

Measuring Value and Impact through Practice-Based Research Networks

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Why study public health practice?

“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



The Discovery-Delivery Disconnect in Public Health

- The evidence for practice is limited
 - Research not focused on practice issues
 - Pressing questions are overlooked
- Evidence-based strategies vs. the real-world
 - Will that work here?
(external validity)
 - No time, money, organization, staffing, will
(implementation science)
- “Drive-by” research offers little to study sites

The challenges of practice-based research

- Limited data and measures about the organization, financing, and delivery of public health services
- Practice agencies often have only limited roles in the design & conduct of public health studies
- Difficulties translating and integrating research findings into practice

Fundamental empirical questions



- Which programs, interventions, policies (*mechanisms*)....
- Work best (*outcomes*)...
- In which institutional & community settings (*contexts*)...
- And why (*causal pathways, interactions*)?

Uncertainty and controversy about public health value & impact

THE WALL STREET JOURNAL.

WSJ.com

JUNE 12, 2009

Prevention Efforts Provide No Panacea on Health Costs

By JANET ADAMY

Preventing Chronic Disease: An Important Investment, But Don't Count On Cost Savings

An overwhelming percentage of preventive interventions add more to medical costs than they save.

by Louise B. Russell

HEALTH AFFAIRS - Volume 28, Number 1

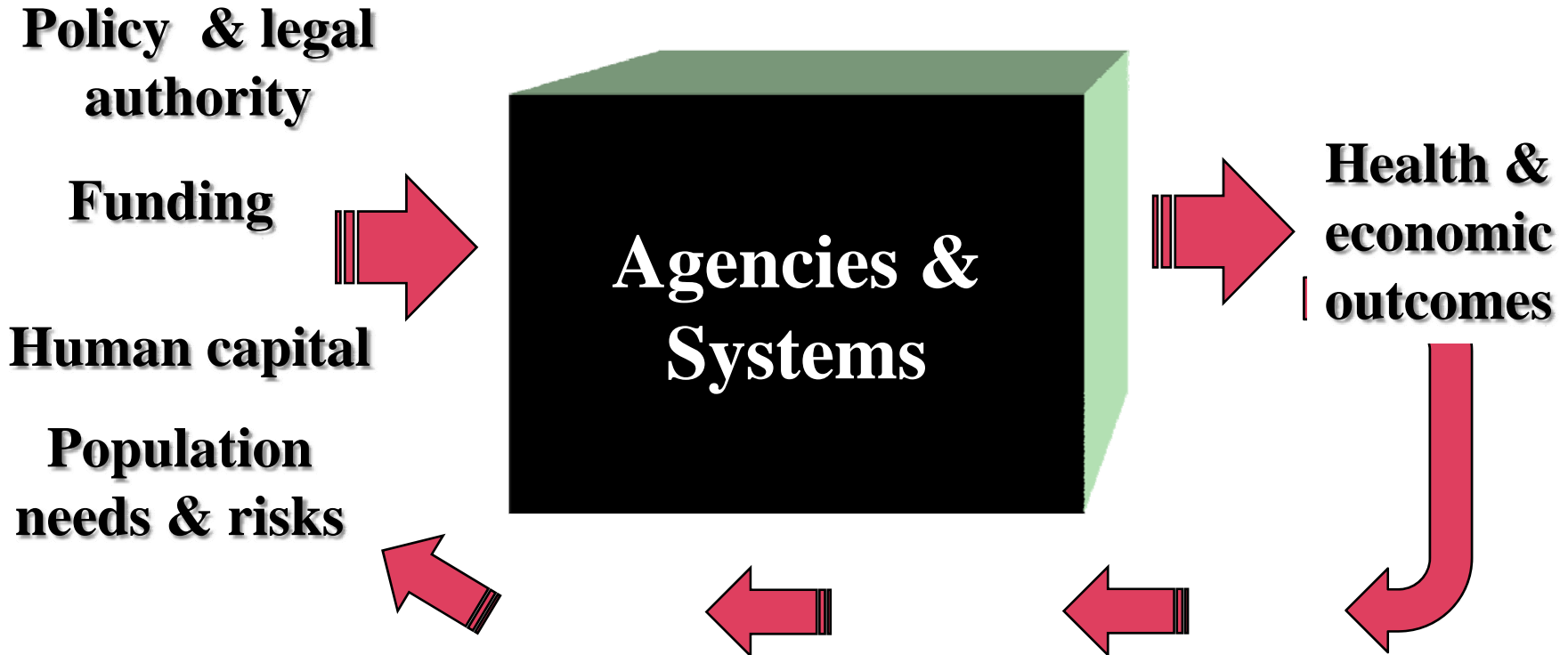
Prevention for a Healthier America:

