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Producing Population Health: Collective Action Requires Infrastructure, Incentives & Evidence

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Producing Population Health: Collective Action Requires Infrastructure, Incentives & Evidence

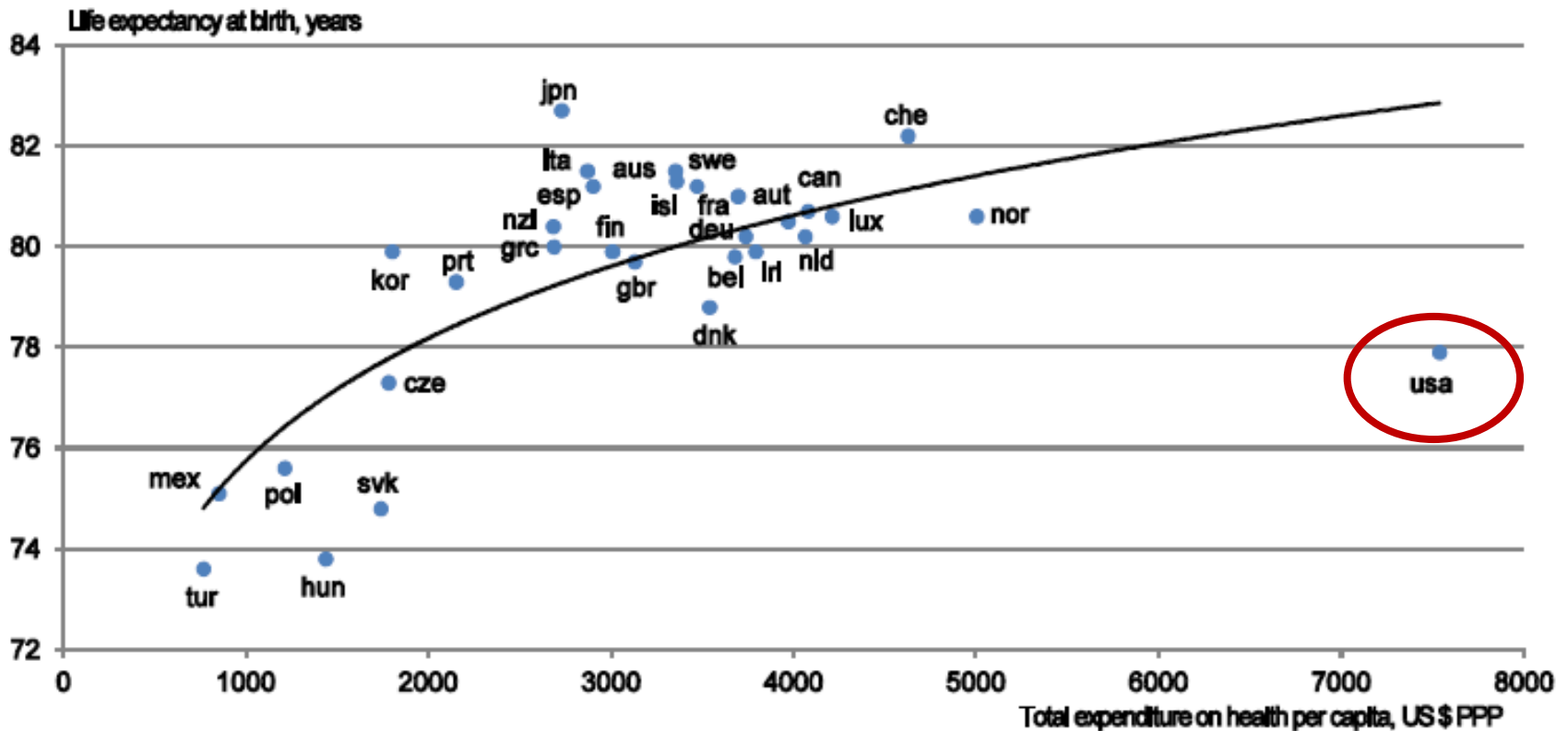
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Delta Omega Induction Ceremony • Lexington KY • 9 May 2014

Failures in population health

Figure 1. There are large differences in life expectancy and health care spending across OECD countries 2008¹

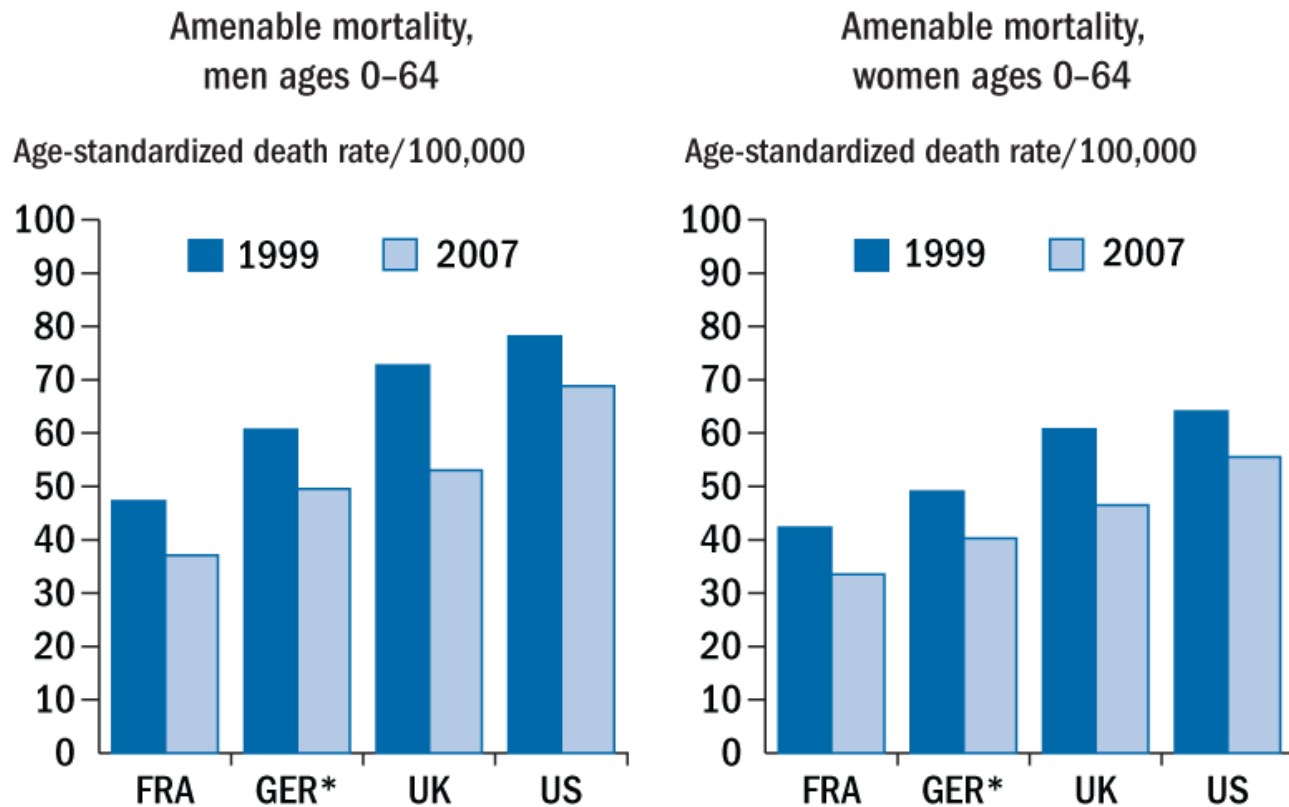


1. Or latest year available.

Source: OECD Health Data 2010.

