

University of Kentucky

From the Selected Works of Glen Mays

Summer August 12, 2015

Foundational Public Health Services and Health System Reform: Evidence, Economics, and Implementation

Glen P. Mays, *University of Kentucky*



Available at: https://works.bepress.com/glen_mays/213/

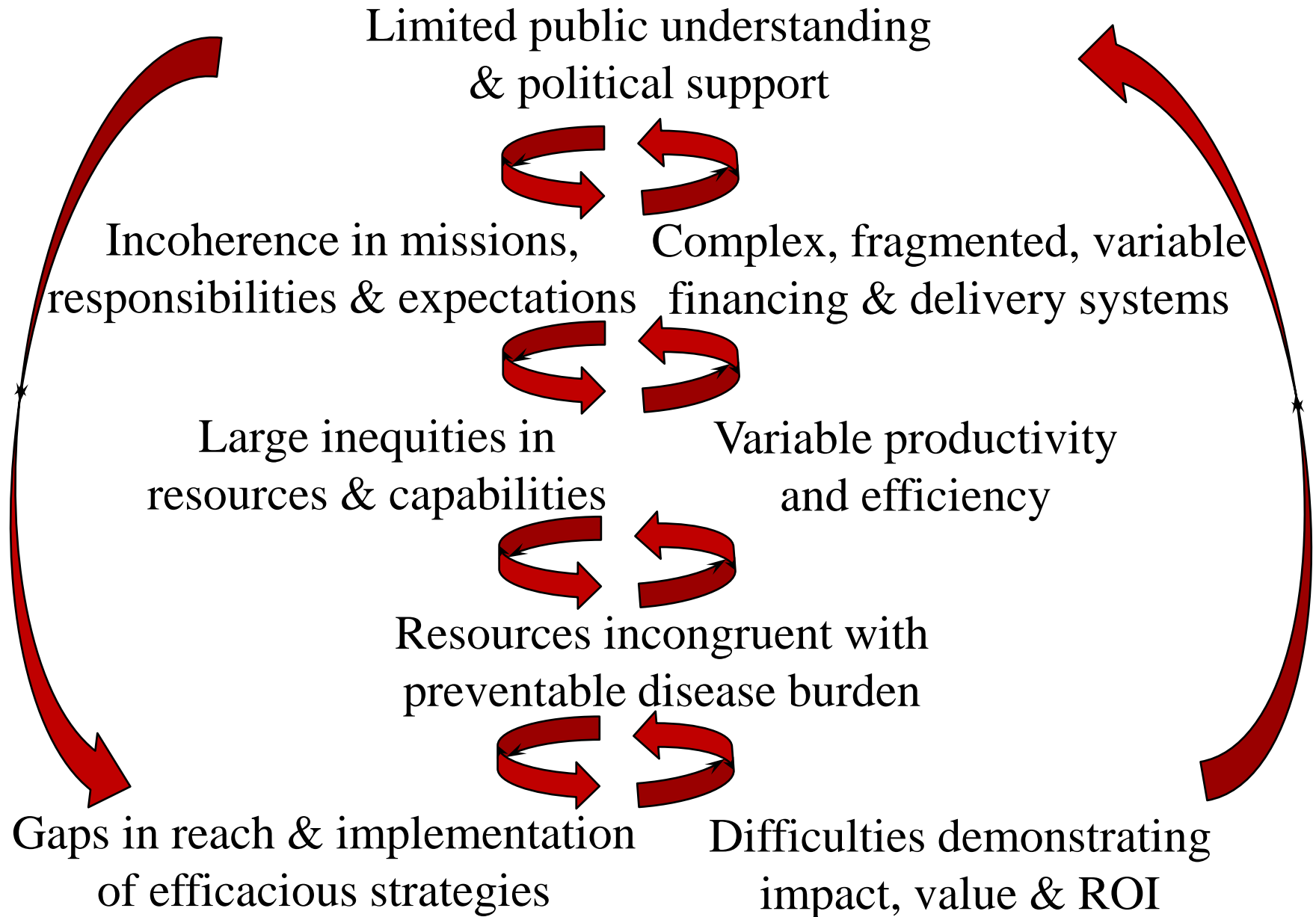
Foundational Public Health Services and Health System Reform

Annual Meeting of Directors of Health Promotion and Education
Dallas, Texas • August 12, 2015

