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The Public Health PBRN Program: Building the Science of Public Health Delivery

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THE PUBLIC HEALTH PBRN PROGRAM: BUILDING THE SCIENCE OF PUBLIC HEALTH DELIVERY

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Public Health PBRN National Coordinating Center
University of Kentucky College of Public Health

CDC ICRC Director’s Conference Call • 11 June 2013
Where Are We Going

- Why Study Public Health Delivery?
- The Problem with Research “on” Practice
- PBRN History and Rationale
- Where Are Public Health PBRNs?
- What Do Public Health PBRNs Look Like?
- What Do They Research?
- What Are the Benefits and Barriers?
- What Is the Role of the National Coordinating Center?
- Future Directions
- Questions
Why study public health delivery?

“The Committee had hoped to provide specific guidance elaborating on the types and levels of workforce, infrastructure, related resources, and financial investments necessary to ensure the availability of essential public health services to all of the nation’s communities. However, such evidence is limited, and there is no agenda or support for this type of research, despite the critical need for such data to promote and protect the nation’s health.”

—Institute of Medicine, 2003
Public health services & systems research

A field of inquiry examining the organization, financing, and delivery of public health services at local, state and national levels, and the impact of these activities on population health

Mays, Halverson, and Scutchfield. 2003
PHSSR’s place in the continuum

**Intervention Research**
- What works – proof of efficacy
- Controlled trials
- *Guide to Community Preventive Services*

**Services/Systems Research**
- How to organize, implement and sustain in the real-world
  - Reach
  - Enforcement/Compliance
  - Quality/Effectiveness
  - Cost/Efficiency
  - Equity/Disparities
- Impact on population health
- Comparative effectiveness & efficiency
Subtitle D—Support for Prevention and Public Health Innovation

Patient Protection and Affordable Care Act of 2010

SEC. 4301. RESEARCH ON OPTIMIZING THE DELIVERY OF PUBLIC HEALTH SERVICES.

(a) IN GENERAL.—The Secretary of Health and Human Services (referred to in this section as the “Secretary”), acting through the Director of the Centers for Disease Control and Prevention, shall provide funding for research in the area of public health services and systems.

(b) REQUIREMENTS OF RESEARCH.—Research supported under this section shall include—

(1) examining evidence-based practices relating to prevention, with a particular focus on high priority areas as identified by the Secretary in the National Prevention Strategy or Healthy People 2020, and including comparing community-based public health interventions in terms of effectiveness and cost;

(2) analyzing the translation of interventions from academic settings to real world settings; and

(3) identifying effective strategies for organizing, financing, or delivering public health services in real world community settings, including comparing State and local health department structures and systems in terms of effectiveness and cost.
A national research agenda to improve public health delivery

- Public health system organization and structure
- Public health financing and economics
- Public health workforce
- Public health information and technology

Cross-cutting elements
- Quality
- Law and policy
- Equity and disparities
- Metrics and data
- Analytic methods

http://www.publichealthsystems.org/research-agenda.aspx
The Problem

MIND THE GAP
PBRN Rationale and History
Where are Public Health PBRNs?

First cohort (December 2008 start-up)
Second cohort (January 2010 start-up)
Affiliate/Emerging PBRNs (2011-13)

(New in 2013)
What Do Public Health PBRNs Look Like?

Connecticut
(35.4% Centrality)

Florida
(15.6% Centrality)
What Do They Research?

Workforce

• Effects of Cultural Competency Training on Local Health Departments: A Randomized Trial (KY)
• Analyzing Concordance between Position Descriptions and Practice Standards for Public Health Nurses (OH)
• Local Health Department Workforce Reductions: Implications for Diversity and Health Disparities (WA)
• Evaluation of a Quality Improvement Project to Improve Workforce Diversity (WA)
What Do They Research?