Failures in population health

U.S. Men and Women Under Age 65 Have Higher Rates of Potentially Preventable Deaths Slowest Rate of Improvement, 1999–2007



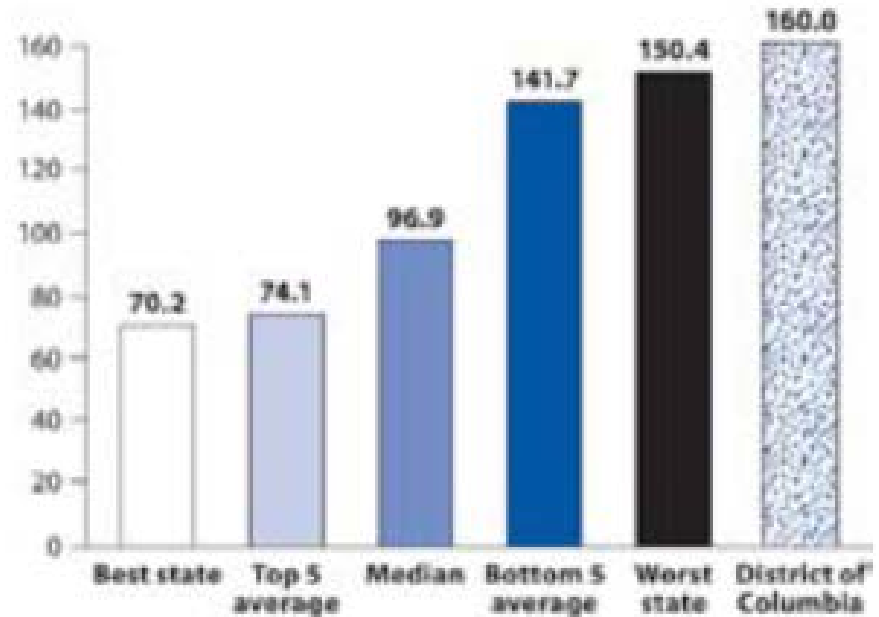
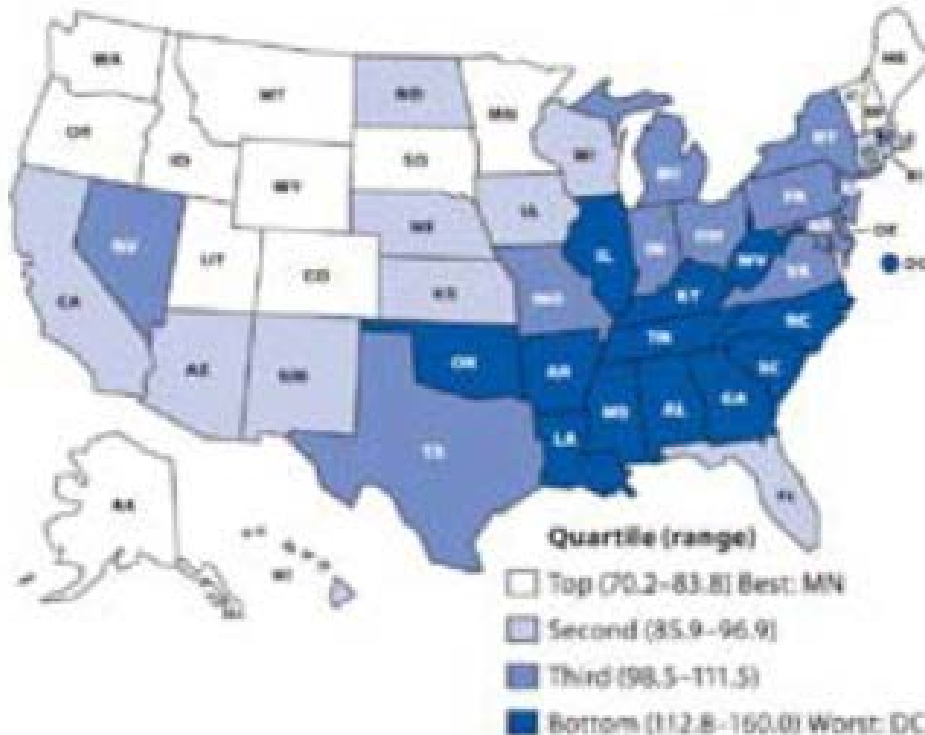
* Data for Germany are 1999 and 2006.

Source: Adapted from E. Nolte and C. M. McKee, "In Amenable Mortality—Deaths Avoidable Through Health Care—Progress in the US Lags That of Three European Countries," *Health Affairs*, published online Aug. 29, 2012.