INVESTMENTS IN DISEASE PREVENTION
YIELD SIGNIFICANT SAVINGS,
STRONGER COMMUNITIES

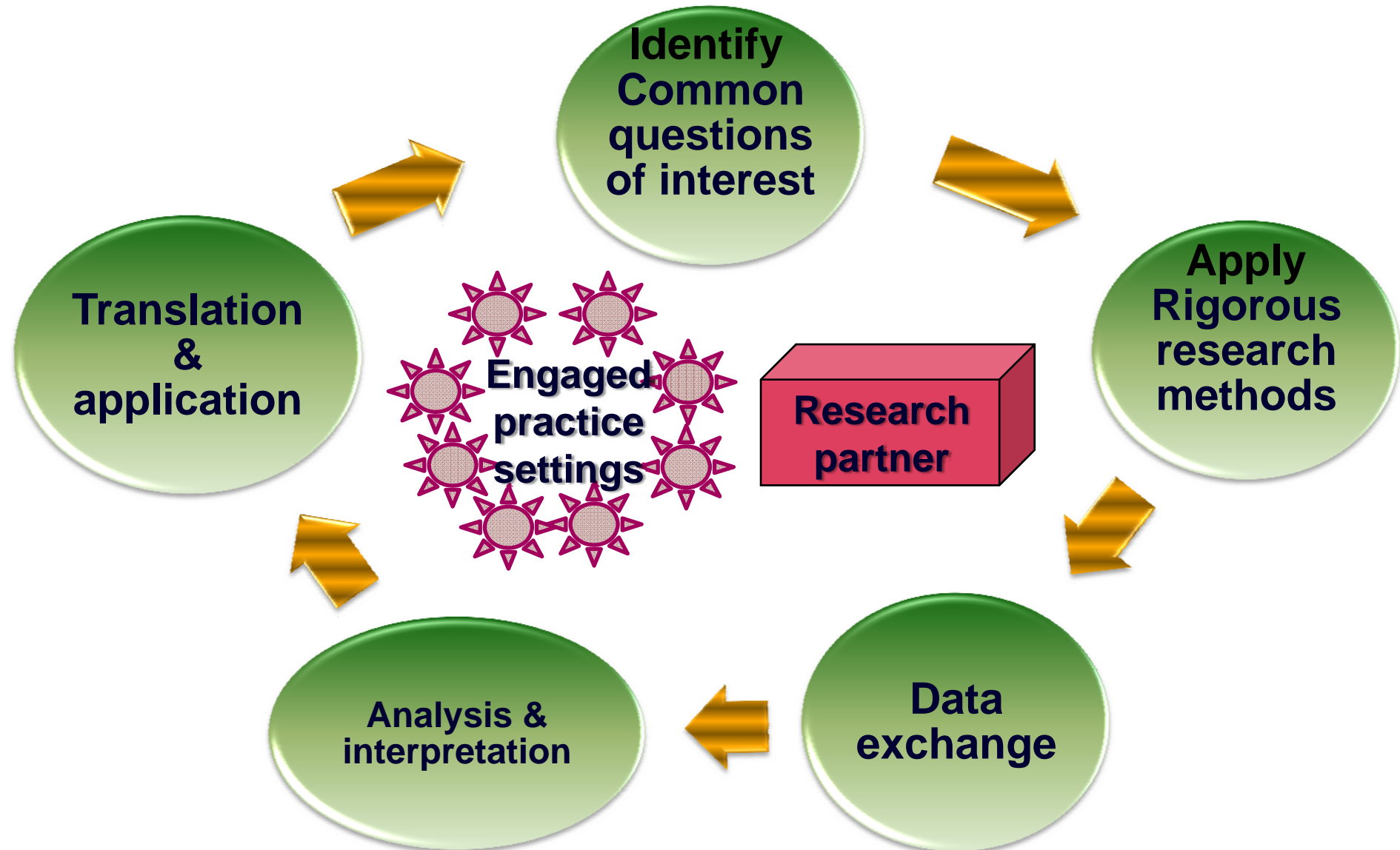


How to Measure Value and Impact

We need research that penetrates and elucidates the “black box” of agencies and systems



The Logic of PBRNs





Key elements of a Public Health PBRN

- ☑ State or local agency to serve as lead convener
- ☑ Multiple practice settings available for study
- ☑ Champion within each practice site
- ☑ Research partner with design and analysis expertise
- ☑ Regular communication among participants
- ☑ Feasible and relevant initial research projects
- ☑ Dedicated staff time for research facilitation



Examples of PBRN studies

- ***Comparative case studies***: document processes, identify scope and scale of problems, examine innovations
- ***Large-scale observational studies***: document practice variation across public health settings; identify causes & consequences of variation
- ***Adoption/diffusion studies***: identify the pace and patterns through which evidence-based practices are adopted, and factors that facilitate and inhibit adoption
- ***Quality improvement studies***: evaluate strategies for improving program operations & outcomes
- ***Policy evaluations and natural experiments***: monitor effects of key policy and administrative changes