System Structure and Performance

Quality Improvement

- Measuring Quality in Local Public Health Emergency Preparedness: the H1N1 Experience (CT)
- Comparative Effectiveness of State vs. Regional Approaches to QI in Public Health (GA)
- QI Collaboratives for Small and Rural Public Health Settings (GA)
- Public Health QI and Evidence-Based Diabetes Prevention (KY)
- Measuring the QI Continuum and Correlates in Public Health Settings (MN)
- Taxonomy of QI Methods, Techniques and Results in Public Health (MN)
- Public Health Accreditation and QI Philosophy (MO)
- QI Strategies & Regional Public Health Structures (NE)
- Regional Public Health Structures & Readiness for Accreditation & QI (NE)
What Do They Research?

System Structure and Performance

Food Safety

• Local Variation in Food Safety and Infectious Disease Control Practices (MA)
• Prevention, Investigation, and Intervention Related to Foodborne Illness in Ohio (OH)
• Direct Observation Methods in Local Public Health Settings: Foodborne Outbreak Practices in Ohio (OH)
What Do They Research?

System Structure and Performance

Cross-Jurisdictional Sharing and Other Partnerships

• Community Partnerships and Evidence-Based Prevention (CO)
• Current and Planned Shared Service Arrangements Among Wisconsin Local and Tribal Health Departments (WI)
What Do They Research?

System Structure and Performance

Other

• PHAST Retrospective Data Compilation and Transformation (WA)
• Measuring Quality in Local Public Health Emergency Preparedness (CT)
• Integrated HIV/AIDS and STD Service Delivery in New York (NY)
• Measuring the Quality of Community Health Improvement Planning and Implementation (WI)
• Local Variation in H1N1 Response in North Carolina (NC)
• Local Public Health Responses to the County Health Rankings (FL)
• Utilization and Effectiveness of a Health Equity Index in Mobilizing Local Public Health Action (CT)
• Comparative Effectiveness Research Tools for Examining Public Health Services and Outcomes (NC)
• Variation in Local Public Health Actions to Address Health Inequities (MN)
What Do They Research?

Financing and Economics

• Economic Shocks & Evidence-Based Decision-Making in Public Health (WA)
• Financial Constraints, Regionalization Incentives, and Public Health Responses (CT)
• Variation in Local Enforcement of State Public Health Policy (OH)
• Resource Allocation and Public Health Roles in Safe Routes to Schools (CO)
• Forecasting the Impact of the Economic Recession on Public Health Financing (WI)
• Consolidation of Local Public Health Jurisdictions: Financial Implications (OH)
• The Cost of Doing Business: Developing a Cost Model for a Minimum Package of Local Public Health Services (OH)
What Do They Research?

Information and Technology

• Local Variation in H1N1 Communication and Response in Kentucky (KY)
• Local Information Systems for Studying Public Health Practice and Outcomes (WI)
• Effects of Health Information Exchange Systems on Public Health and Primary Care Alignment (GA)
What Are the Benefits and Barriers?

Benefits
• Structural Heterogeneity
• Geographic Variation
• Context-Based

Barriers
• Structural Heterogeneity
• Geographic Variation
• Context-Based
What Is the Role of the National Coordinating Center?

Agenda Setting

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2013 Request for Proposals
Proposal Deadline: March 20, 2013

PURPOSE
Public Health Practice-Based Research Networks (PBPRN) is a national program of the Robert Wood Johnson Foundation (RWJF) that supports researchers-practitioner networks dedicated to discovering ways to improve the delivery of public health services. A public health PBPRN brings multiple public health agencies together with researchers-partners to design and implement comparative studies in real-world practice settings. The Public Health Delivery and Cost Studies Award will support selected PBPRN 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 awards of up to $300,000 in duration are available. In total, two awards will support up to $300,000 in total funding. The awards are limited to $150,000 per study site.

BACKGROUND
The scope and scale of public health activities vary widely across communities, as do the institutional and financial arrangements used to produce those 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.

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. This
### What Is the Role of the National Coordinating Center?

#### Research Coordination

**N handle**:

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<th>Measure Name</th>
<th>Measure Description</th>
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| A. Tobacco Prevention and Control Bundle | Smoking cessation and policy exposure (communities) | Rate/Reduction

**Definition**: Proportion of the population that resides in areas covered by policies that prohibit smoking in workplaces and other public places during the past 12 months.

