

University of Kentucky

From the Selected Works of Glen Mays

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Building the Science of Delivery: Advances in Public Health Services and Systems Research

Glen Mays, *University of Kentucky*



Available at: https://works.bepress.com/glen_mays/115/

Building the Science of Public Health Delivery: Public Health Services & Systems Research

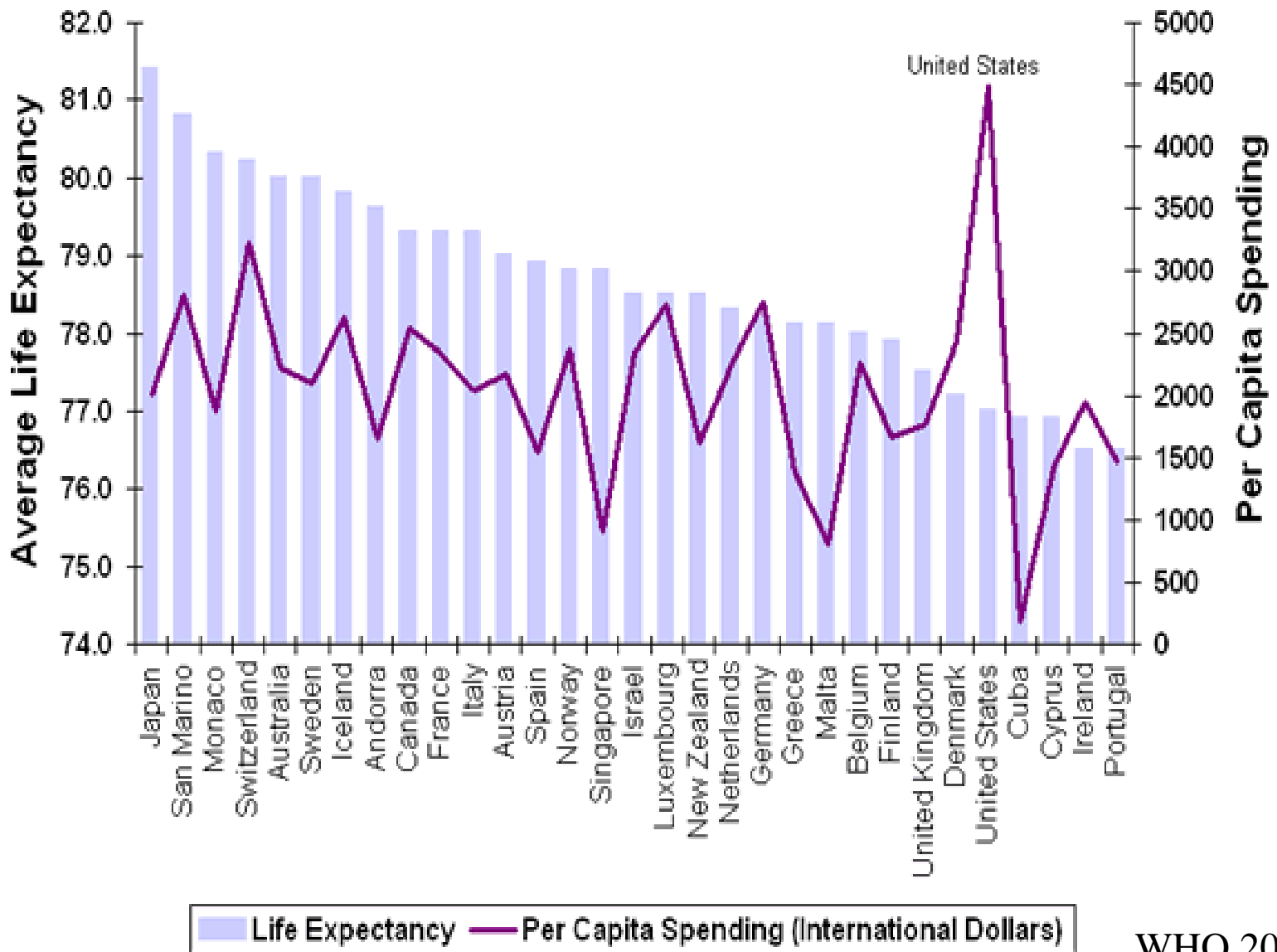
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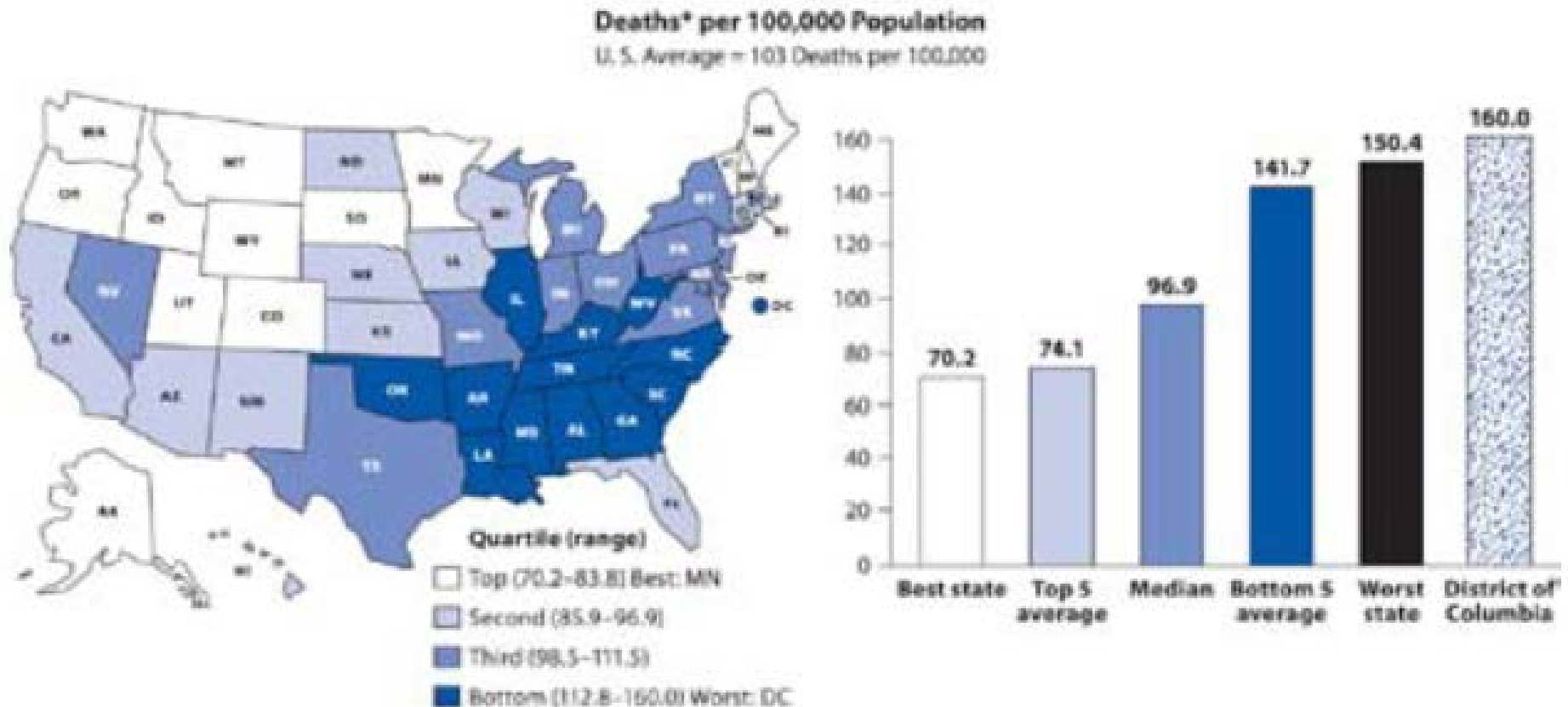
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Fundamental failures in health system performance