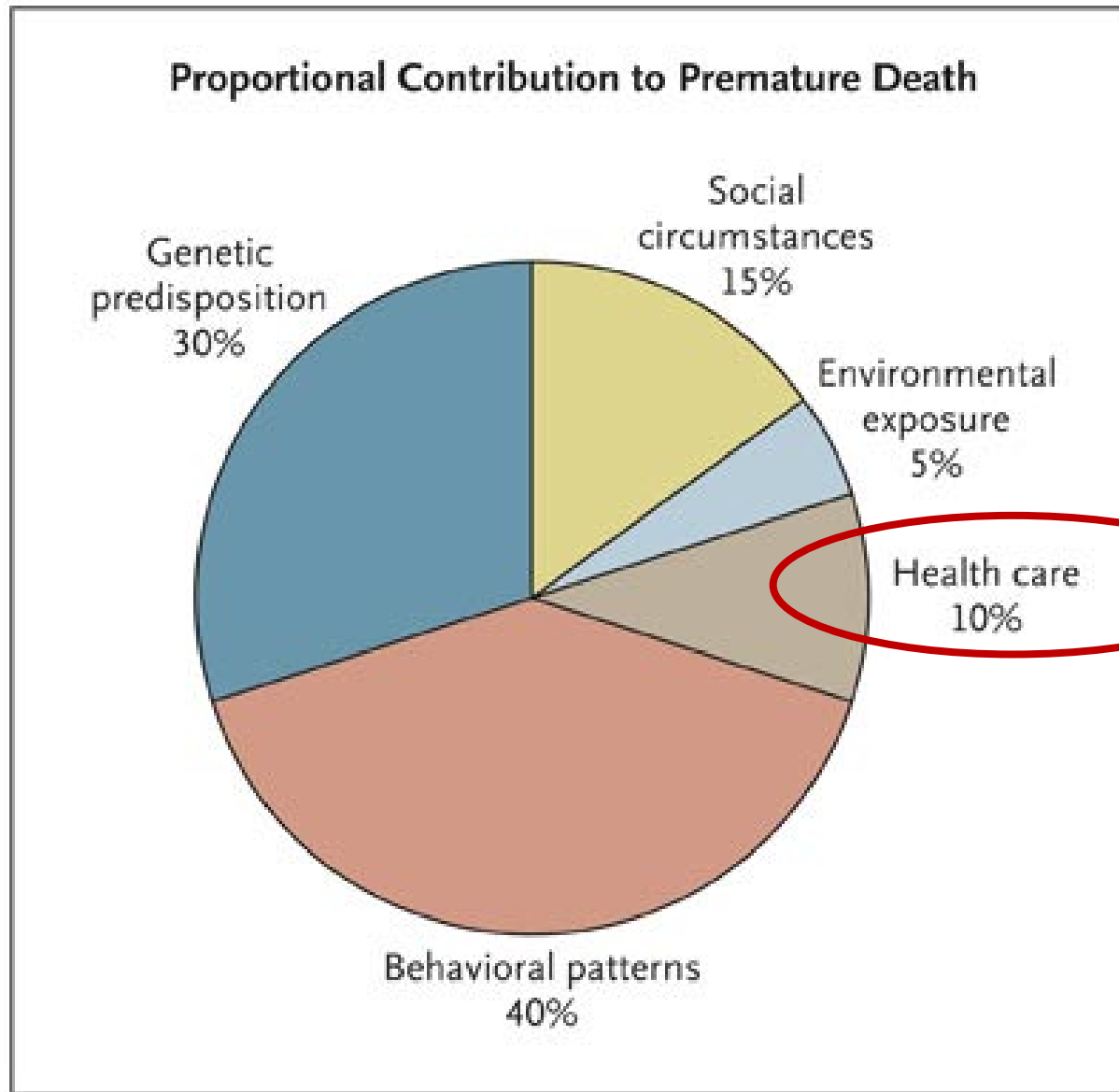
Failures in population health

Premature Deaths per 100,000 Residents

U.S. Average = 103 Deaths per 100,000



Drivers of population health failures

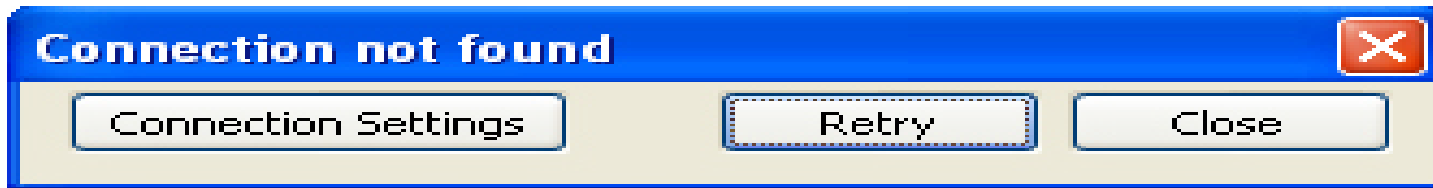


Drivers of population health failures

>75% of US 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 US health spending is allocated to prevention and public health



Medical Care ↔ **Social Supports** ↔ **Public Health**

- Fragmentation
- Duplication
- Variability in practice
- Limited accessibility
- Episodic and reactive care
- Insensitivity to consumer values & preferences
- Limited targeting of resources to community needs

- Fragmentation
- Variability in practice
- Resource constrained
- Limited reach
- Insufficient scale
- Limited public visibility & understanding
- Limited evidence base
- Slow to innovate & adapt

Inefficient delivery
Inequitable outcomes
Limited population health impact

Two large, thick blue curved arrows pointing outwards from the central text, one on the left and one on the right.

What are Population Health Strategies?

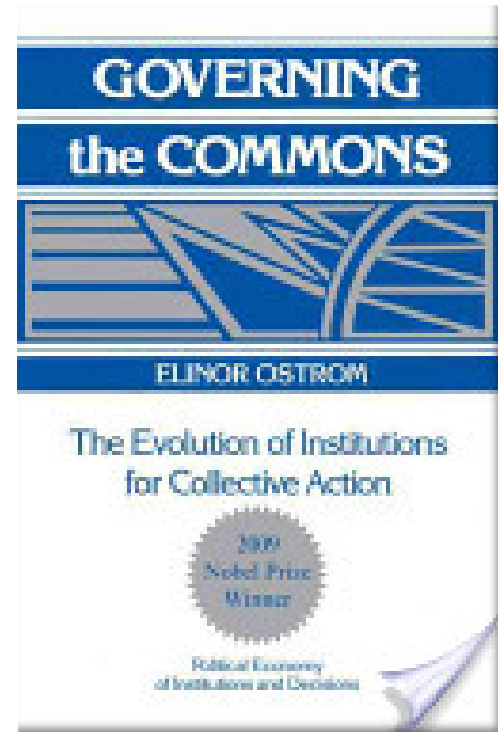
- Designed to achieve **large-scale** health improvement: neighborhood, city/county, region
- Target **fundamental** and often **multiple** determinants of health
- Mobilize the **collective actions** of multiple stakeholders in government & private sector
 - Usual and unusual suspects

New incentives & infrastructure are in play



What Makes Population Health Strategies So Hard?

- Incentive compatibility → public goods
- Concentrated costs & diffuse benefits
- Time lags: costs vs. improvements
- Uncertainties about what works
- Asymmetry in information
- Difficulties measuring progress
- Weak and variable institutions & infrastructure
- Imbalance: resources vs. needs
- Stability & sustainability of funding





Courtesy Omaha Community Playhouse

Can Public Health Infrastructure Help?

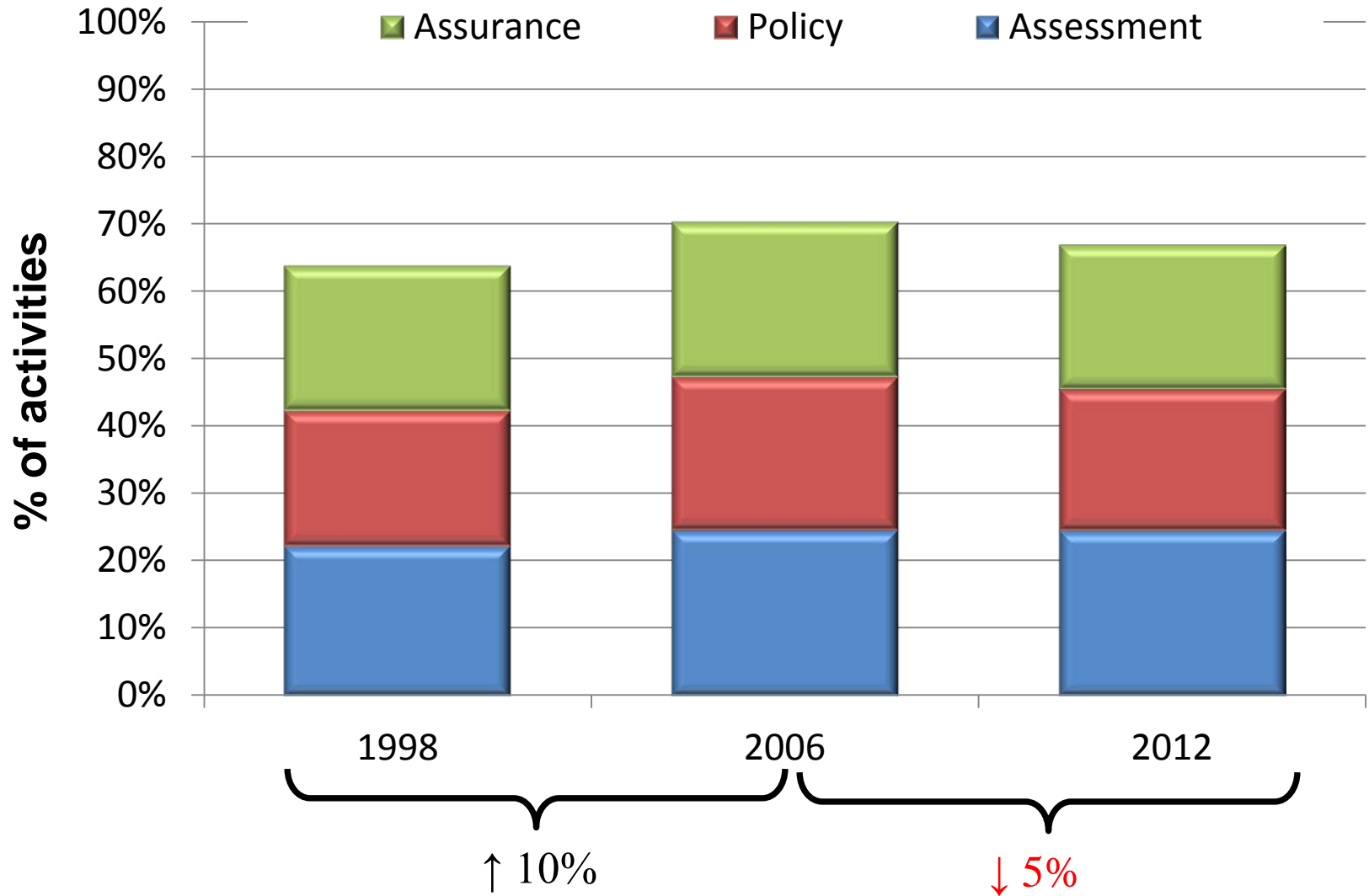
Organized programs, policies, and laws to prevent disease and injury and promote health on a population-wide basis

