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Summer June 11, 2013

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

Anna Hoover, *University of Kentucky*

Glen P Mays, *University of Kentucky*



Available at: [https://works.bepress.com/glen\\_mays/99/](https://works.bepress.com/glen_mays/99/)

# 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**



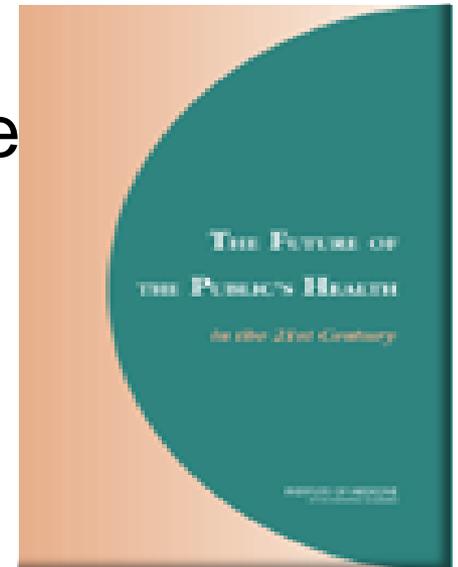
# Where Are We Going

- **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



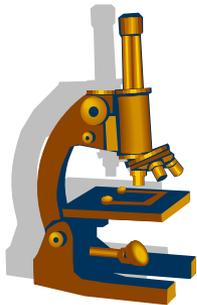
# Public health services & systems research

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

# 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

# PHSSR and policy relevance

## 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—

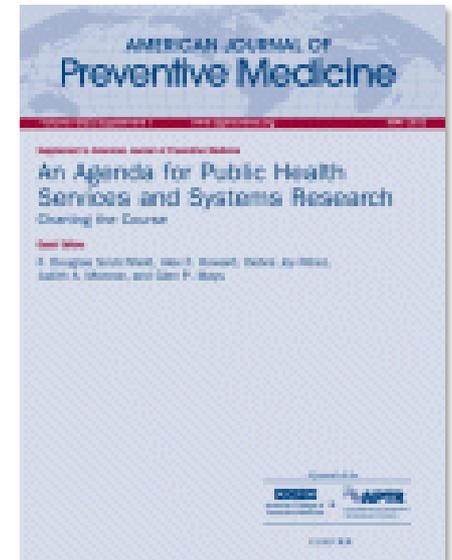
(1) examining evidence-based practices relating to prevention, with a particular focus on high priority areas as identified by the Secretary in the National Prevention Strategy or Healthy People 2020, and including comparing community-based public health interventions in terms of effectiveness and cost;