Fundamental failures in health system performance



Preventable disease burden and national health spending

>75% of national health spending is attributable to conditions that are largely preventable

- Cardiovascular disease
- Diabetes
- Lung diseases
- Cancer
- Injuries
- Vaccine-preventable diseases and sexually transmitted infections

<5% of national health spending is allocated to public health and prevention

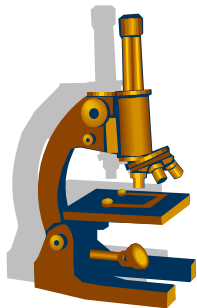
Public health services & systems research

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

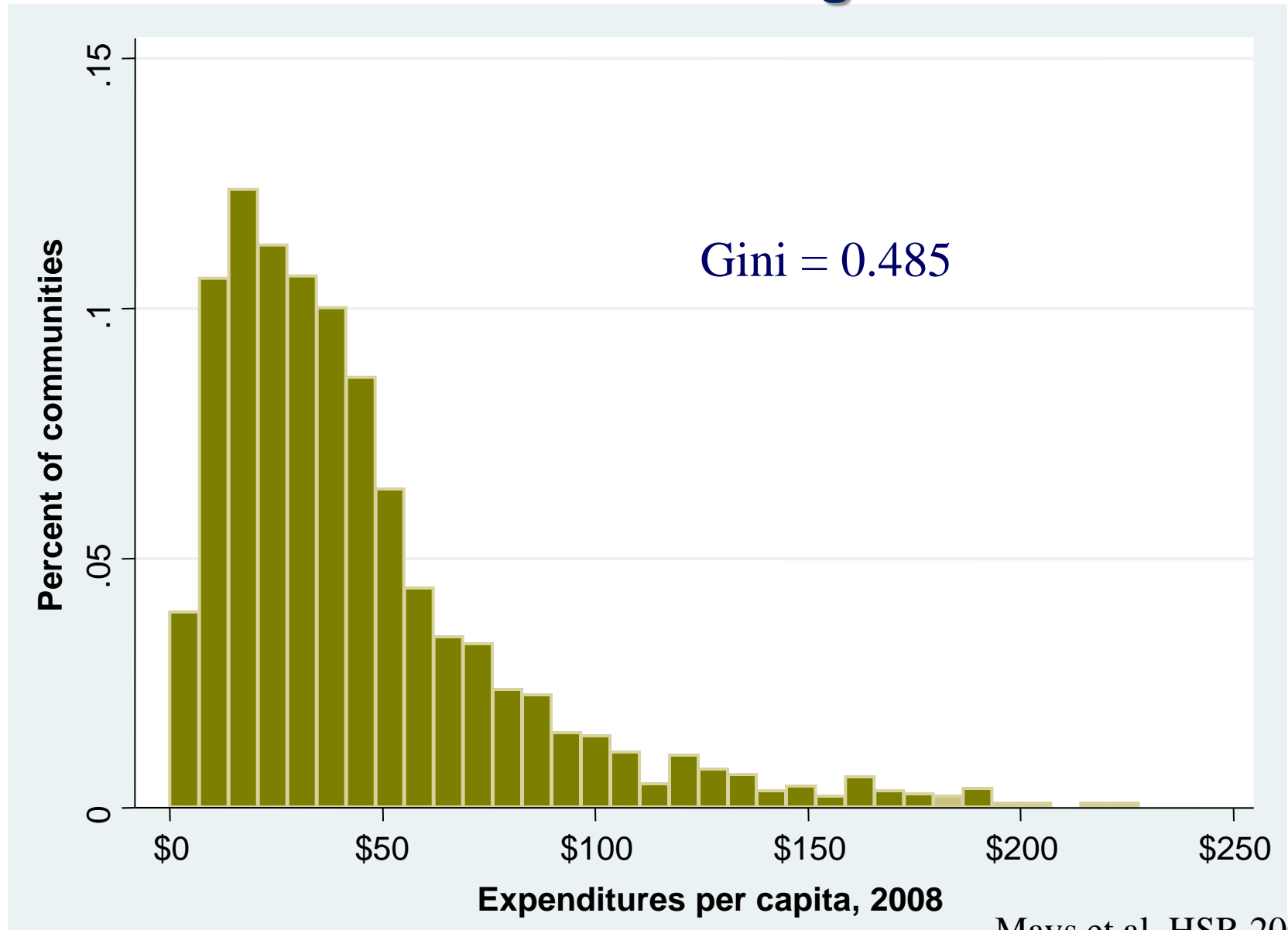
(3) identifying effective strategies for organizing, financing, or delivering public health services in real world community settings, including comparing State and local health department structures and systems in terms of effectiveness and cost.

Complex production processes

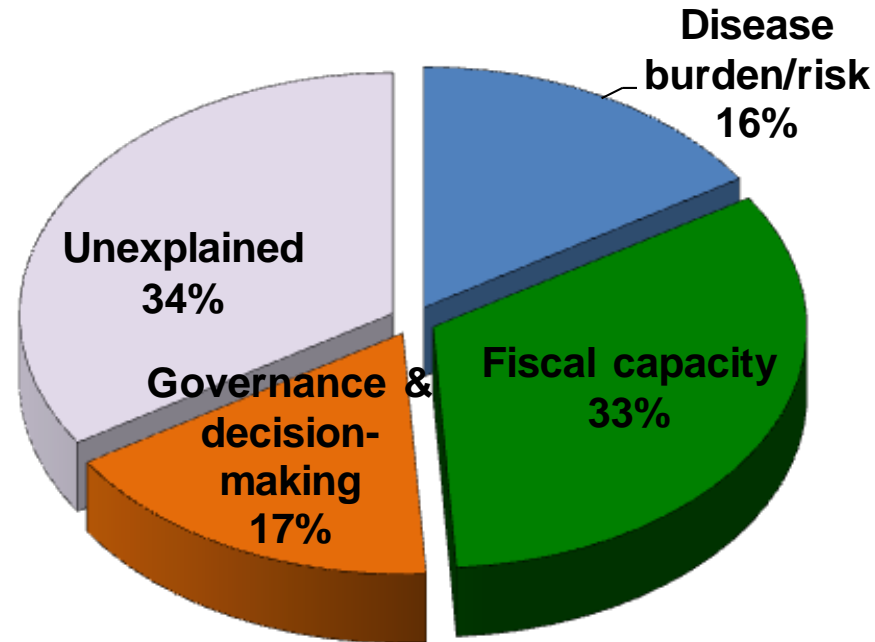
Organized programs, policies, and laws to prevent disease and injury and promote health on a population-wide basis

- Epidemiologic surveillance & investigation
- Community health assessment & planning
- Communicable disease control
- Chronic disease and injury prevention interventions
- Health education and communication
- Environmental health monitoring and assessment
- Enforcement of health laws and regulations
- Inspection and licensing: food, facilities, services
- Inform, advise, and assist school-based, worksite-based, and community-based health programming
- ...and roles in assuring access to medical care

Geographic variation in public health spending: What Would Wennberg Do?