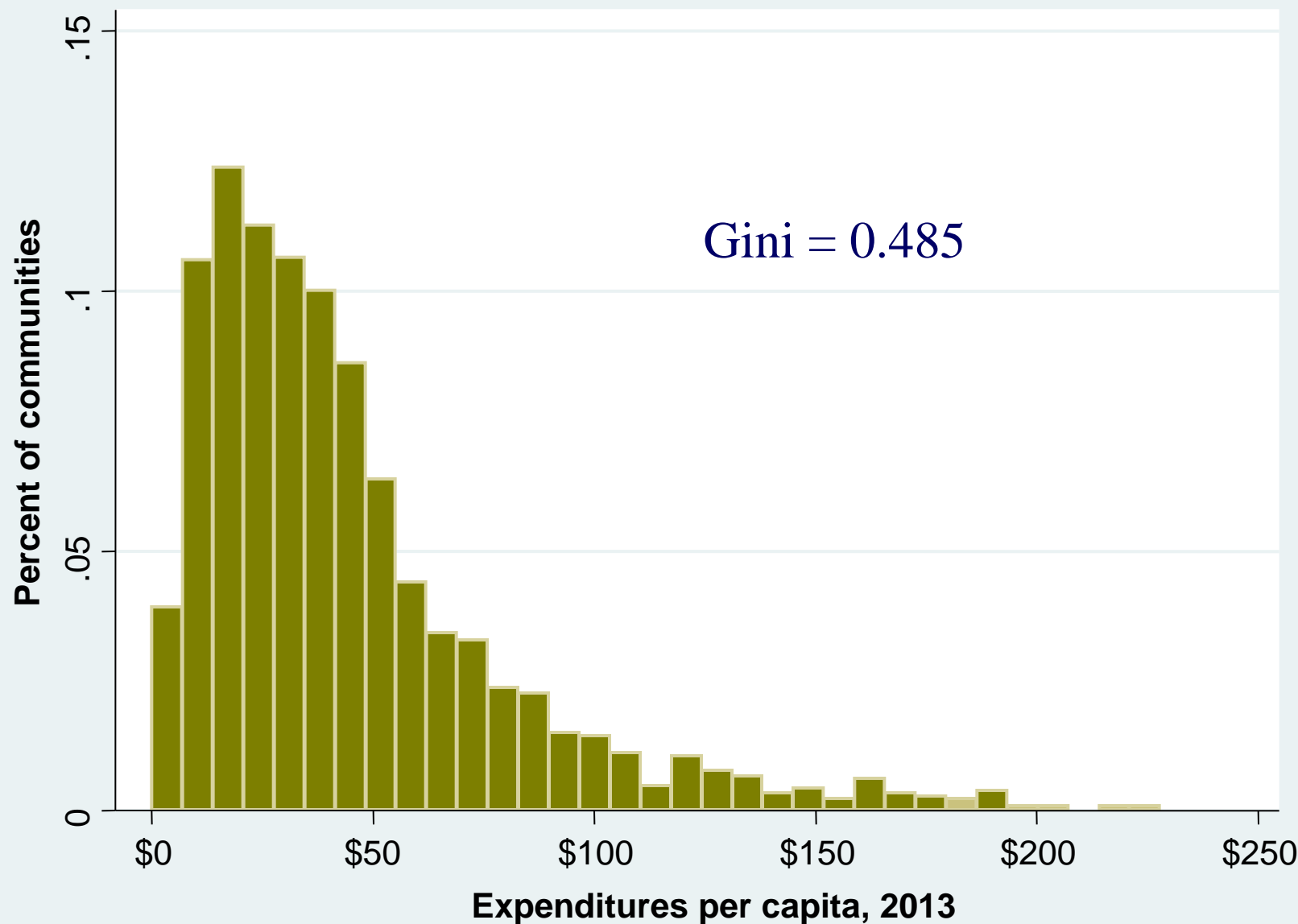
Glen Mays, PhD, MPH



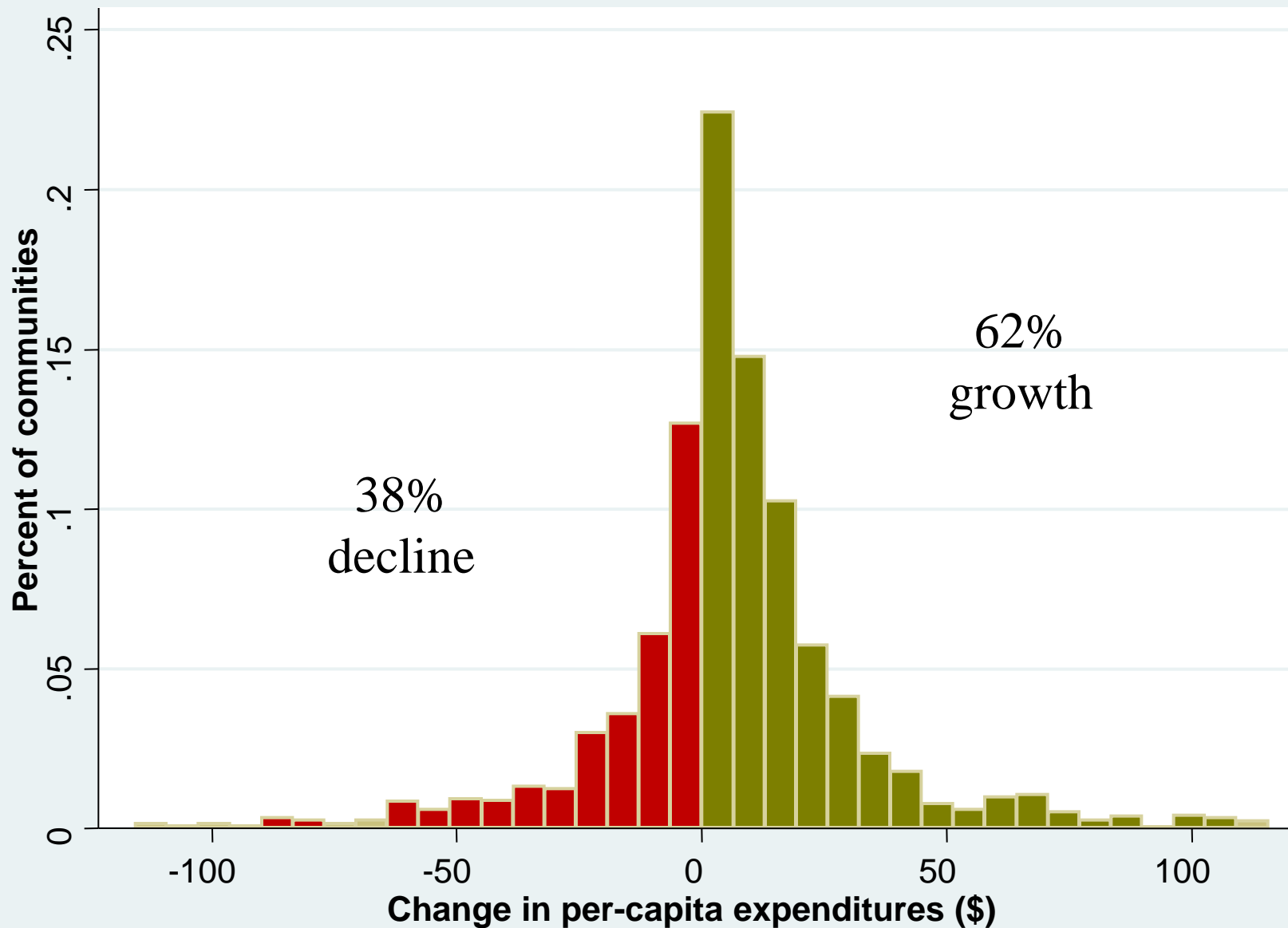
Vicious cycles in public health delivery