(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



# The Problem



**MIND THE GAP**

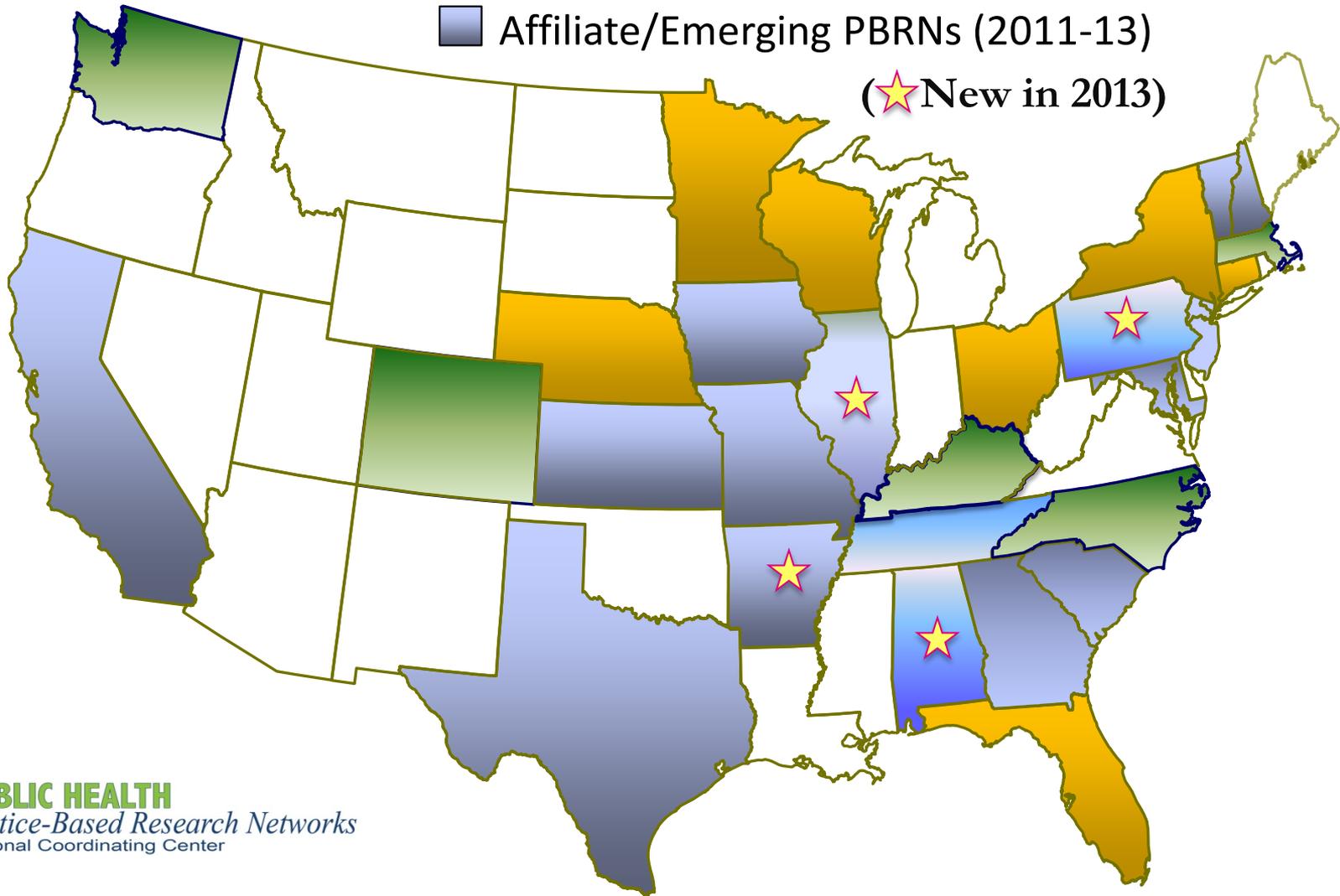
# PBRN Rationale and History



# Where are Public Health PBRNs?

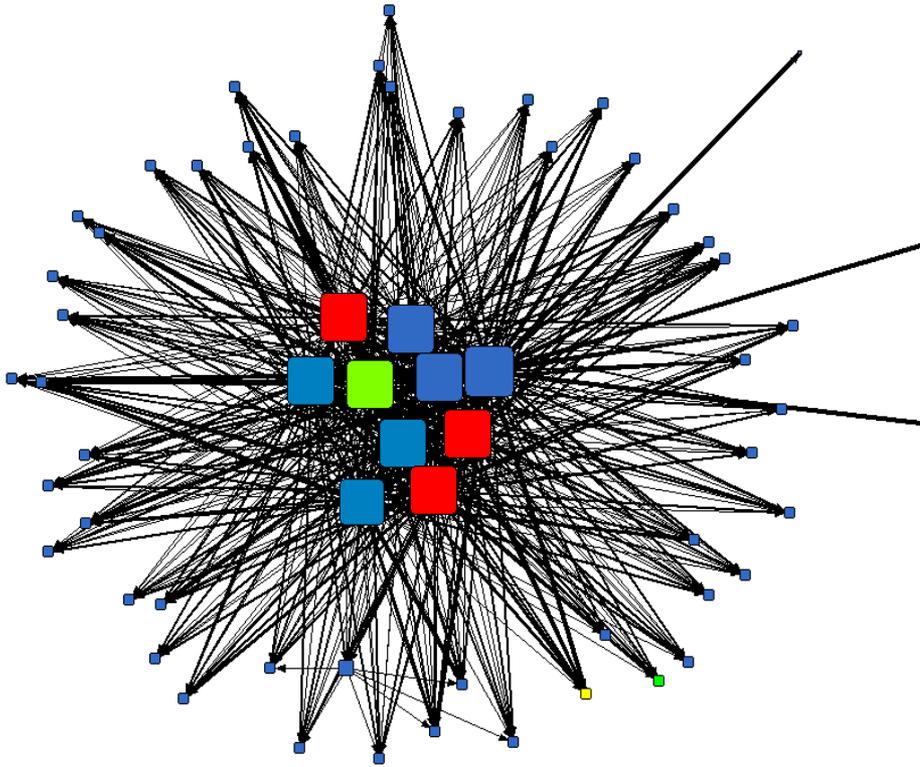
- First cohort (December 2008 start-up)
- Second cohort (January 2010 start-up)
- Affiliate/Emerging PBRNs (2011-13)