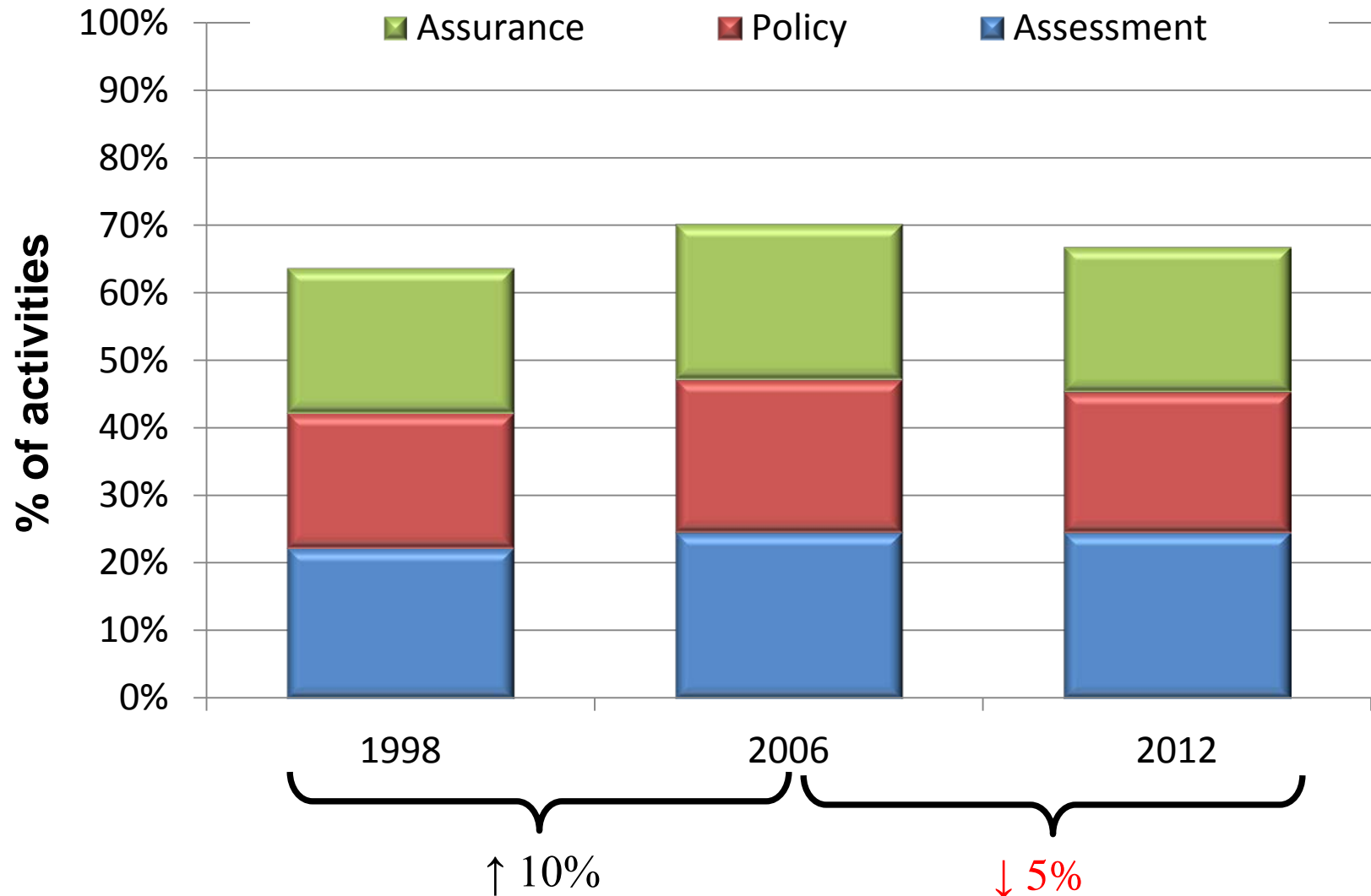
Determinants of public health spending variation



