performance in determining the value of public health services?
- How do alternative staffing models (e.g. volume and mix of staff and the distribution of tasks to personnel) influence the cost of delivering public health services?
- How do the costs, effectiveness, and equity of delivering public health services vary with the application of information and communication technologies in public health, such as applications involving electronic health records, health information exchanges, and social media?
- What factors are most influential in contributing to differences in the costs of service delivery between rural and urban public health jurisdictions?

Research Focus Area: Public Health Services

Studies funded under either category of this solicitation should identify one or more public health services as the focus of the inquiry. Public health services include programs, policies, activities, and administrative practices that are implemented for the primary purpose of promoting health and/or preventing disease and injury on a population-wide basis.¹¹ Studies may focus on one or more categorical services that intervene with specific populations and risk factors, such as programs for obesity prevention, sexually transmitted disease control, or food safety. Alternatively or in addition, studies may focus on cross-cutting activities and administrative practices such as community health assessment, epidemiologic surveillance, and community health planning. Studies should avoid a narrow focus on personal health services that are primarily the responsibility of the clinical health care delivery system and that involve public health agencies primarily as safety-net providers of services. The services studied through this solicitation should have broad applicability to public health practice across the United States and should be consistent with the Institute of Medicine's recommendation for defining a "minimum package of public health services" to be identified for priority funding.⁷ Applicants should provide a coherent rationale for their selection of public health services to study based on the expected impact of these services on preventable disease burden and on resources used within the public health system. PBRNs are expected to work collaboratively with their network participants to ensure that the research focus area is rigorous, feasible, and responsive to the information needs and interests of practice partners. Applicants are encouraged to incorporate design features that enhance the project's relevance and utility for practice partners, such as customized and comparative feedback reports, collaborative analysis and interpretation sessions, and interim briefings on study findings.

Standardized Cost Measurement and Analysis

The Public Health PBRN National Coordinating Center at the University of Kentucky College of Public Health will coordinate the studies and facilitate the use of standardized approaches to cost measurement and analysis where possible, so that data from the individual studies can be pooled for comparative analysis across large numbers of practice settings. Studies funded under this solicitation will be required

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collaborate with the Coordinating Center to ensure the use of consistent methods of distinguishing fixed and variable costs, defining units of service, and decomposing costs into standard components, including personnel and non-personnel costs.

ELIGIBILITY CRITERIA

Applicants must meet the following criteria in order to be eligible for grants under this solicitation:

- Applicants must be grantees of the *Public Health PBRN program* (“core” networks) or registered affiliates of the program (“affiliate” networks). To be eligible for this solicitation, affiliate networks must have completed their registration process with the Coordinating Center by the application deadline for this solicitation. All applicants must be governmental public health agencies or nonprofit organizations that work in concert with such agencies and are tax-exempt under Section 501(c)(3) of the Internal Revenue Code. Applicant organizations must be based in the United States or its territories at the time of application.
- Applicants must propose a research project that makes effective use of practice settings participating in their Public Health PBRN and must engage these settings directly in the development, refinement, implementation and translation of the research project. Co-principal investigator arrangements in which leadership of the research project is shared between a practice-based PI and a research-based PI are strongly encouraged.
- Applicants may apply for only one category of award under this solicitation.

SELECTION CRITERIA

All proposals will be reviewed by members of the RWJF staff, Coordinating Center staff, and the National Advisory Committee for the Public Health PBRN program. The following criteria will be used to assess proposals:

- Extent to which the proposed project addresses the objectives of the Category One or Category Two award regarding measuring the costs of delivering public health services and investigating the delivery system characteristics that influence these costs.
- Significance of the proposed research project in terms of the ability to address important gaps in the evidence base for public health practice, and to identify strategies with strong potential to produce improvements and/or reduce disparities in the way public health services are delivered.
- Strength of mechanisms used to engage practice agencies in the development, implementation, and application of the research. (*Note: Co-PI arrangements that include both a practice-based PI and a research-based PI are strongly encouraged.*) Applications should include effective strategies for disseminating results to research and practice audiences within the PBRN networks and to external audiences, including submission of research briefs to the *Frontiers in PHSSR* journal, presentations at the Keeneland Conference on PHSSR, and other venues.
- Strength and soundness of the project’s proposed research design, measurement approach, data sources, and analytic methodology.