- Epidemiologic **surveillance & investigation**
- Community health **assessment & planning**
- Communicable disease control
- Chronic disease and injury prevention
- Health education and communication
- Environmental health **monitoring and assessment**
- Enforcement of health **laws and regulations**
- Inspection and licensing
- **Inform, advise, and assist** school-based, worksite-based, and community-based health programming
- ...and roles in **linking people** to medical care & social supports



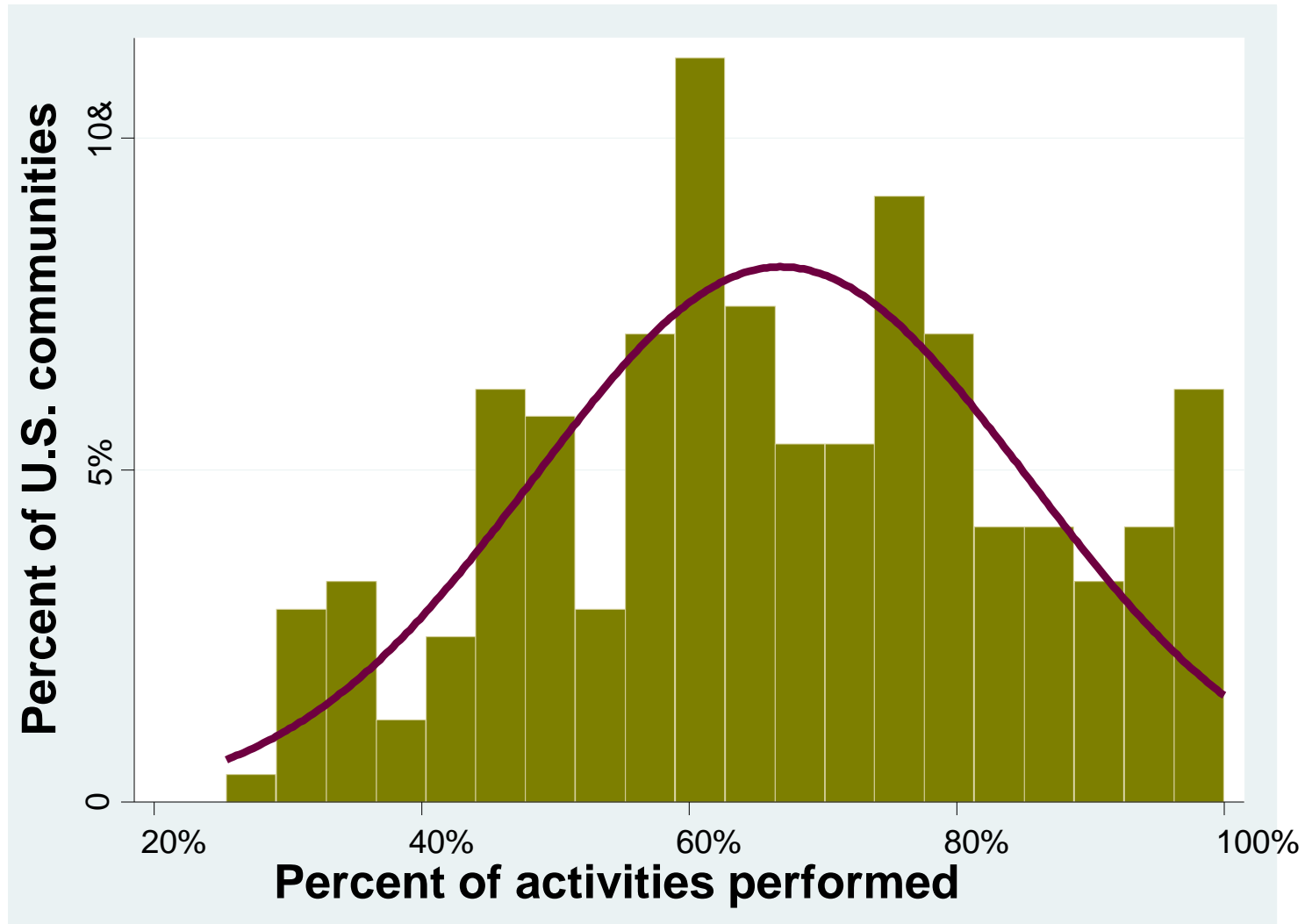
Public Health
Prevent. Promote. Protect.

U.S. Delivery of Recommended Public Health Activities



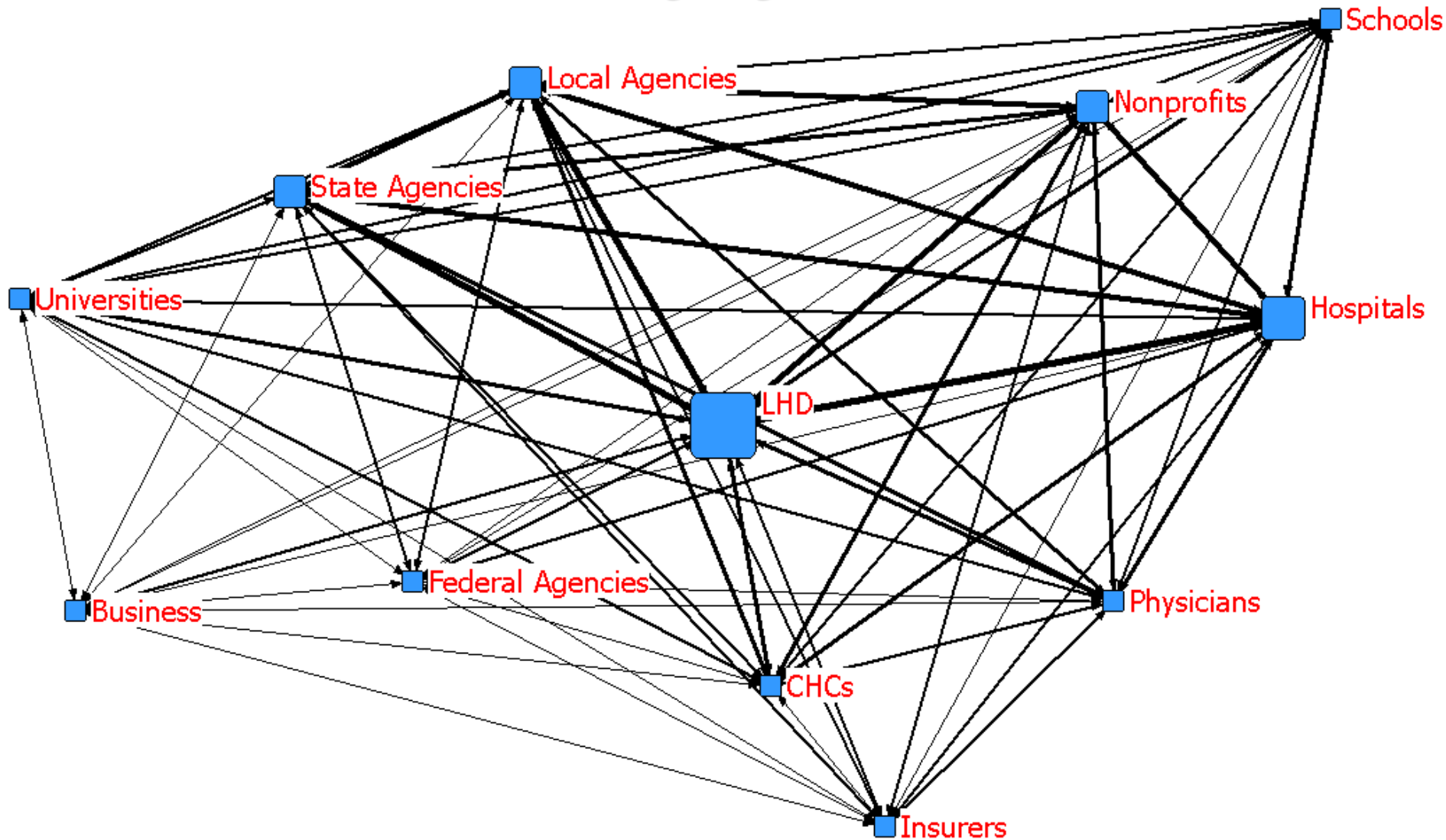
Variation in Scope of Public Health Delivery