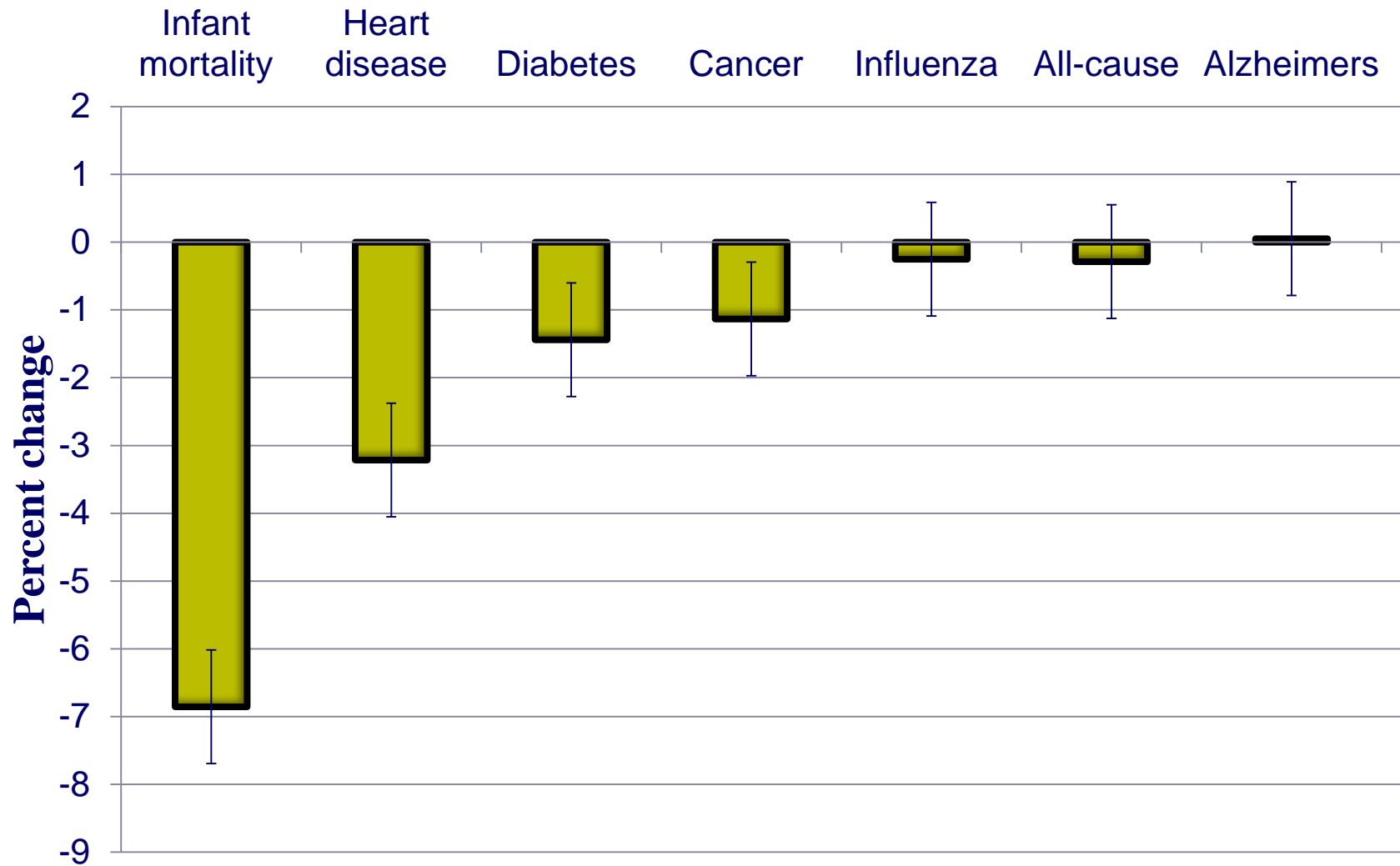
Variation in Public Health Spending



Changes in Public Health Spending 1993-2013