Goals of the RWJF Public Health PBRN Program

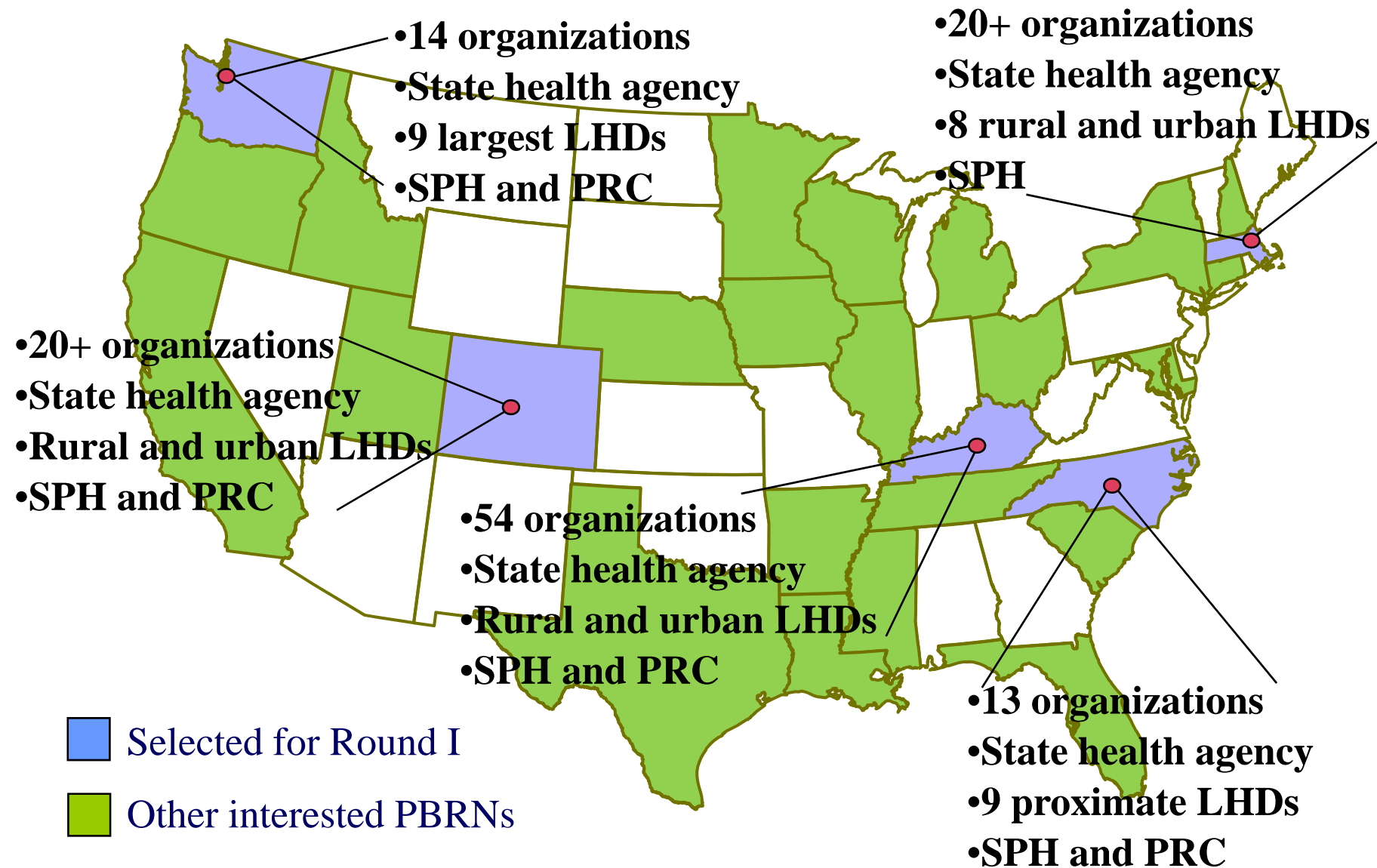


- Learning what works to improve practice
- Comparing approaches across diverse practice settings
- Building reusable and sustainable capacity for practice-relevant research
- Testing approaches for rapid research dissemination and translation

Activities of the Public Health PBRN Program

- Develop up to 15 public health PBRNs over 4 year period
- Two-year grants for infrastructure development and initial studies
- Additional funding opportunities for research implementation
- National coordinating office
 - Support network development
 - Expert consultation on research projects
 - Coordinate multi-network research studies
 - Diffuse findings and lessons learned

Initial PBRN Sites



SPH = School of Public Health

PRC= Prevention Research Center

How you can get involved

- Join an existing or developing network
- Apply for funding opportunities in applied public health systems/services research
- Participate in research activities around emerging practice changes in public health
 - Accreditation
 - Quality improvement
 - Preparedness
 - Changes in funding and resources
 - Changes in policy & law

For more information



Public Health PBRN Coordinating Center
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Example: variations in investigation practice