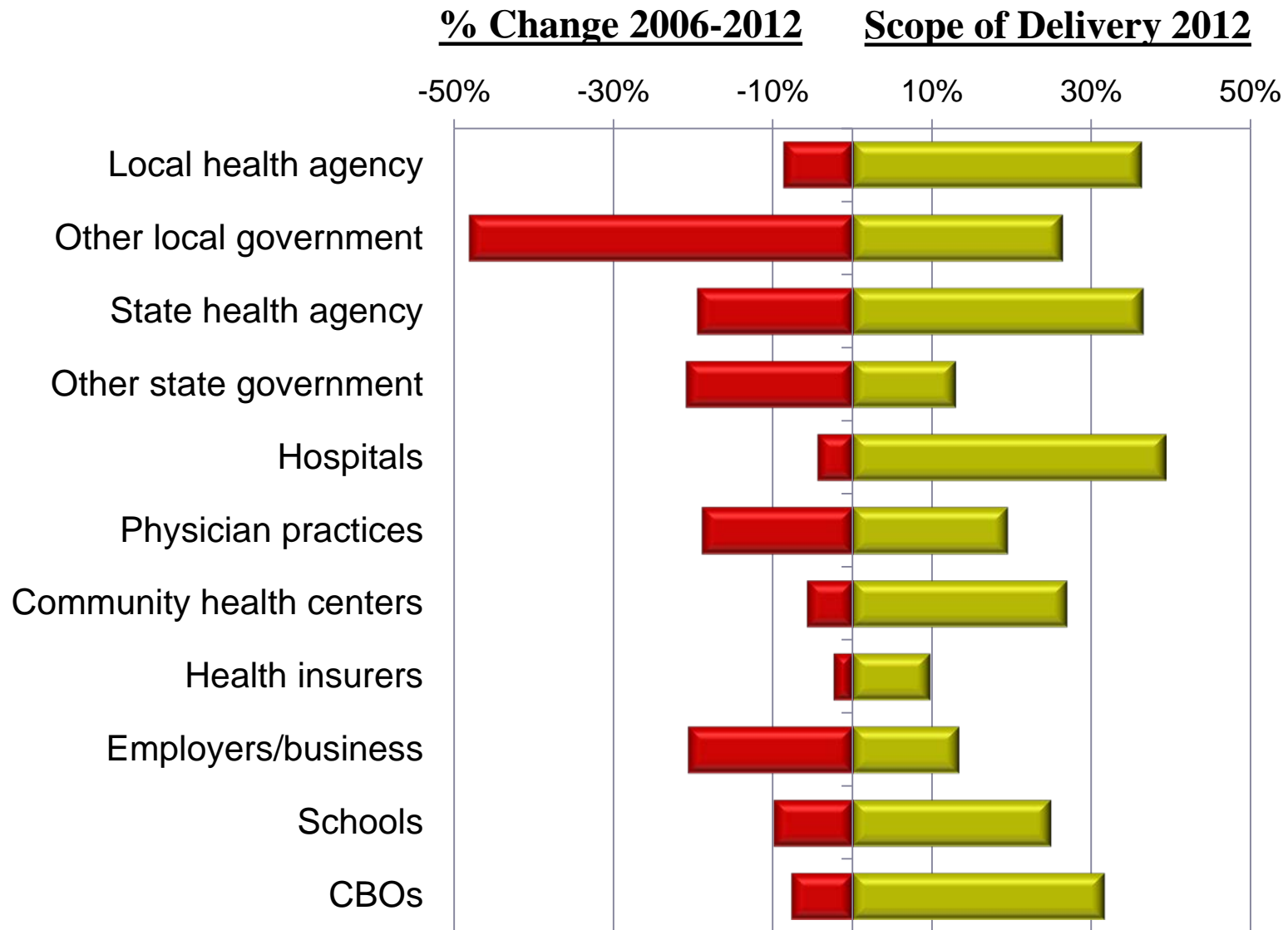
- Population needs and risks
- Economic and fiscal capacity (income & housing wealth)
- Efficiency & uncertainty