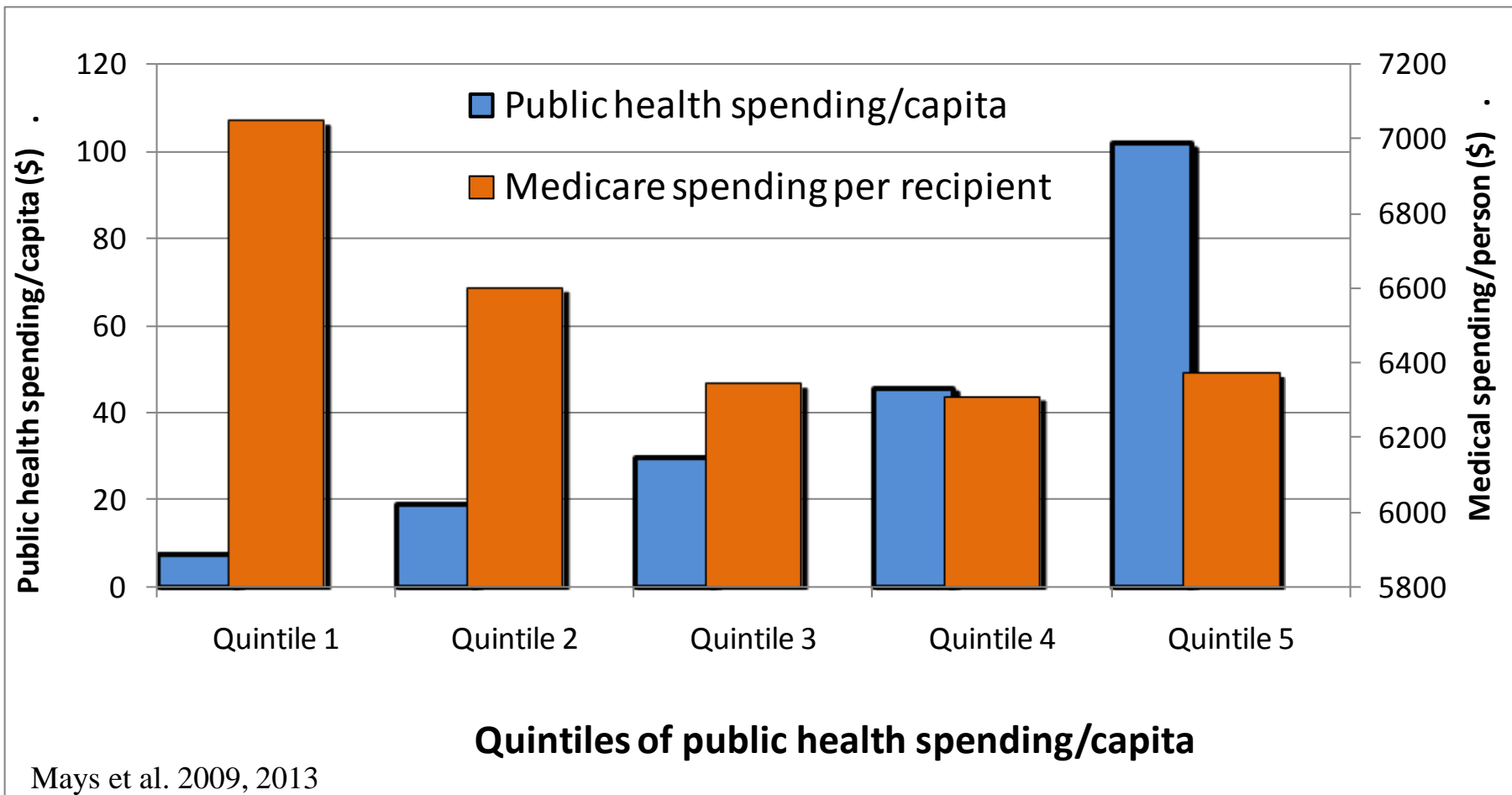
Mortality reductions attributable to investments in public health spending, 1993-2008