Delivery of recommended public health activities, 2012



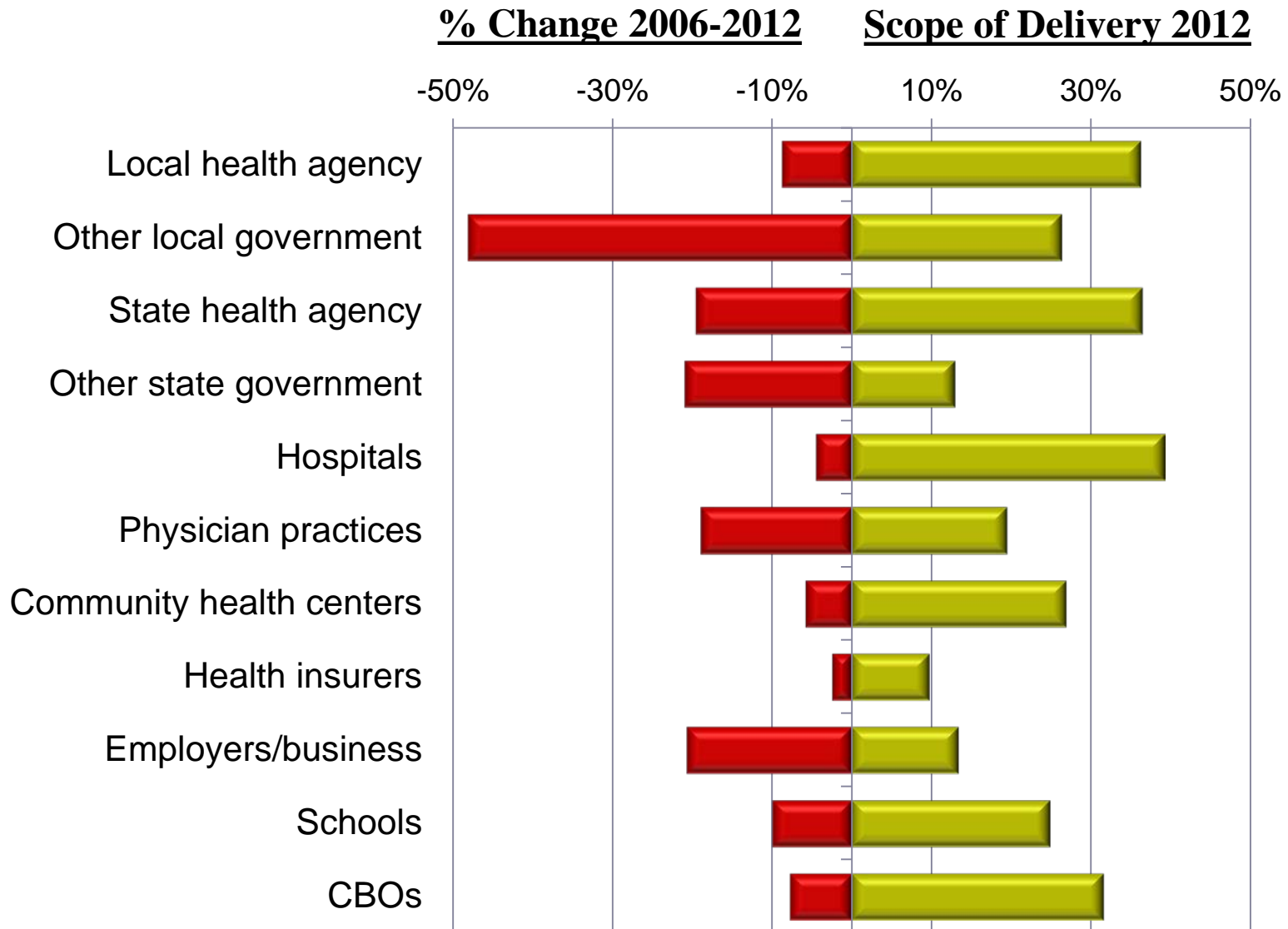
National Longitudinal Survey of Public Health Systems, 2012