Economic Shocks and Public Health Delivery

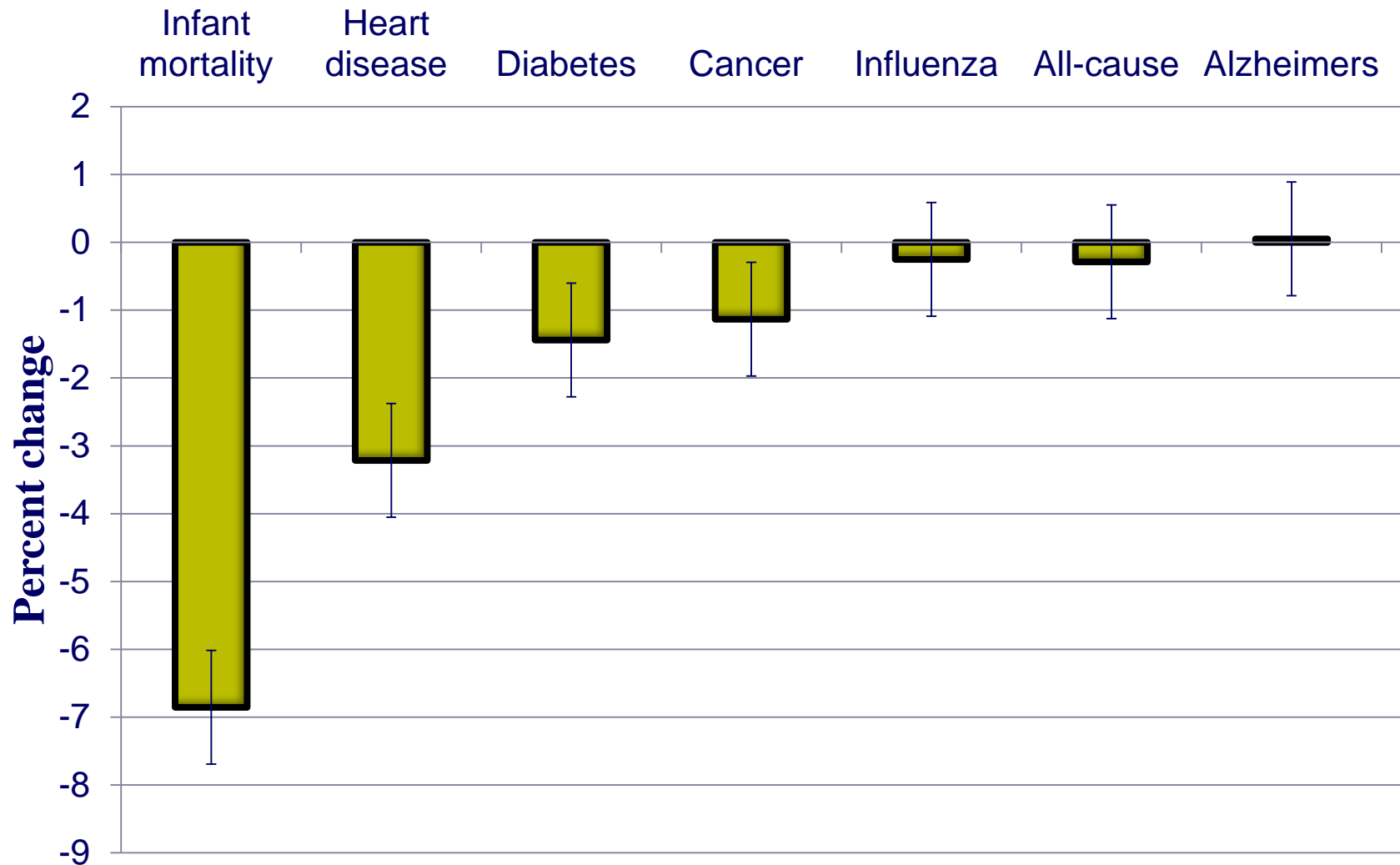
Delivery of recommended public health activities