Mixed Results In Tracking Food Scores

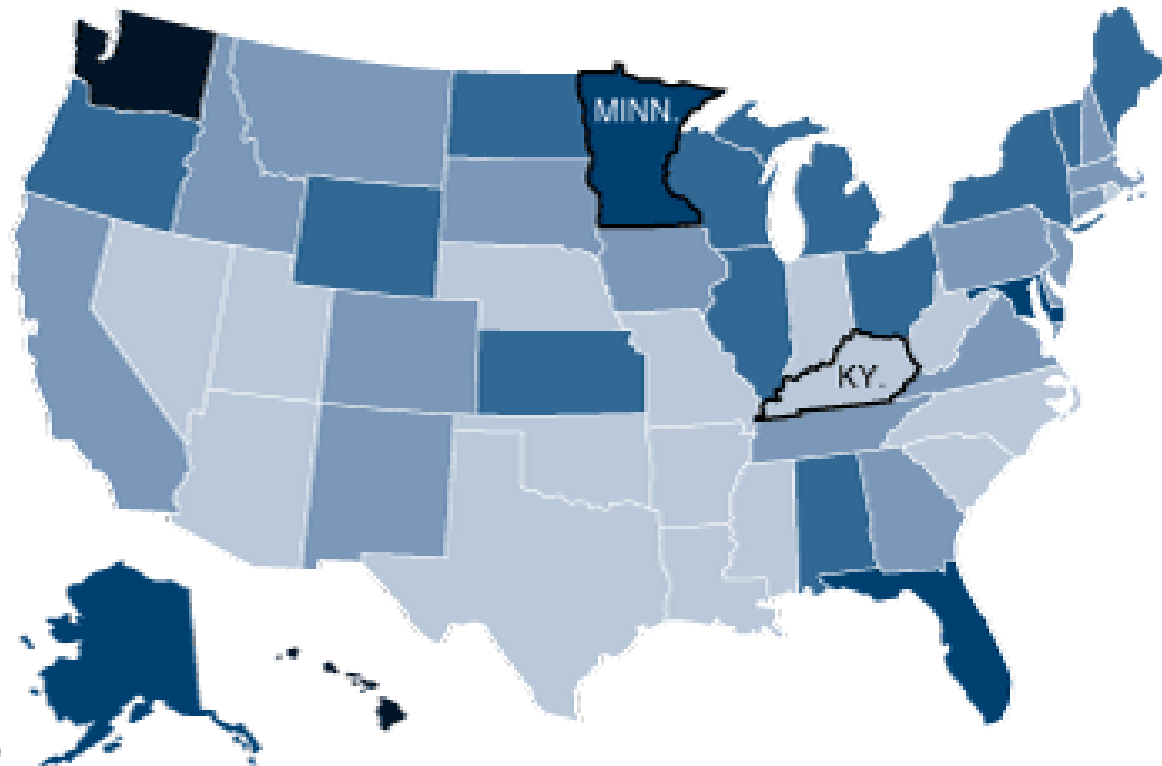
Minnesota health officials investigate all reports of food-borne illness, but officials in many states do not. From 1990 to 2006, Minnesota reported 548 outbreaks, while Kentucky reported 18.