**Baseline**: Tobacco use is the single largest cause of preventable disease burden in the U.S., and tobacco smoking has stagnated at 19% among people age 18-25 years. Elimination of policies that are the most effective tobacco control strategy based only to tobacco brands for reducing exposure and related disease burden.

**Source**: Data for this measure are available from Americans for Nonsmokers Rights, Public Health Law Research

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| B. Innovation Bundle | Completed innovation completions (communities) | Rate/Reduction

**Definition**: Proportion of children admitted with complete series as required by state law who enter into kindergarten for the most recent school year.

**Baseline**: Although state law requires vaccinations, most students enter kindergarten at an age that does not meet the recommendation of state law. Inadequate vaccination rates are a major risk for outbreaks of infectious diseases, resulting in poor health outcomes for children and preventing families from accessing public health services.

**Source**: Immunization Services Division, National Center for Immunization and Respiratory Diseases, CDC. [MMWR 2011;60:1](https://www.cdc.gov/mmwr/)

**Note**: This measure requires data to be obtained from the administrative records or surveillance systems of the states and/or local or state health departments.

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| C. Lead Prevention Bundle | Elevated blood lead level (community) | Quality/Effectiveness

**Definition**: Number of cases of elevated blood lead in children aged 0-5 years identified in the past 12 months, out of 1000 children aged 0-5 years. The blood lead threshold used to define elevated blood lead level is 5 mcg/dL.

**Baseline**: Children’s blood lead levels vary in the United States, even in high-risk populations such as those with high-risk groups for lead poisoning. To minimize the risk associated with elevated blood lead levels, efforts must continue to lead children at high risk for lead poisoning, and identify and control sources of lead. Elevated prevention strategies at local level have shown high effectiveness in reducing elevated blood lead levels. In 2020-21, the Centers for Disease Control and Prevention released new national guidelines, which include a new target level of lead in blood to be used to direct the implementation of public health interventions.

**Source**: Tennessee and New Jersey [PDWs](https://www.cdc.gov/mmwr/)

**Note**: This measure requires data to be obtained from state or local public health disease surveillance systems for lead poisoning.

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<th>Measure Name</th>
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| D. Food Inspection Bundle | Food safety inspection reach (community) | Volume/Reach

**Definition**: Number of food service establishments impacted by food safety during past 10 months, as a percentage of the total number of food service establishments impacted by food safety.

**Baseline**: Food safety inspections are critical to ensuring the safety of food products, and the number of inspections conducted during the past 12 months is an important indicator of the efforts taken to improve food safety standards.

**Source**: Tennessee and New Jersey [PDWs](https://www.cdc.gov/mmwr/)

**Note**: This measure requires data to be obtained from state or local public health disease surveillance systems for food safety inspections.
What Is the Role of the National Coordinating Center?

Capacity-Building
What Is the Role of the National Coordinating Center?

Communication

Public Health PBRN
Monthly Virtual Meeting
January 17, 2013
Research-in-Progress Presentation by Kentucky PBRN
Community Outreach and Change for Diabetes Management (COACH 4 DM)
Rick Ingram, EdD, Dr PH, Angela Dearing, MD, MPH, Robin Pendley, DrPH, and Sarah Wilding, RN, MPA

If you are dialed into the conference line on the telephone, please turn off your computer speakers.
If you are on mute, please use 1 to mute and #6 to unmute.

Public Health PBRN Review | January 2013

PBRN Grantees: Please circulate relevant information to network members. To request additional information or make suggestions for future items, please contact the Public Health PBRN National Coordinating Center (NCC) at publichealthpbrn@uvm.edu or (800) 238-2094. Past issues are available in the newsletter archive.