Complexity in population health delivery systems

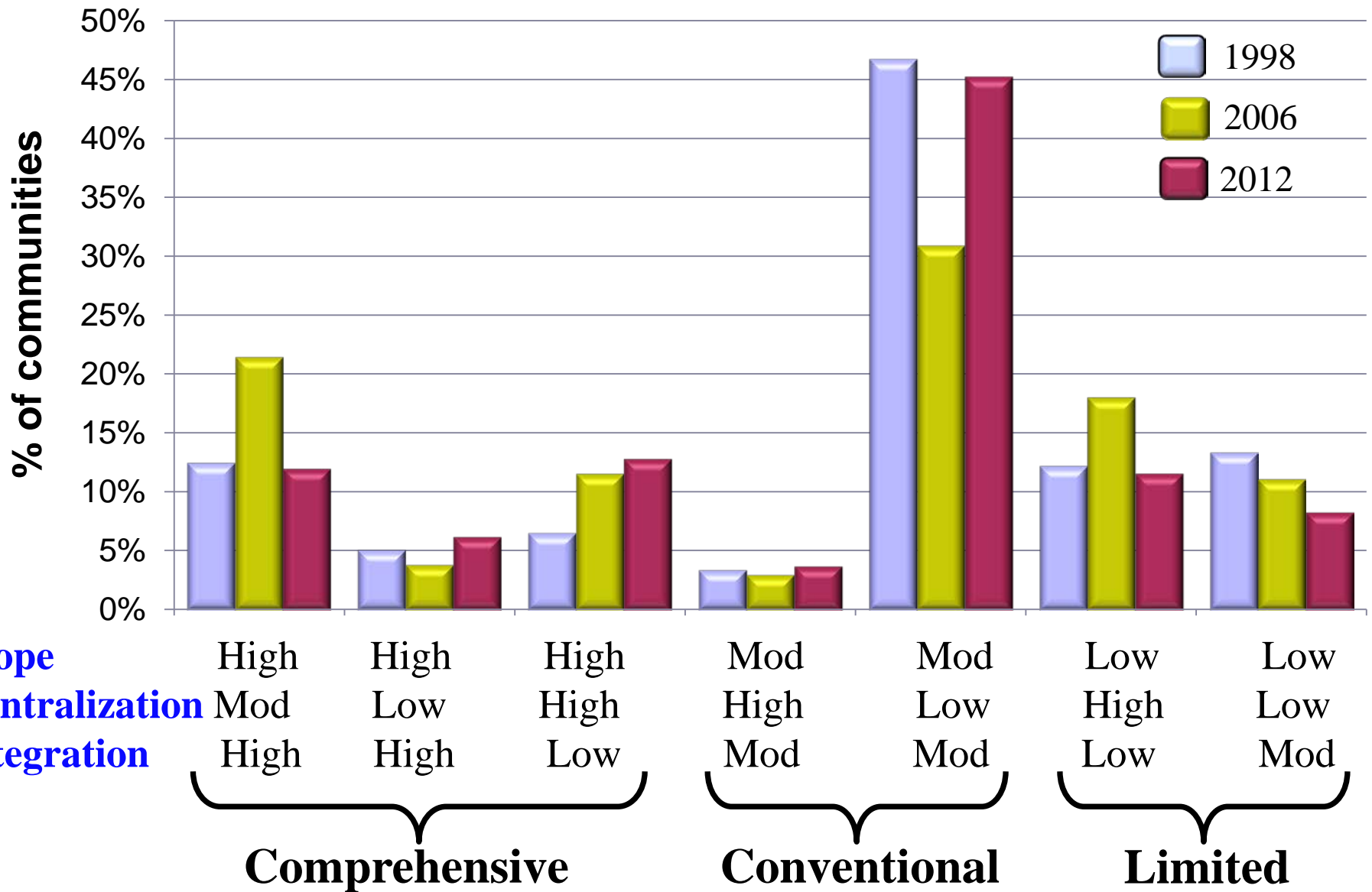


National Longitudinal Survey of Public Health Systems, 2012

Organizations engaged in local public health delivery



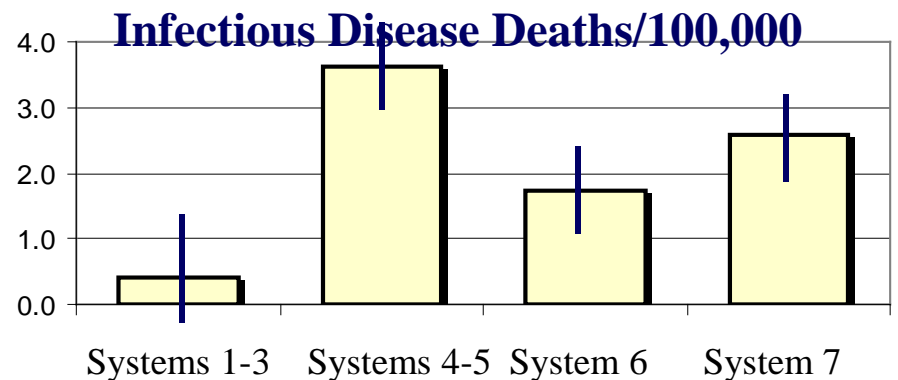
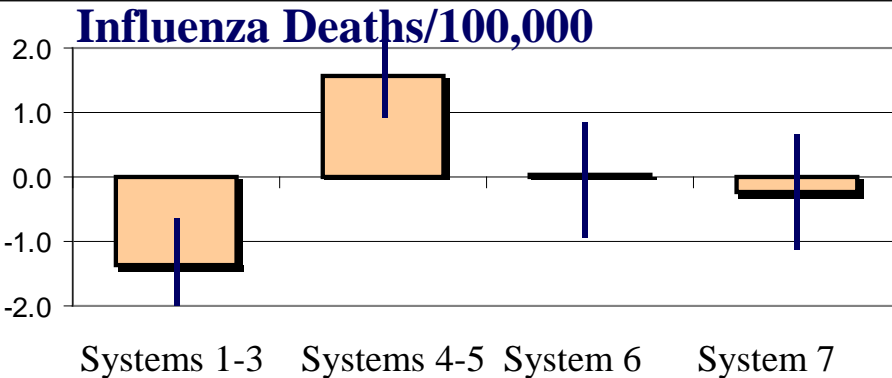
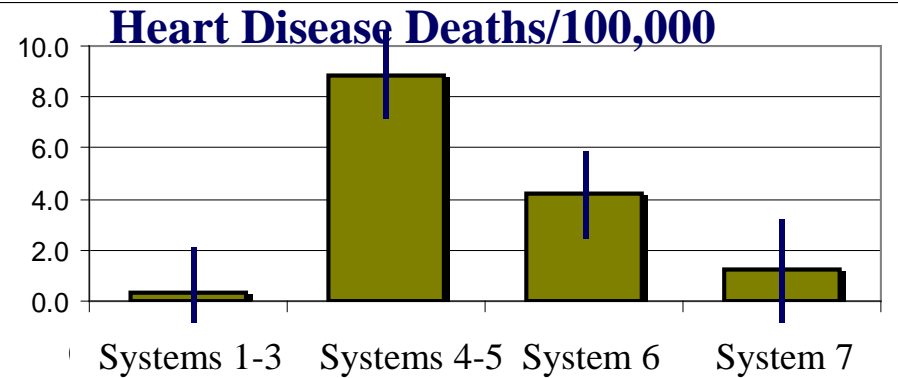
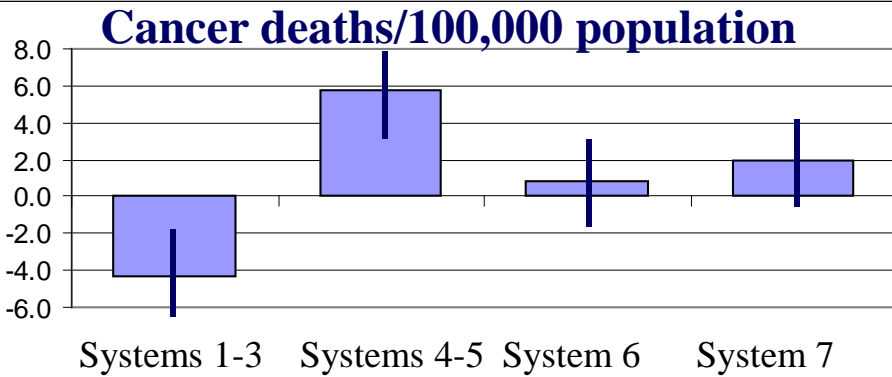
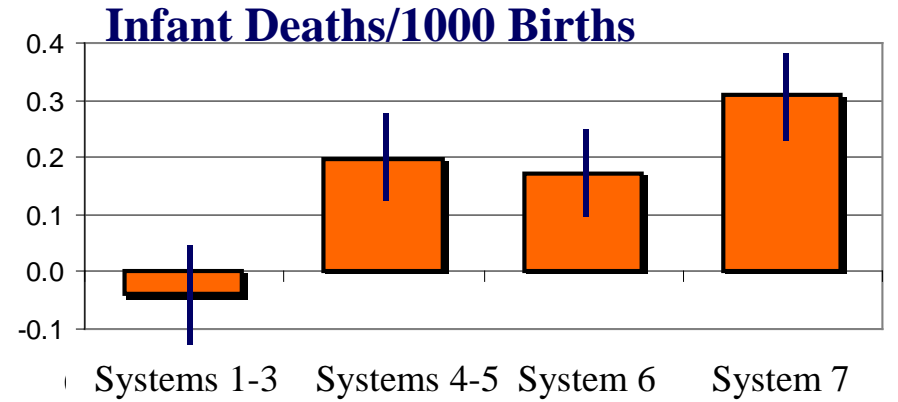
Seven types of population health delivery systems