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

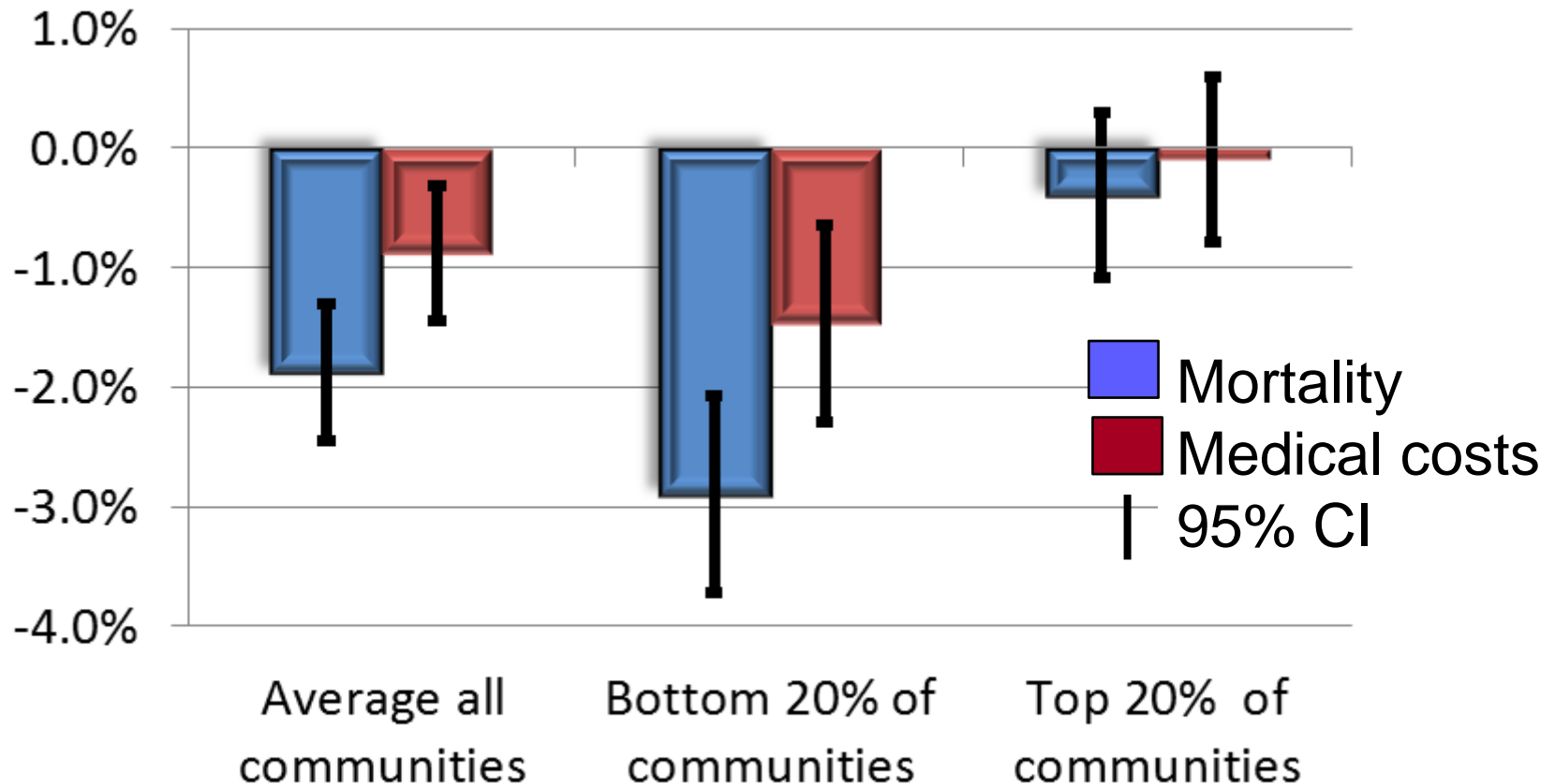
Medical cost offsets attributable to investments in public health spending, 1993-2008