Organizations engaged in local public health delivery



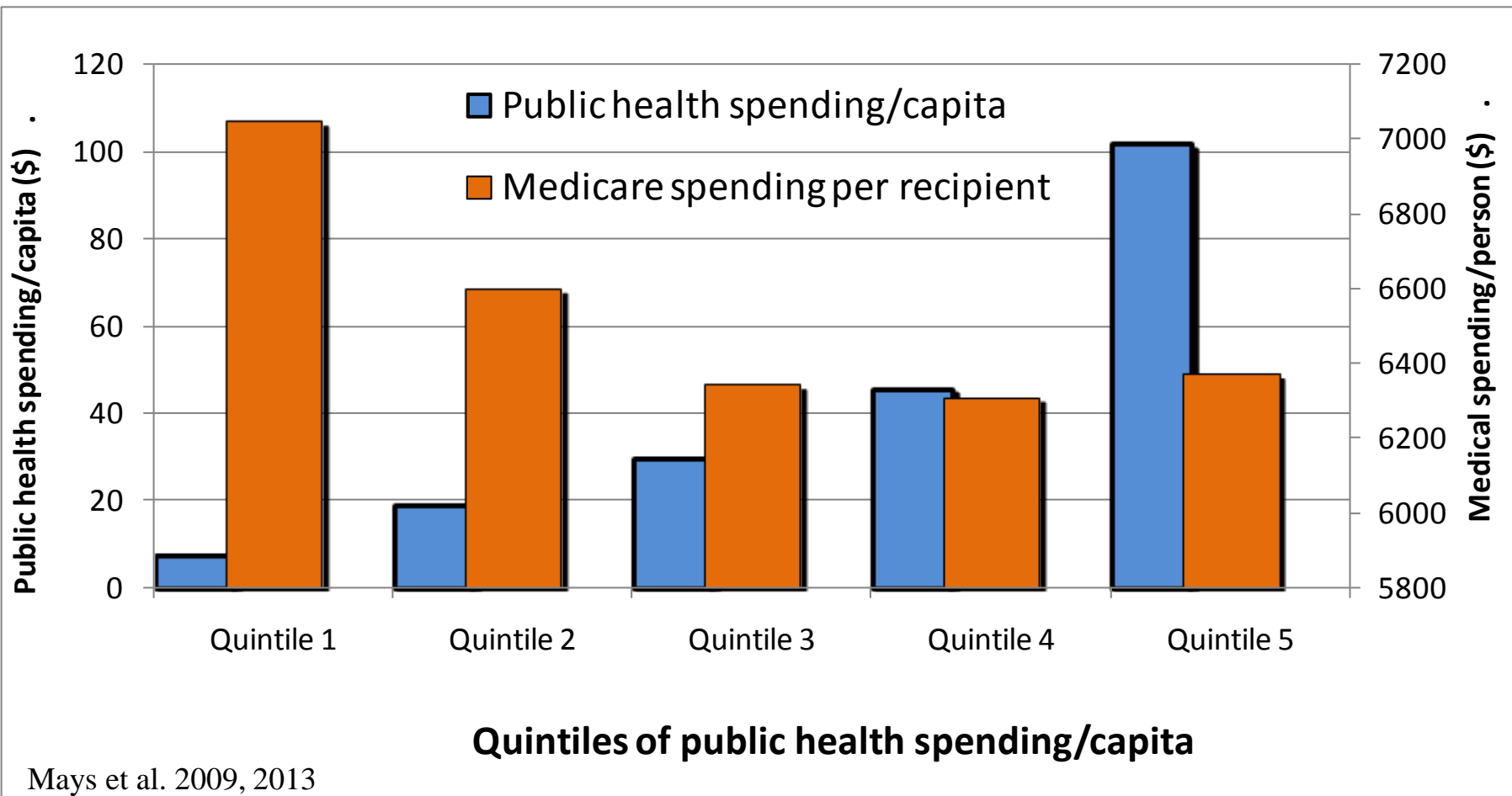
Mortality reductions attributable to local public health spending, 1993-2008