(★ New in 2013)

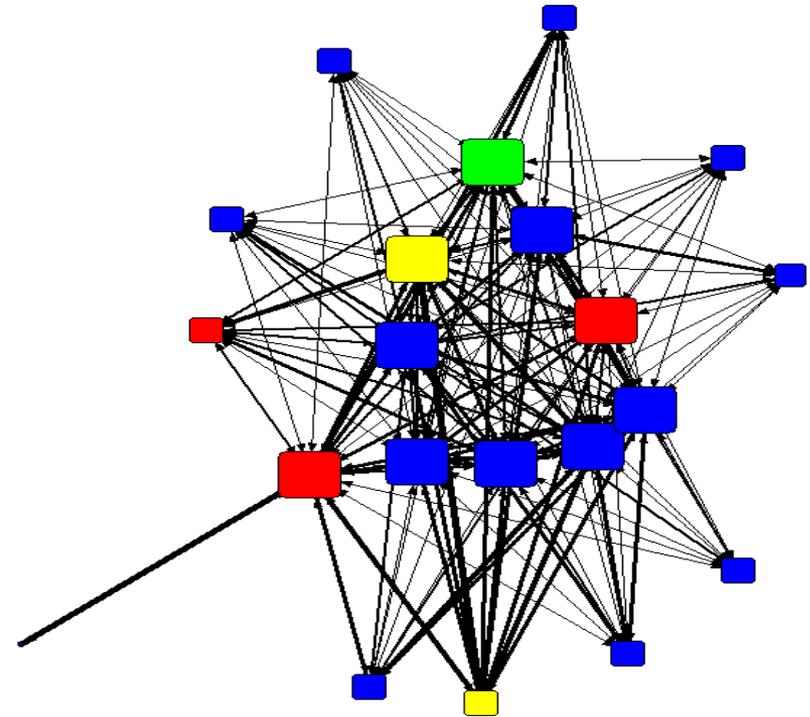


# What Do Public Health PBRNs Look Like?

## 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

  
Annual Grantee Meeting - April 8-9, 2013  
Hyatt Regency  
Agenda

**Day One: Monday, April 8**  
Hyatt Regency Mezzanine Level

8:00am **Breakfast**  
Woodford Room

9:00am **Welcome and Introductions**  
Glen Mays, Public Health PBRN National Coordinating Center  
Paul Kuehnert and Naima Wong, Robert Wood Johnson Foundation

9:15am **Session I: The State of the Public Health PBRN Program**

**The Year in Review**  
Glen Mays, Public Health PBRN National Coordinating Center

**Strategies for Network Development, Growth, and Sustainability:  
A Multi-Network Dialogue**  
Public Health PBRN Networks

**Exploring the Intersection of Practice-Based and Participatory Research Models:  
Practice-Based Participatory Research and Focus Group Solicitation**  
Nancy Winterbauer, North Carolina PBRN; Betty Bekemeier, Washington PBRN;  
Lisa VanRaemdonck, Colorado PBRN; Anna Hoover, Public Health PBRN Coordinating Center

10:45am **Break**

11:00am **Session II: Emerging Opportunities**

**CDC Injury Prevention**  
Lynn Jenkins and Grant Baldwin, National Center for Injury Prevention and Control,  
Centers for Disease Control and Prevention

**Multi-Network Dissemination & Implementation Project Visioning**  
Glen Mays and Anna Hoover, Public Health PBRN National Coordinating Center

12:00pm **Working Lunch**  
Woodford Room

**Dissemination & Implementation Pilot Project Opportunity**  
Richard Crosby and Margaret McGladrey, University of Kentucky College of Public Health