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- Expertise of the proposed investigative team, including both practice and research expertise.

EVALUATION AND MONITORING

Grantees are expected to meet RWJF requirements for the submission of narrative and financial reports, as well as periodic information needed for overall project performance monitoring and management. We may ask PIs to participate in periodic meetings and give progress reports on their grants. Grantees are also expected to provide mid-course updates on their work to the Coordinating Center, using the monthly PBRN research-in-progress webinars and other channels, so that this progress can be featured in the communication and outreach activities of the Center and RWJF. At the close of each grant, the grantee is expected to provide a written report on the project and its findings. Coordinating Center staff and RWJF staff will work with investigators to communicate the results of the funded projects to scientific audiences, media, policymakers, public health professionals and other audiences, as appropriate.

USE OF GRANT FUNDS

Grant funds are designed to be used to support core activities for implementing the research project within a PBRN network and/or for collaboration in related, multi-network research projects. Funds may be used for project staff salaries, network communications and meetings, project-related supplies and travel, data collection and analysis, and other direct project expenses, including a limited amount of equipment deemed essential to the project. In keeping with policies of the Robert Wood Johnson Foundation, grant funds may not be used to subsidize individuals for the costs of their health care, to support clinical trials of drugs or devices, to construct or renovate facilities, for lobbying, or as a substitute for funds currently being used to support similar activities. Applicants should clearly describe how their proposed scope of work is distinct from any similar PBRN activities already receiving support from RWJF.

HOW TO APPLY

Applicants should submit proposal narratives of no more than 10 single-spaced pages with one-inch margins, accompanied by a budget, budget narrative and curriculum vitae for PI and/or co-PIs. The proposal narrative should include: (1) a statement of the project aims, their significance, and their responsiveness to the objectives of this solicitation; (2) a description of the research approach, including research design, practice settings, measurement approach, data sources, and analytical methods; (3) a discussion of how findings will be disseminated, translated and applied within practice settings; and (4) a timeline and staffing and management plan for the proposed project. Proposals for this solicitation must be submitted electronically. Applicants will receive an e-mail invitation with a link to the RWJF online proposal system and additional instructions. To begin the proposal, select the link in the e-mail and follow the instructions. Guidelines and information, including a list of frequently asked questions (FAQs), are available in the online system through the links shown on the left side of all screens.

PROGRAM DIRECTION

Direction and technical assistance for *Public Health Practice-Based Research Networks* are provided by the PBRN National Coordinating Center at the University of Kentucky.

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Public Health PBRN National Coordinating Center

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Responsible staff members at the national coordinating center are:

- Glen Mays, PhD, *program director*
- Anna Hoover, MS, *deputy director*
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Responsible staff members at the Robert Wood Johnson Foundation are:

- Paul Kuehnert, DNP, RN, *senior program officer and team director*
- Naima Wong, PhD, MPH, *program officer*
- Thomas Andruszewski, *senior program financial analyst*

Members of the National Advisory Committee are:

- Michael Caldwell, MD, MPH, Dutchess County New York Department of Health, *chair*
- Alice Ammerman, DrPH, RD, University of North Carolina at Chapel Hill
- Ross Brownson, PhD, Washington University
- Wayne Giles, MD, MS, U.S. Centers for Disease Control and Prevention
- Paul Halverson, DrPH, MHSA, Arkansas Department of Health
- Judith Monroe, MD, U.S. Centers for Disease Control and Prevention
- Robert Pestronk, MPH, National Association for County and City Health Officials
- Donna Petersen, ScD, MHS, University of South Florida
- Patrick Remington, MD, MPH, University of Wisconsin
- Patricia Sweeney, JD, MPH, RN, University of Pittsburgh

KEY DATES AND DEADLINES

March 20, 2013 (5 p.m. ET)

Deadline for receipt of proposals.*

Late May 2013

Finalists notified of funding recommendations.

July 15, 2013

Grants initiated.

**All proposals must be submitted electronically through the RWJF online proposal system. Program staff may not be able to assist all applicants in the final 24 hours before the submission deadline. In fairness to all applicants, the program will not accept late or incomplete proposals. While proposals will be accepted until 5:00 p.m. ET, RWJF Help Desk personnel will be available to assist with any difficulties only until 3:00 p.m. ET.*

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