Source: Mays et al. 2010; 2012

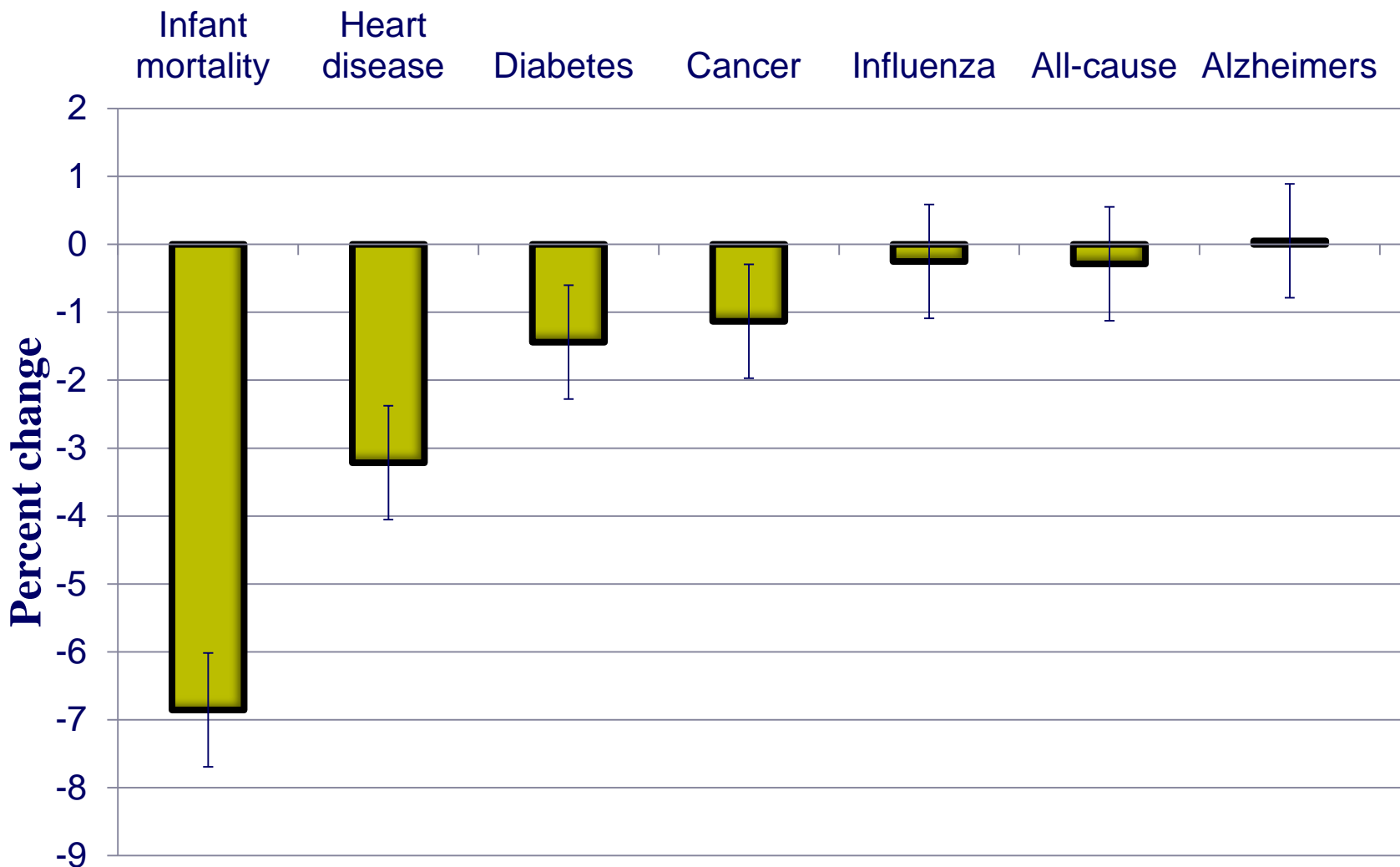
Health Consequences of Delivery System Change

Relative Change in Preventable Mortality Rates Associated with Changes in Delivery System Type, 1998-2012



Fixed-effects models control for population size, density, age composition, poverty status, racial composition, and physician supply

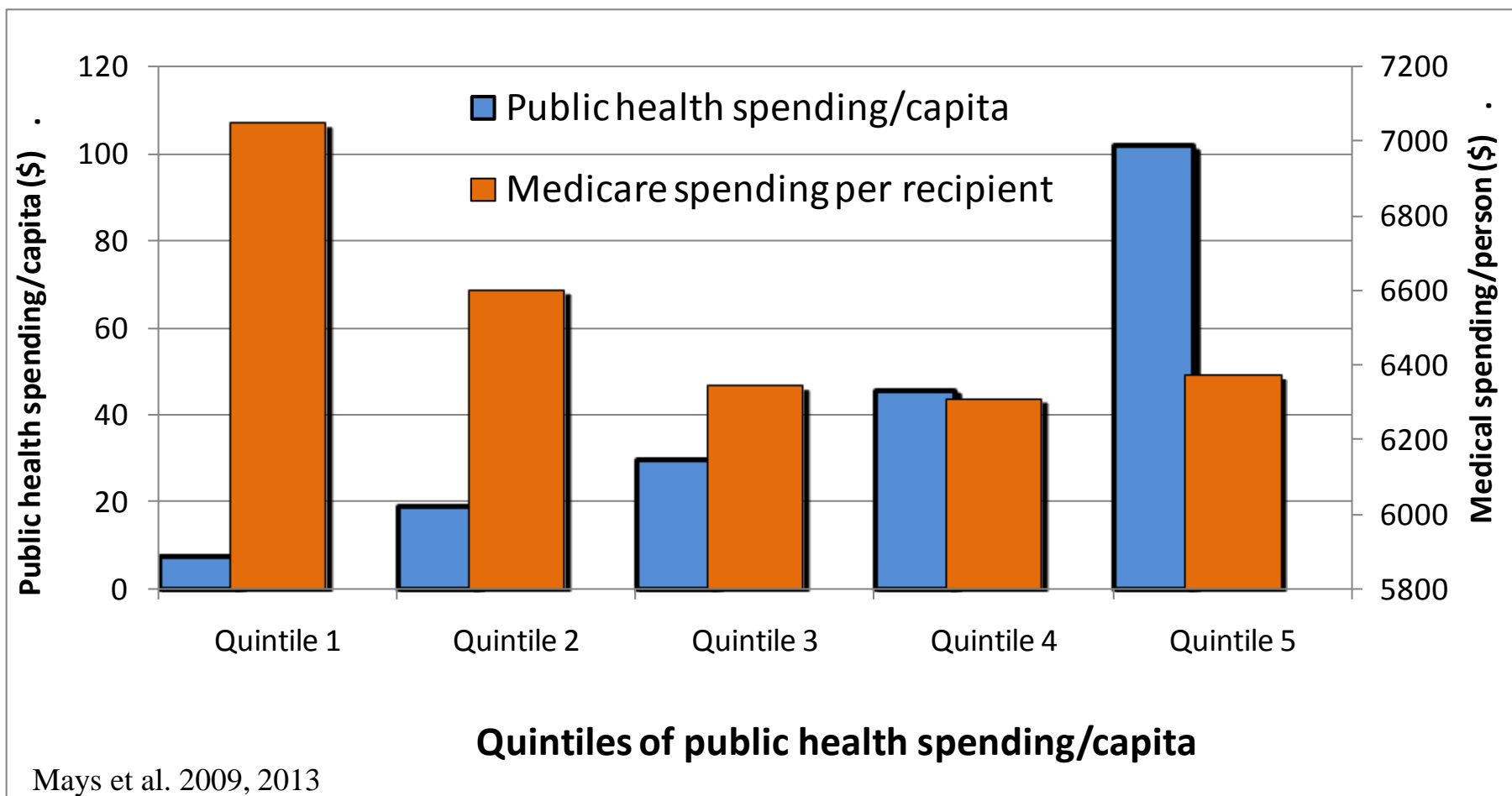
Mortality reductions attributable to investments in public health delivery, 1993-2008



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

Medical cost offsets attributable to investments in public health delivery, 1993-2008

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



Some Promising Examples

Hennepin Health ACO

- Partnership of county health department, community hospital, and FQHC
- Accepts full risk payment for all medical care, public health, and social service needs for Medicaid enrollees
- Fully integrated electronic health information exchange
- Heavy investment in care coordinators and community health workers
- Savings from avoided medical care reinvested in public health initiatives
 - Nutrition/food environment
 - Physical activity



Some Promising Examples

Massachusetts Prevention & Wellness Trust Fund

- \$60 million invested from nonprofit insurers and hospital systems
- Funds community coalitions of health systems, municipalities, businesses and schools
- Invests in community-wide, evidence-based prevention strategies with a focus on reducing health disparities
- Savings from avoided medical care are reinvested in Trust Fund



Some Promising Examples

Arkansas Community Connector Program

- Use community health workers & public health infrastructure to identify people with unmet social support needs
- Connect people to home and community-based services & supports
- Link to hospitals and nursing homes for transition planning
- Use Medicaid and SIM financing, savings reinvestment
- ROI \$2.92