**Public Health Activities and Service Tracking Study (PHAST) Update**  
Betty Bekemeier, Washington Public Health PBRN

111 Washington Avenue, Room 212 • Lexington, KY 40536-0003  
859.218.2094 • 859.257.2821 fax  
www.publichealthsystems.org/pbrn

### 2013 Request for Proposals

Proposal Deadline: March 20, 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.<sup>1</sup> 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.<sup>2</sup> This

# What Is the Role of the National Coordinating Center?

## Research Coordination



MPROVE Candidate Measures Inventory – Measure Descriptions			
No.	Measure Name	Type/Aim	Description
<b>I. CHRONIC DISEASE PREVENTION DOMAIN (8 core measures, 3 optional measures)</b>			
<b>A. Tobacco Prevention and Control Bundle</b>			
15	Smoking restriction policy exposure (community)	Reach/ Risk-Reducing	<b>Definition:</b> Proportion of the population that resides in areas covered by policies that prohibit smoking in workplaces and other public areas during the past 12 months. <b>Rationale:</b> Tobacco exposure is the single largest source of preventable disease burden in the U.S. Smoking prevalence has stagnated at 40% among people age 18-25 years. Clean indoor air policies are the most effective known strategy (second only to tobacco taxes) for reducing exposure and related disease burden. <b>Source:</b> Data for this measure are available from Americans for Nonsmokers Rights, Public Health Law Research mapping study ( <a href="http://www.no-smoke.org">www.no-smoke.org</a> ).
<b>MPROVE Candidate Measures Inventory – Measure Descriptions</b>			
<b>II. COMMUNICABLE DISEASE CONTROL DOMAIN (4 core measures)</b>			
<b>A. Immunization Bundle</b>			
153	Childhood immunization completeness (community)	Reach/ Risk-reducing	<b>Definition:</b> Proportion of children vaccinated with complete series as required by state law upon entry into kindergarten for the most recent school year. <b>Rationale:</b> Although statewide vaccination rates at kindergarten entry are at or above target levels nationally and at state levels, local areas of low coverage exist and present significant population health risks. The growing use of religious and philosophical exemptions to school vaccination requirements in recent years has added to these risks. Actions of public health agencies and their community partners can address these risks through education and outreach, policy development, and direct service delivery. <b>Source:</b> Immunization Services Division, National Center for Immunization and Respiratory Diseases, CDC. MMWR 2012 / 61(33):647-652. <b>Data:</b> The measure requires data to be obtained from the administrative records or surveillance systems of the LHDs and/or state participation in the PBRN.
<b>MPROVE Candidate Measures Inventory – Measure Descriptions</b>			
<b>III. ENVIRONMENTAL HEALTH PROTECTION DOMAIN (5 core measures and 3 optional measures)</b>			
<b>A. Lead Protection Bundle</b>			
134/139	Agency involvement control and cessati	154/160 Childhood (agency)	contact tracing, screening, and treatment can contain the spread of disease. <b>Source:</b> New Jersey PBRN and CDC Division of TB Elimination, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. MMWR March 23, 2012 / 61(11):181-185. <b>Data:</b> The measure requires data to be obtained from state or local public health program records.
<b>B. Obesity Prevention Bundle</b>			
201	Confirmed (communi	219 Elevated blood lead level rate (community)	<b>Quality-effectiveness/Effectiveness</b> <b>Definition:</b> Number of cases of elevated blood lead in children ages 0-6 years identified in the past 12 months, per 1000 children age 0-6 years. Specify blood lead level threshold used to define elevated blood lead level. (Population estimates will be used to construct case rate measure). <b>Rationale:</b> Children's blood lead levels continue to decline in the United States, even in historically high-risk groups for lead poisoning. To maintain progress made and eliminate remaining disparities, efforts must continue to test children at high risk for lead poisoning, and identify and control sources of lead. Coordinated prevention strategies at local levels have been shown highly effective in reducing elevated blood lead levels. In 2012 CDC lowered its blood lead level criteria, which is likely to precipitate changes to case detection and investigation rates and practices. <b>Source:</b> Tennessee and New Jersey PBRNs. <b>Data:</b> The measure requires data to be obtained from state or local public health disease surveillance systems for reportable diseases.
<b>B. Enteric Disease Bundle</b>			
167	Foodborne (communi	220 Elevated blood lead level investigation (agency)	<b>Volume/Vigilance</b> <b>Definition:</b> Number of cases of elevated blood lead (EBL) in children age 0-6 years investigated by the LHD in the past 12 months (to be expressed as a proportion of measure #219). (Measure #219 will be used to construct a measure of the investigation rate) <b>Rationale:</b> Children's blood lead levels continue to decline in the United States, even in historically high-risk groups for lead poisoning. To maintain progress made and eliminate remaining disparities, efforts must continue to test children at high risk for lead poisoning, and identify and control sources of lead. Coordinated prevention strategies at local levels have been shown highly effective in reducing elevated blood lead levels. In 2012 CDC lowered its blood lead level criteria, which is likely to precipitate changes to case detection and investigation rates and practices. <b>Source:</b> Tennessee and New Jersey PBRNs. <b>Data:</b> The measure requires data to be obtained from state or local public health disease surveillance systems for reportable diseases.
<b>B. Food Protection Bundle</b>			
269	Food safety inspection reach (community)	Reach/ Vigilance	<b>Definition:</b> Number of food service establishments inspected for food safety during the past 12 months, as a percentage of the total number of food service establishments required to be inspected under state and/or local law
269	Food safety inspection volume (community)	Volume/ Vigilance	Number of inspections of food service establishments conducted during the past 12 months