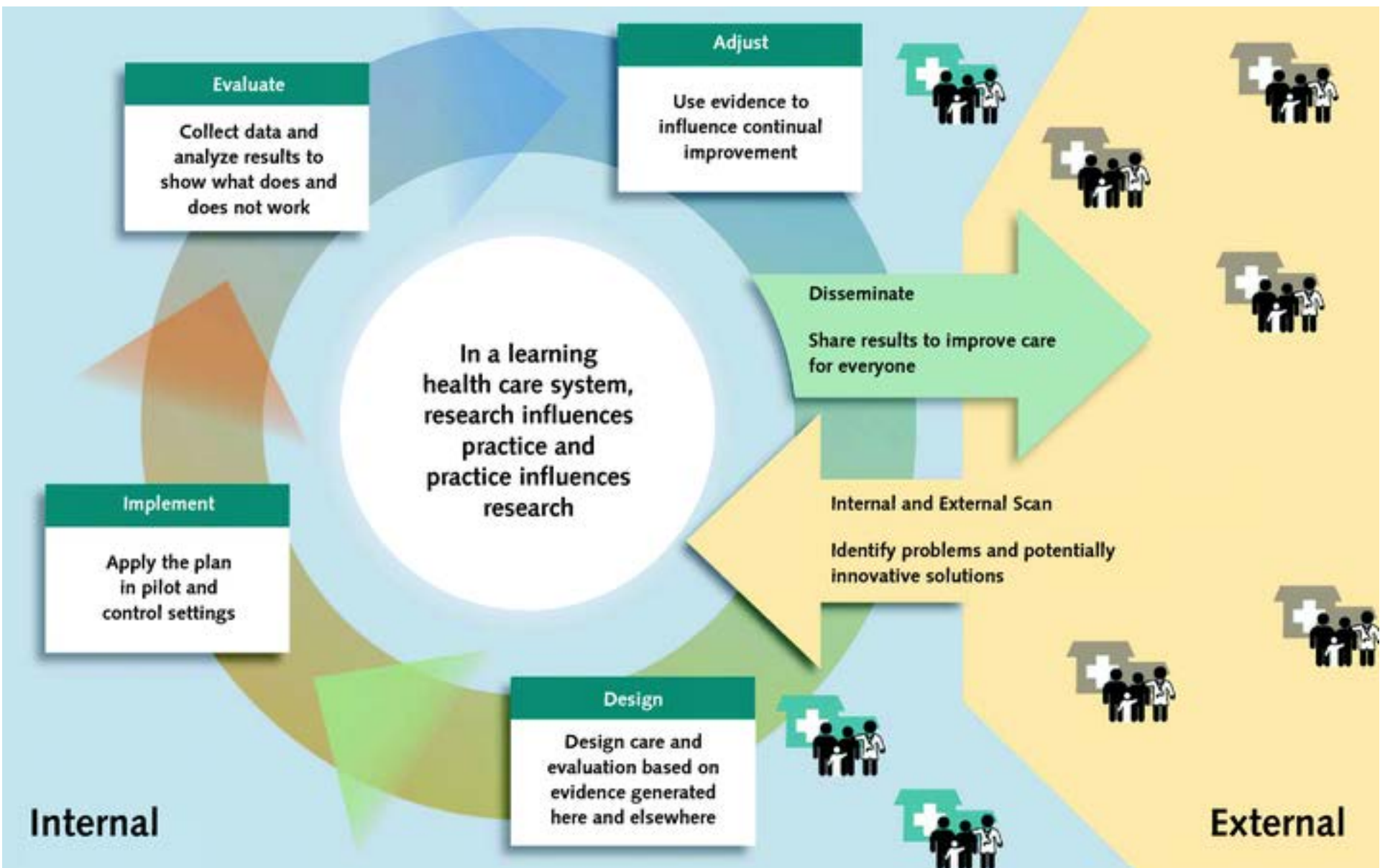
Hierarchical regression estimates with instrumental variables to correct for selection and unmeasured confounding