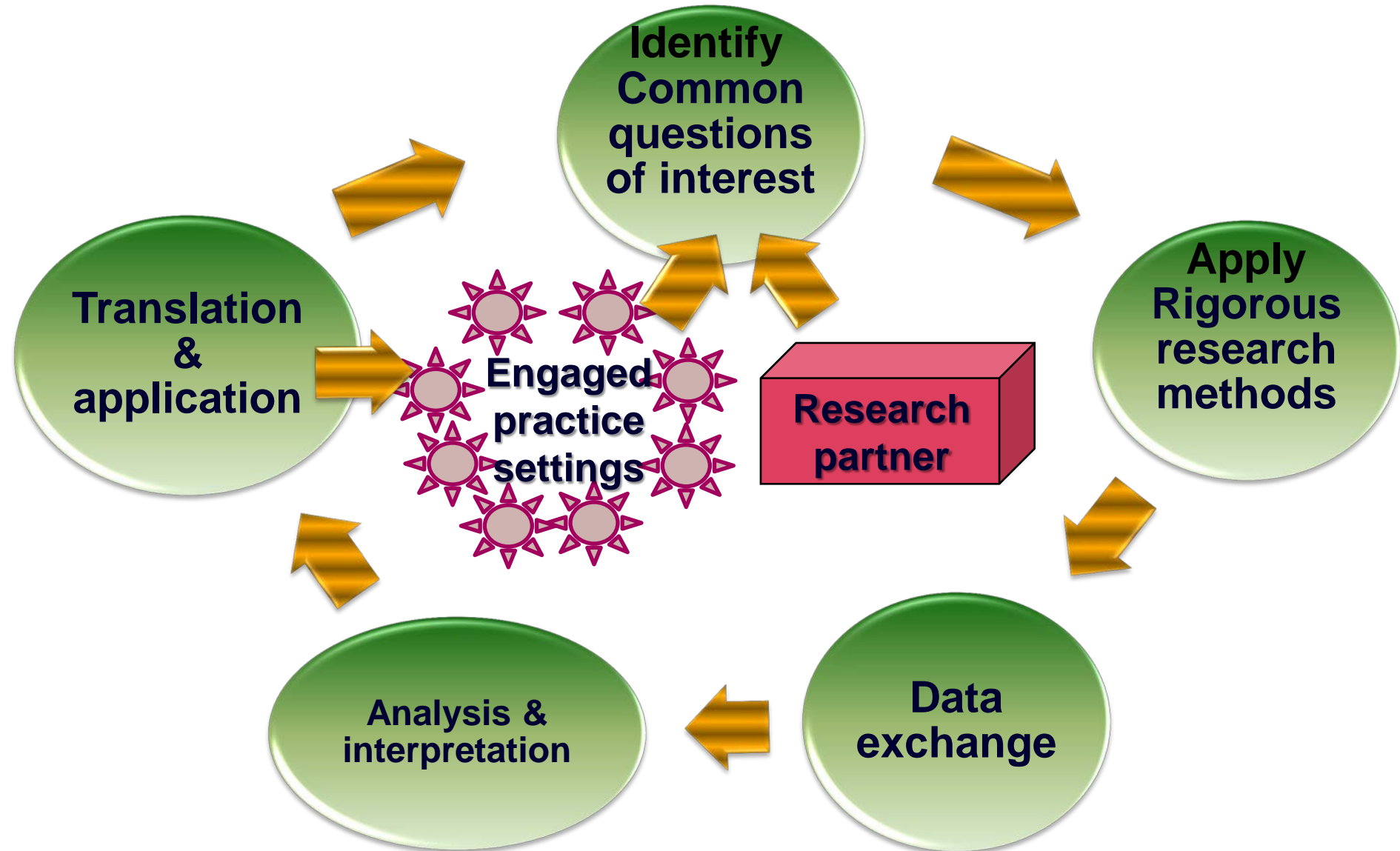
Source: Felix, Mays et al. *Health Affairs* 2011

www.visionproject.org

Roles for Scholarship & Leadership

- Identify common interests, incentives & problems
- Mitigate asymmetries in power & information
- Use theory, evidence & experience to design strategies with high probability of success
- Use policies, payment systems, & resource sharing models to incentivize collective action
- Measure progress & provide feedback
 - Fail fast
 - Continuously improve
- Evaluate health & economic impact

PBRNs as Mechanisms for Community-Engaged Scholarship & Learning

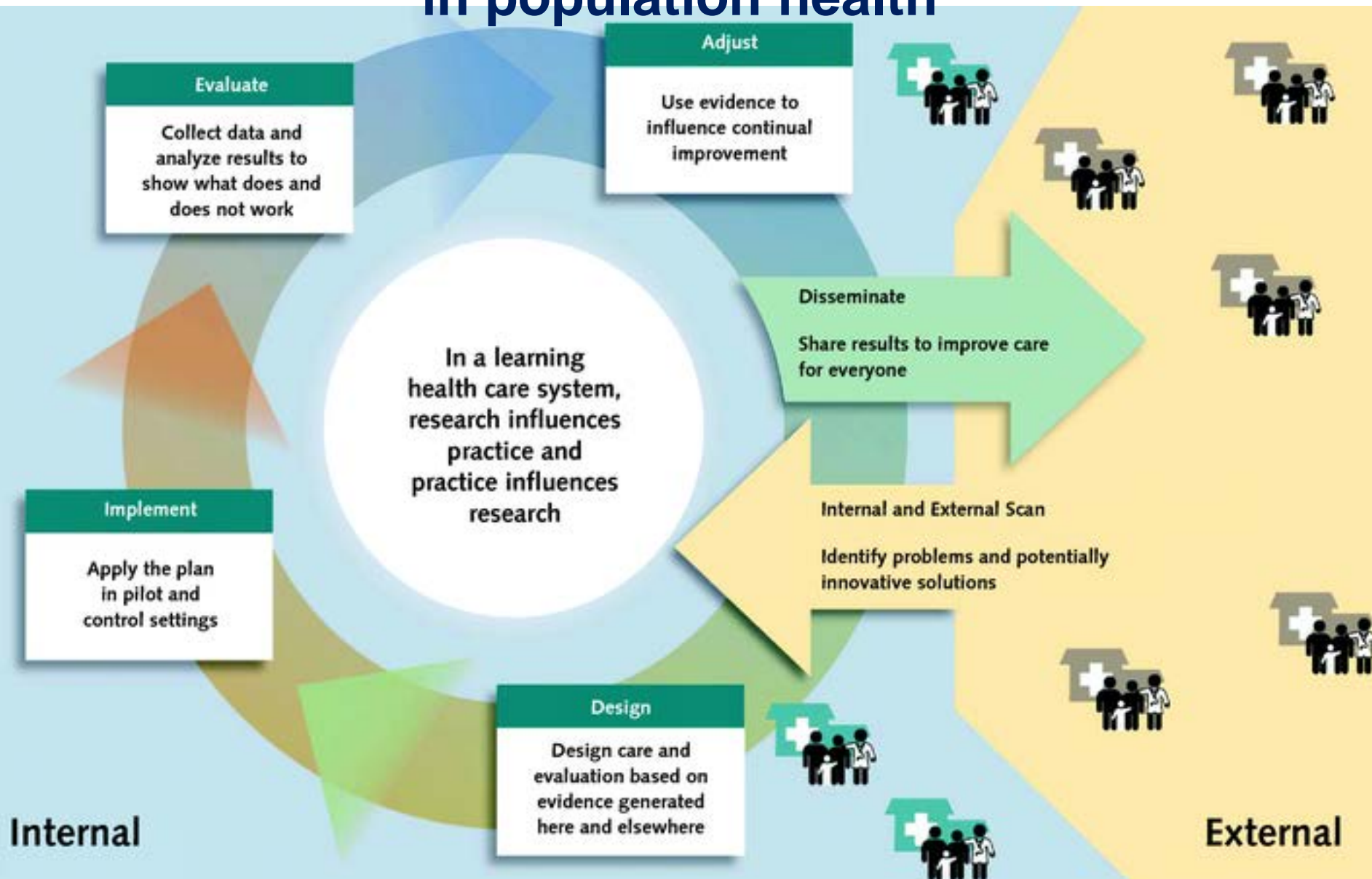


Finding the connections



- Act on aligned incentives
- Exploit the disruptive policy environment
- Innovate, prototype, study – then scale
- Pay careful attention to shared governance, decision-making, and financing structures
- Demonstrate value and accountability to the public

Toward a “rapid-learning system” in population health



More Information



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