# What Is the Role of the National Coordinating Center?

## Capacity-Building

### **The Forward-Looking Network: *Strategies for PBRN Sustainability***

March 23, 2012  
PH PBRN Quarterly Webinar

Glen Mays, PhD, MPH  
F. Douglas Scutchfield Endowed Professor of Health Services and Systems Research  
Public Health Practice-Based Research Networks National Coordinating Center  
University of Kentucky College of Public Health

### **Developing Community-Based Grant Proposals: *A Reviewer's Perspective***

July 30, 2012  
PH PBRN Quarterly Webinar

Anna Goodman Hoover  
Deputy Director, National Coordinating Center for the Public Health PBRN Program  
Research Translation Core, University of Kentucky Superfund Research Program  
Public Health Practice-Based Research Networks National Coordinating Center  
University of Kentucky College of Public Health



# 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 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**

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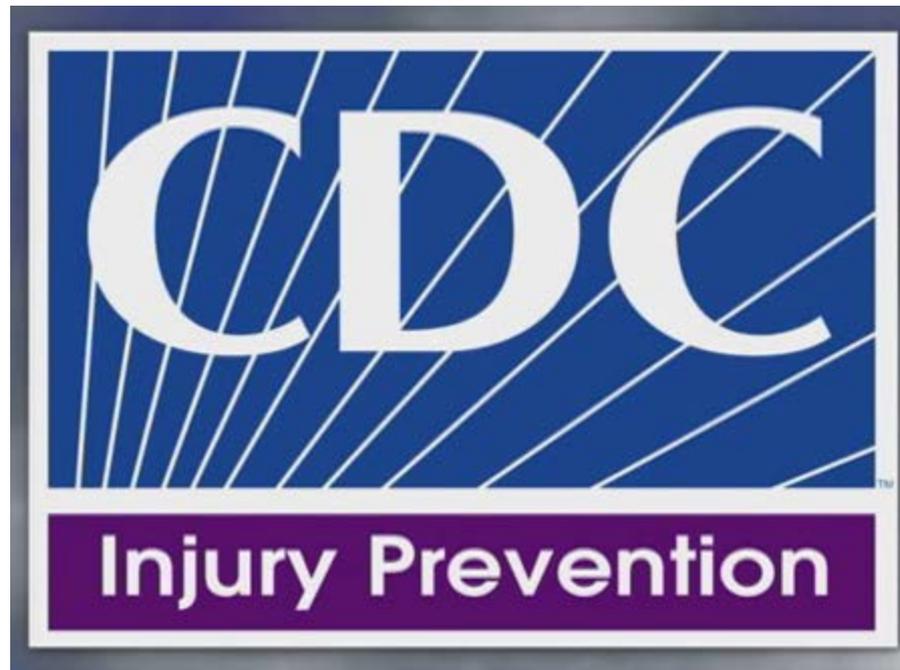
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There is also a critical gap in scientific and professional knowledge concerning resources required to deliver a basic set of public health protections for a defined community or population group.<sup>2</sup> This