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



Public health investments generate larger health & economic gains in low-resource communities

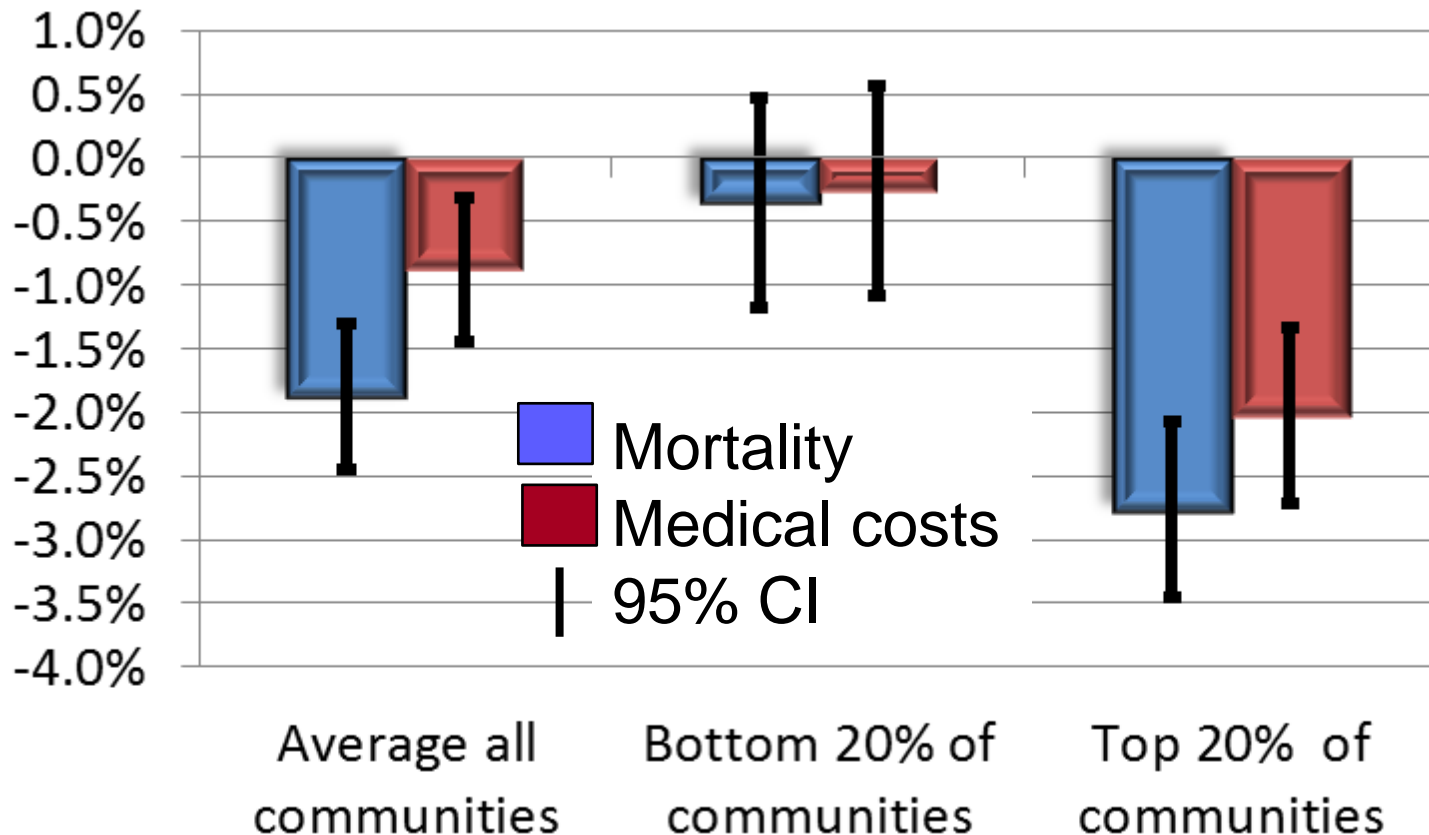
Impact in Low-Income vs. High Income Communities



Log IV regression estimates controlling for community-level and state-level characteristics

Public health investments produce larger gains in communities with robust infrastructure