STAT OF THE MONTH

The number of people with diabetes who attended disease self-management sessions on a monthly basis increased by 14%, and the number of people who completed an entire self-management course increased by more than 100%, following implementation of a quality improvement intervention delivered by Kentucky local health departments to improve delivery of evidence-based diabetes self-management support in community settings. The Kentucky Public Health PBRN’s Community Outreach and Change for Diabetes Management (COACH 4 DM) Quality Improvement intervention also found that more than half of participating health departments initiated additional QI projects, while 82% of all program staff indicated that additional QI projects were under consideration in their organizations. Preliminary findings from the study were presented during the Research-in-Progress segment of the January 2013 Public Health PBRN Virtual Meeting. An archive of the presentation will be available on the PBRN website.

PBRN NEWS

RE-ACT Podcast Examines Cross-Jurisdictional Sharing with the Massachusetts Public Health PBRN.
The latest episode of the RE-ACT: Research to Action in Public Health Services and Systems Research podcast is now available online. Host Dr. Paul Halverson speaks with Dr. Justeen Hyde about recent research conducted by the Massachusetts Public Health PBRN to identify characteristics related to successful cross-jurisdictional sharing (CJS) partnerships formed between local health departments. This podcast comes on the heels of a recent PHSR Matters from the National Coordinating Center for PHSR that highlights additional CJS-related Quick Strike research from the Wisconsin Public Health PBRN. This PBRN research promises to add momentum to the work of the recently-launched Center for Sharing Public Health Resources.

Frontiers Analyzes Wellness Incentives, Hospital Community Benefits, Social Media Adoption:
The PBRN program’s journal Frontiers in Public Health Services and Systems Research opens 2013 with a new volume of emerging studies on public health delivery. The University of Pennsylvania’s Harold Schmidt examines the public acceptability of workplace wellness incentive programs, finding that reward-based incentives are favored by the public over penalty-based ones by a factor of four, and that the acceptable size of penalty-based programs is quite small. The findings have important implications for recently released HHS draft regulations on employer wellness programs to be implemented under the federal Affordable Care Act. Also in the issue, George Washington University’s Sara Rosenbaum and colleagues offer a comparative analysis of federal and state community benefit reporting systems for tax-exempt hospitals. The authors find that most state programs lack the specificity and clarity that is
What Is the Role of the National Coordinating Center?

Technical and Administrative Assistance

Grants Administration Update:
Budget Extension/Revisions

- All requests for award extensions or budget revisions must be requested in writing to the PBRN National Coordinating Center-Formal Process
- Extension Request Questions
  - What end date are you requesting?
  - What caused the change in the program/project?
  - What scope of work will occur during the extension period?
  - Is this new work or work originally planned under the grant?
  - What will be the new timeline, benchmarks and/or deliverables?
  - If approved, how will you keep us informed that the new timeline is being met?
- Budget Revision Worksheet and Budget Narrative
  - Reallocation of funds
  - Anticipate spending >10% in any budget category
- When?
  - Revisions: Before funds are spent
  - Extensions: At least 3 weeks before end of grant date
Future Directions

Cost Studies

2013 Request for Proposals
Proposal Deadline: March 29, 2013

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. 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. This...
Future Directions

Injury Prevention

CDC

Injury Prevention
Potential Research Questions

- Can specific online dissemination tools (e.g., static web pages, open access journals, and podcasts) be accessed easily by local and state health departments? If not, why not?

- Are intended recipients of evidence-based information people who would be able to take action on it? If not, why not, and what individuals are in positions that would allow them to take evidence-based action?
Future Directions

Making Connections

1 2 3 PAP
Easy Steps to Prevent Cervical Cancer
Harvesting the power of public health systems: Toward “rapid-learning systems”

In a learning health care system, research influences practice and practice influences research.

- **Evaluate**: Collect data and analyze results to show what does and does not work.
- **Implement**: Apply the plan in pilot and control settings.
- **Design**: Design care and evaluation based on evidence generated here and elsewhere.
- **Adjust**: Use evidence to influence continual improvement.
- **Disseminate**: Share results to improve care for everyone.
- **Internal and External Scan**: Identify problems and potentially innovative solutions.

For More Information

Supported by The Robert Wood Johnson Foundation

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Web: www.publichealthsystems.org
Journal: www.FrontiersinPHSSR.org
Archive: www.works.bepress.com/glen_mays

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