Medical cost offsets attributable to local public health spending, 1993-2008

For every \$10 of public health spending, ≈\$9 are recovered in lower medical care spending over 15 years

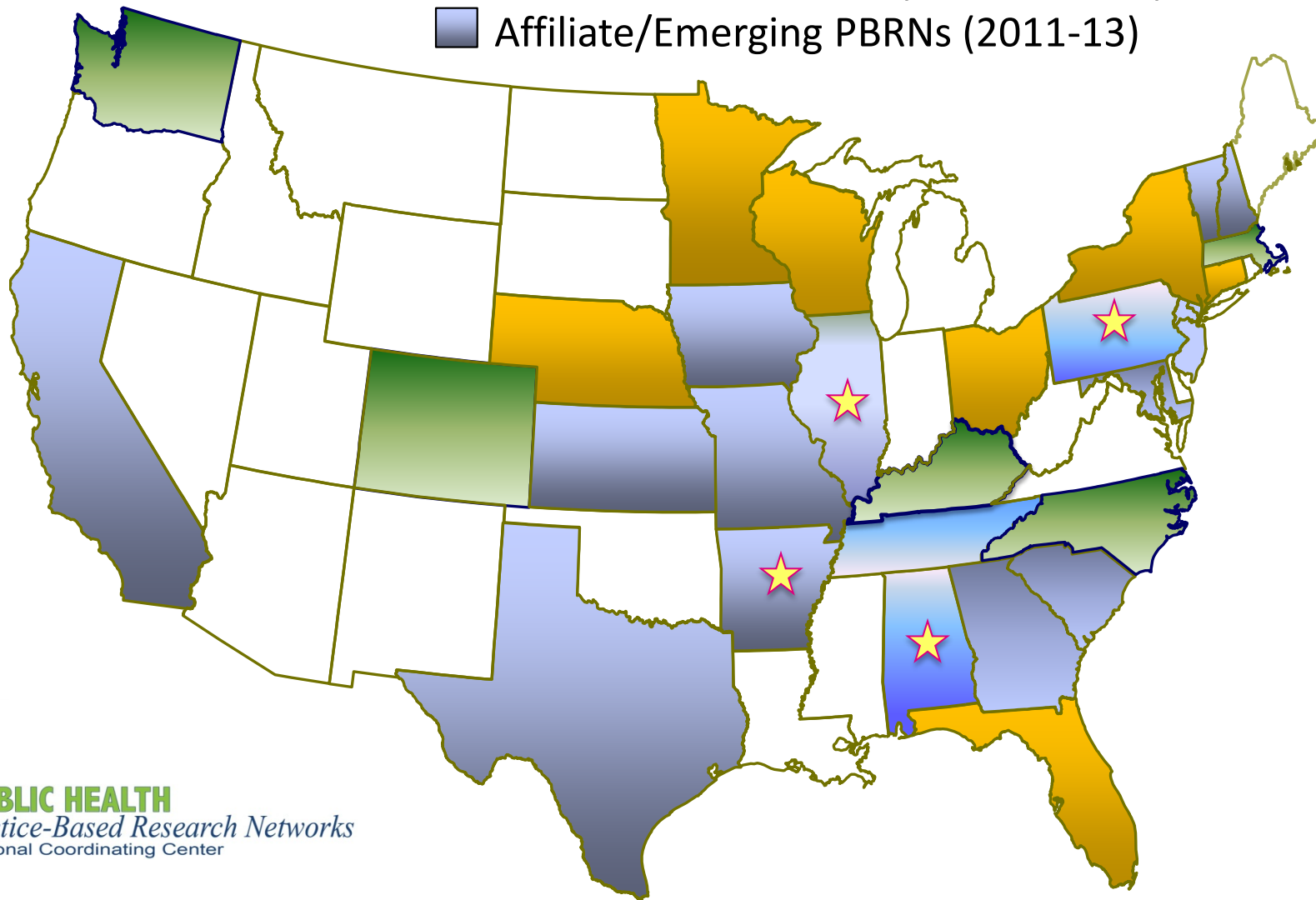


Toward a “rapid-learning system” in public health



Public Health Practice-Based Research Networks (PBRNs)

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



For More Information



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