# Future Directions

## Injury Prevention



# Future Directions

## Dissemination and Implementation

**Department of Health and Human Services**

**Part 1. Overview Information**

<b>Participating Organization(s)</b>	National Institutes of Health ( <a href="#">NIH</a> )
<b>Components of Participating Organizations</b>	National Institute of Mental Health ( <a href="#">NIMH</a> ) National Cancer Institute ( <a href="#">NCI</a> ) National Center for Complementary and Alternative Medicine ( <a href="#">NCCAM</a> ) National Heart, Lung, and Blood Institute ( <a href="#">NHLBI</a> ) National Human Genome Research Institute ( <a href="#">NHGRI</a> ) National Institute on Aging ( <a href="#">NIA</a> ) National Institute on Alcohol Abuse and Alcoholism ( <a href="#">NIAAA</a> ) National Institute of Allergy and Infectious Diseases ( <a href="#">NIAID</a> ) (Clarification per <a href="#">NOT-AI-13-034</a> ) National Institute on Deafness and Other Communication Disorders ( <a href="#">NIDCD</a> ) National Institute of Dental and Craniofacial Research ( <a href="#">NIDCR</a> ) National Institute of Diabetes and Digestive and Kidney Diseases ( <a href="#">NIDDK</a> ) National Institute on Drug Abuse ( <a href="#">NIDA</a> ) National Institute of Neurological Disorders and Stroke ( <a href="#">NINDS</a> ) National Institute of Nursing Research ( <a href="#">NINR</a> ) Office of Behavioral and Social Sciences Research ( <a href="#">OBSSR</a> )
<b>Funding Opportunity Title</b>	<b>Dissemination and Implementation Research in Health (R01)</b>
<b>Activity Code</b>	<a href="#">R01</a> Research Project Grant
<b>Announcement Type</b>	Reissue of <a href="#">PAR-10-038</a>
<b>Related Notices</b>	<ul style="list-style-type: none"> <li><a href="#">March 15, 2013</a> - See Notice <a href="#">NOT-AI-13-034</a>, Notice of Clarification of NIAID's Participation.</li> </ul>
<b>Funding Opportunity Announcement (FOA) Number</b>	<b>PAR-13-055</b>
<b>Companion Funding Opportunity</b>	<a href="#">PAR-13-056</a> , <a href="#">R03</a> Small Grant Program <a href="#">PAR-13-054</a> , <a href="#">R21</a> Exploratory/Developmental Grant
<b>Number of Applications</b>	See <a href="#">Section III. 3. Additional Information on Eligibility</a> .
<b>Catalog of Federal Domestic Assistance (CFDA) Number(s)</b>	93.242, 93.399, 93.213, 93.837, 93.172, 93.866, 93.273, 93.855, 93.856, 93.173, 93.121, 93.847, 93.279, 93.853, 93.361
<b>Funding Opportunity Purpose</b>	This Funding Opportunity Announcement (FOA) encourages investigators to submit research grant applications that will identify, develop, evaluate and refine effective and efficient methods, systems, infrastructures, and strategies to disseminate and implement research-tested health behavior change interventions, evidence-based prevention, early detection, diagnostic, treatment and management, and quality of life improvement services, and data monitoring and surveillance reporting tools into public health and clinical practice settings that focus on patient outcomes.