Reported outbreaks of food-related illness

Per 100,000 people, 1990 to 2006



Source: Centers for Disease Control and Prevention



Example: variation in service offerings

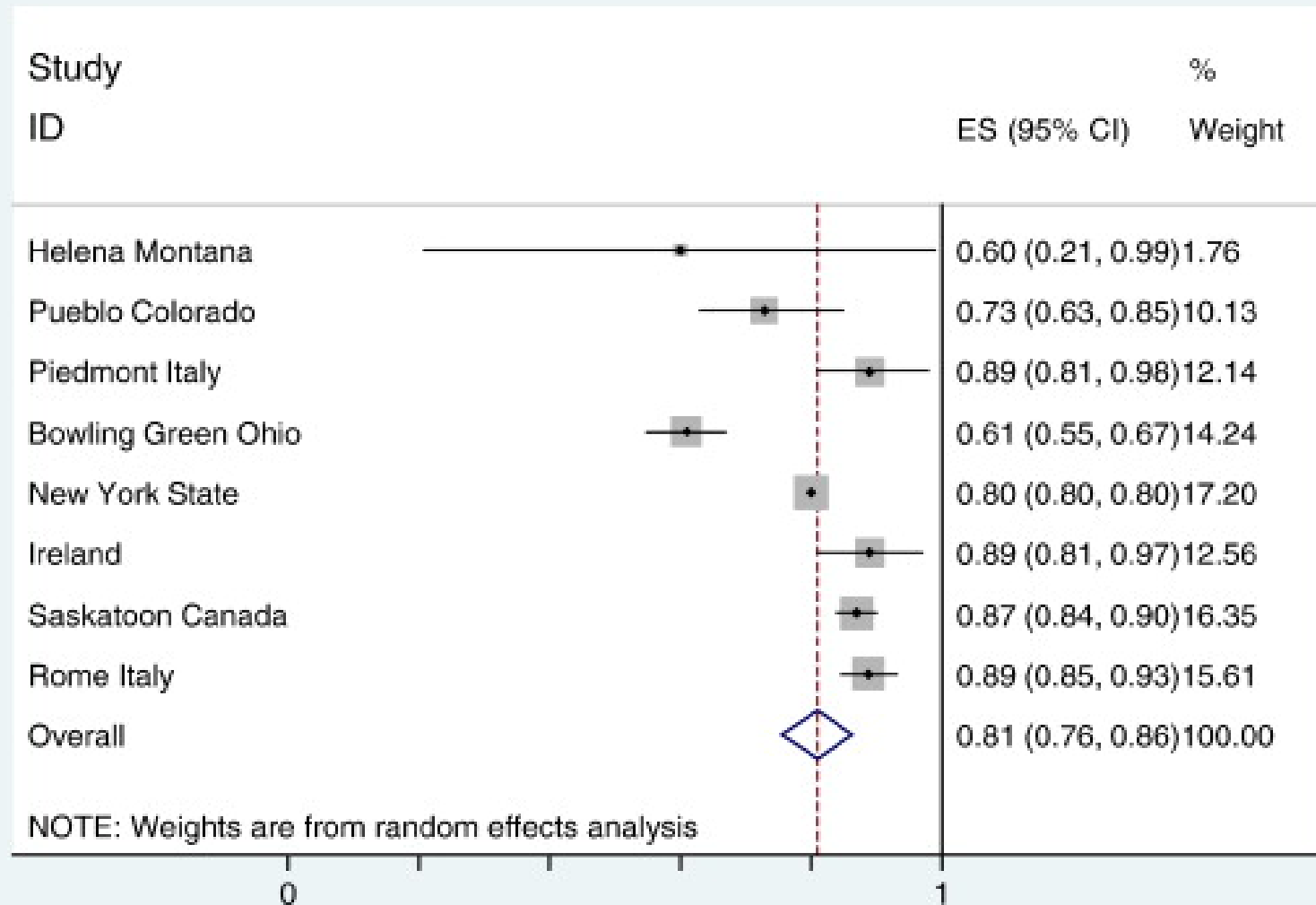
Programs And Functions Of U.S. Local Public Health Agencies, 2005

Program/function	Performed by agency (%)	Contracted by agency (%)
Adult immunization	87.5	6.0
Communicable disease epidemiology	86.9	4.0
Child immunization	86.9	5.5
Tuberculosis screening	82.5	5.0
Food service inspection	74.4	1.7
Tobacco control	66.6	5.8
Women, infants, and children (WIC) program	64.0	4.5
Septic tanks	63.7	2.0
HIV/AIDS screening	59.3	7.1
Sexually transmitted disease treatment	57.1	5.7
Obesity	55.3	2.7
Family planning	54.7	6.5
Early and Periodic Screening, Diagnosis, and Treatment (EPSDT)	44.0	2.7
School health	39.8	1.8
Injury prevention	39.2	1.8
Prenatal care	37.0	7.0
Syndromic surveillance	32.7	1.4
Public water supply monitoring	29.4	1.1
Oral health	27.0	5.5
Home health	25.0	3.7
Hazardous materials handling	19.1	0.9
Primary care	11.8	2.7
Mental health	10.0	3.9