Impact in Communities with Low vs. High Public Health Infrastructure

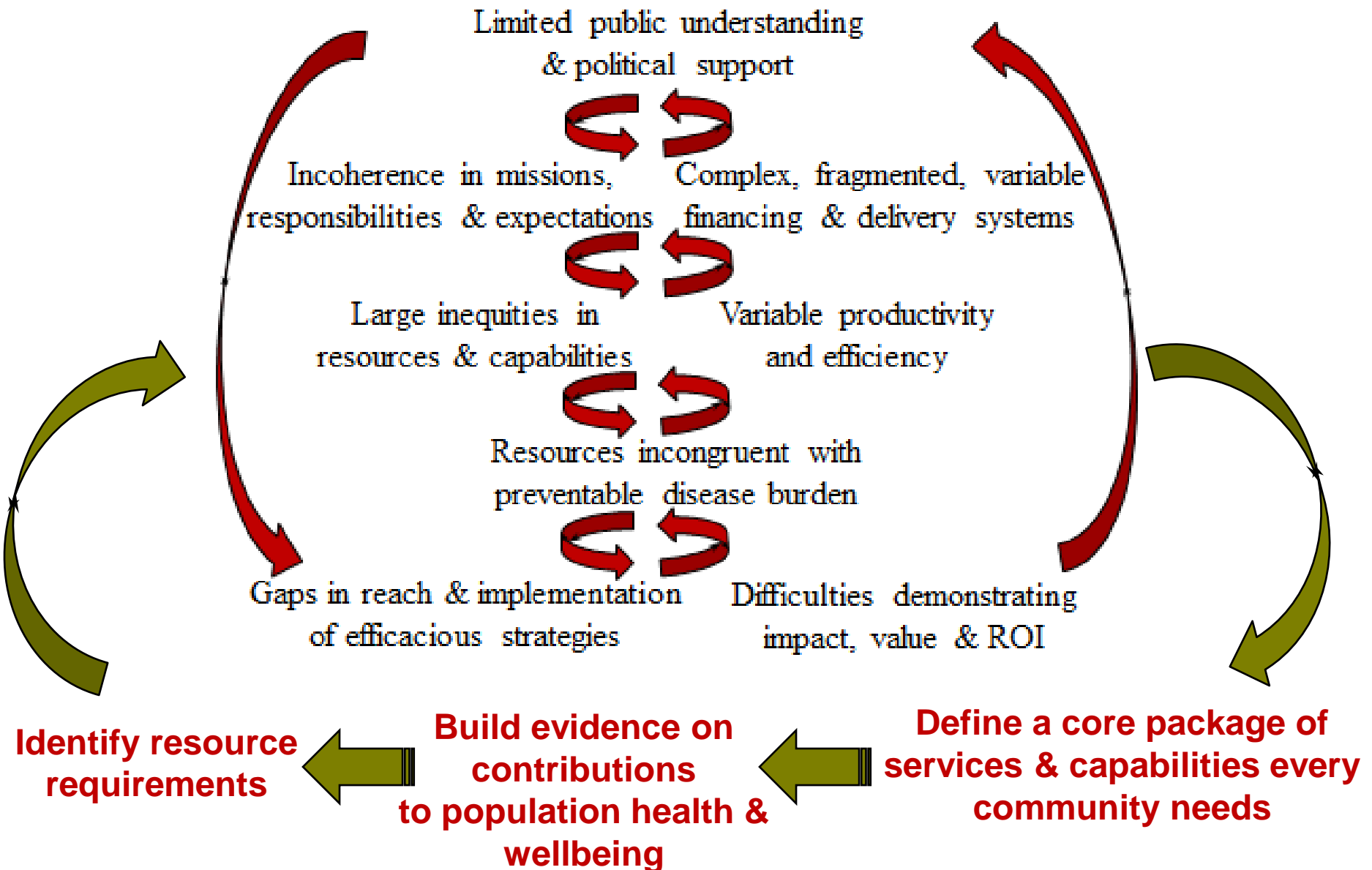


Log IV regression estimates controlling for community-level and state-level characteristics

**More public health
resources and
infrastructure are good
for population health.**

How do we get more?

Vicious cycles to learning systems



New incentives & infrastructure are in play



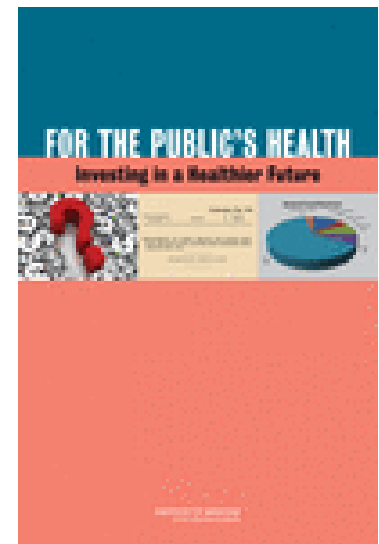
Stimuli in the Affordable Care Act

- ◆ \$10 billion Prevention & Public Health Fund
- ◆ \$10 billion CMMI demonstration programs
 - ACOs
 - Bundled payments
 - Shared savings
- ◆ Medicaid Health Home pilots
- ◆ Enhanced IRS requirements for hospital community benefits
- ◆ Minimum loss ratio incentives for health insurers
- ◆ Employer incentives and support for health promotion