### Potential Research Questions

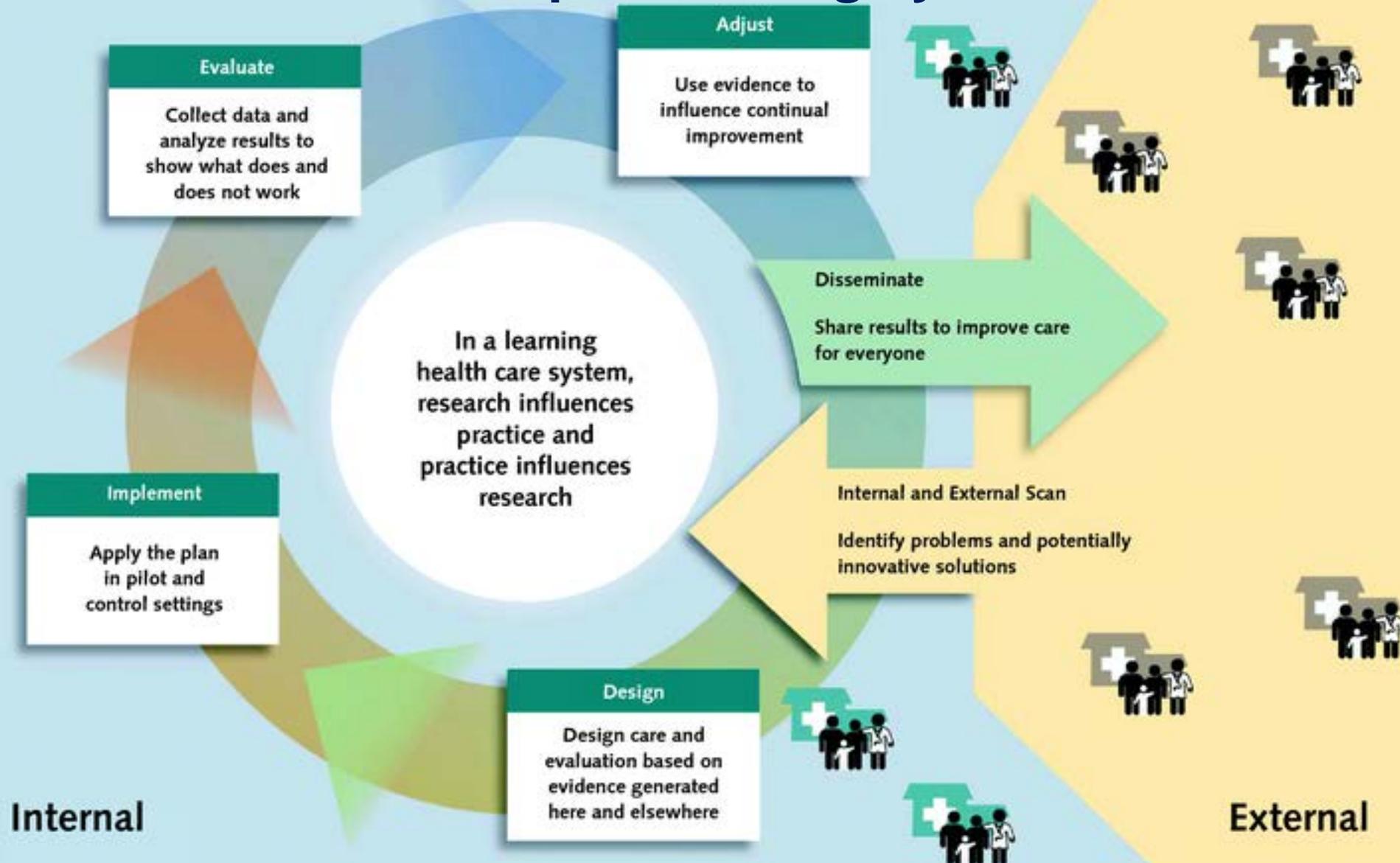
- Can specific online dissemination tools (e.g., static web pages, open access journals, and podcasts) be accessed easily by local and state health departments? If not, why not?
- Are intended recipients of evidence-based information people who would be able to take action on it? If not, why not, and what individuals are in positions that would allow them to take evidence-based action?

# Future Directions

## Making Connections



# Harvesting the power of public health systems: Toward “rapid-learning systems”





# For More Information



**Supported by The Robert Wood Johnson Foundation**

**Email: [publichealthPBRN@uky.edu](mailto:publichealthPBRN@uky.edu)**

**Web: [www.publichealthsystems.org](http://www.publichealthsystems.org)**

**Journal: [www.FrontiersinPHSSR.org](http://www.FrontiersinPHSSR.org)**

**Archive: [www.works.bepress.com/glen\\_mays](http://www.works.bepress.com/glen_mays)**

**Phone: 859-218-0013; Fax: 859-257-3748**



**University of Kentucky College of Public Health  
Lexington, KY**