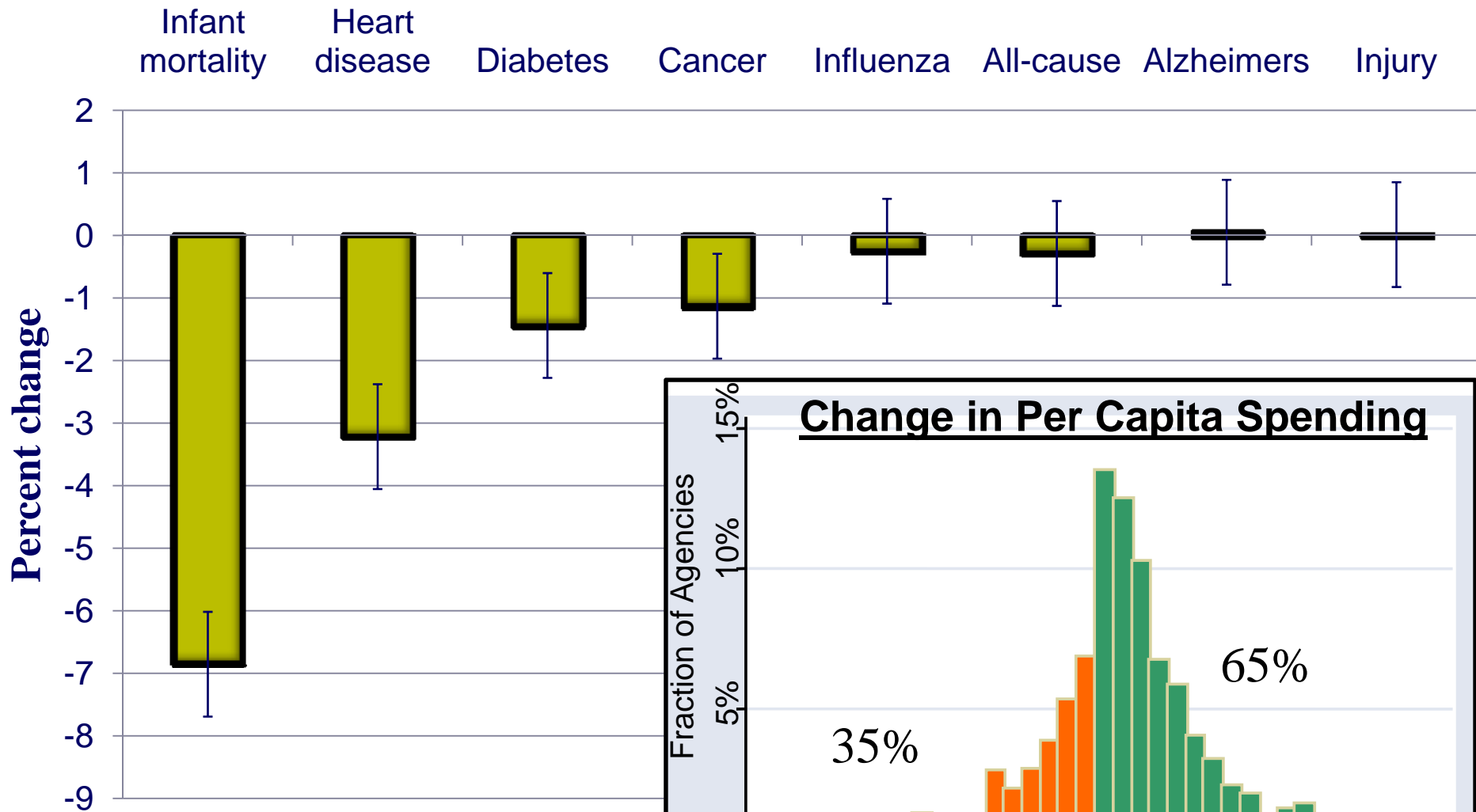


Example: variations in policy design, implementation, enforcement

Estimated Effects of Smoke-free Policies on AMI admissions



Example: Mortality reductions associated with changes in public health spending, 1993-2005



Hierarchical regression estimates with instrumental variables to correct for selection and unmeasured confounding