Articulating Foundational Services and their resource requirements

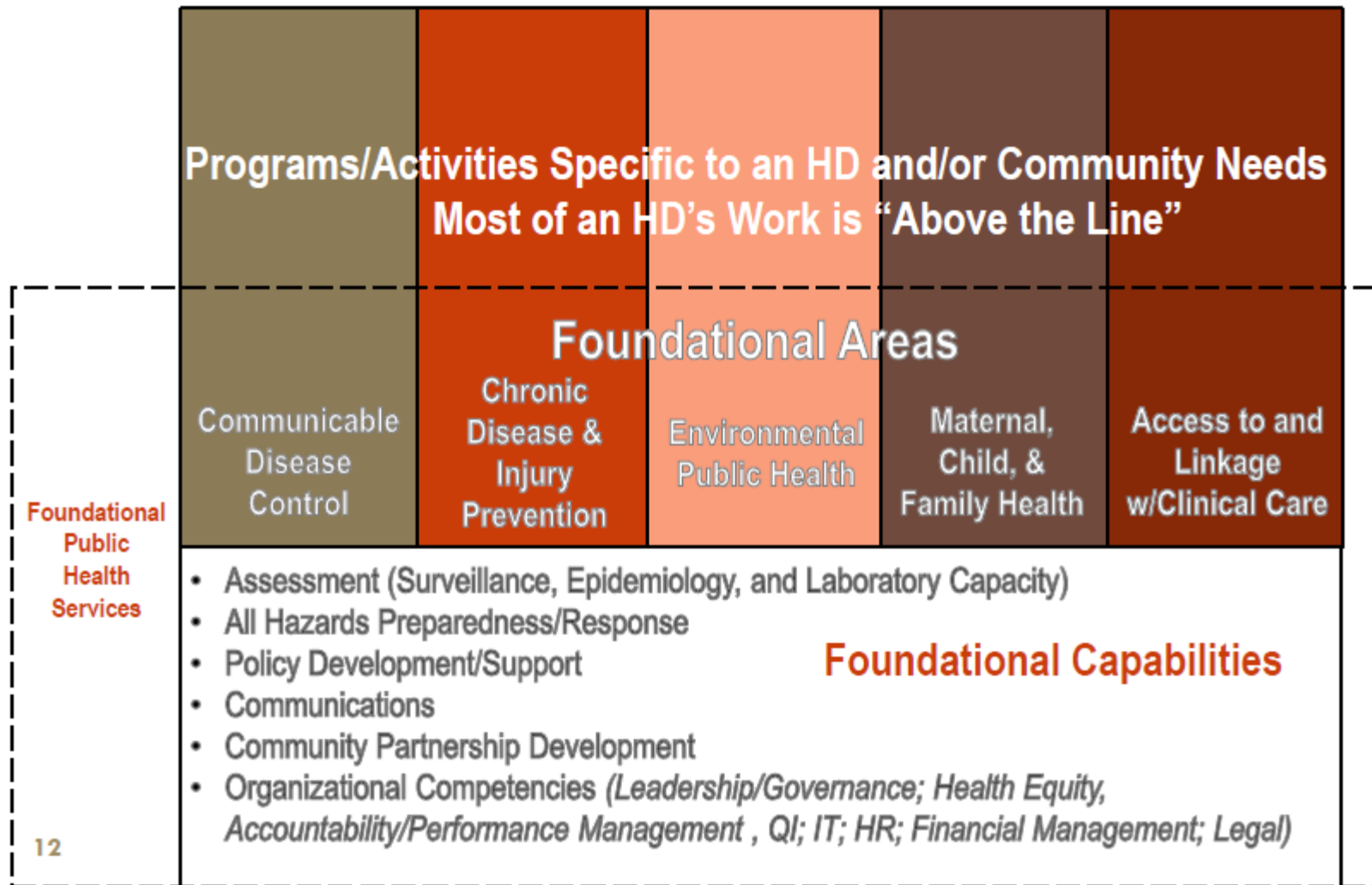
2012 Institute of Medicine Recommendations

- Identify the components and **costs of a minimum package** of public health services
 - Foundational capabilities
 - Basic programs
- Implement a **national chart of accounts** for tracking spending and flow of funds
- Expand **research on costs and effects** of public health delivery



Institute of Medicine. For the Public's Health: Investing in a Healthier Future. Washington, DC: National Academies Press; 2012.

Articulating Foundational Services



Foundational Services & Next-Gen Public Health

Public health agency as **chief health strategist** for the system:

- Articulate population health needs & priorities
- Engage community stakeholders
- Plan with clear roles & responsibilities
- Recruit & leverage resources
- Develop and enforce policies
- Ensure coordination
- Promote evidence-based practices
- Monitor and feed back results
- Mobilize performance improvement
- Ensure transparency & accountability: resources, results, ROI



Creating a Culture of Health through Foundational Services

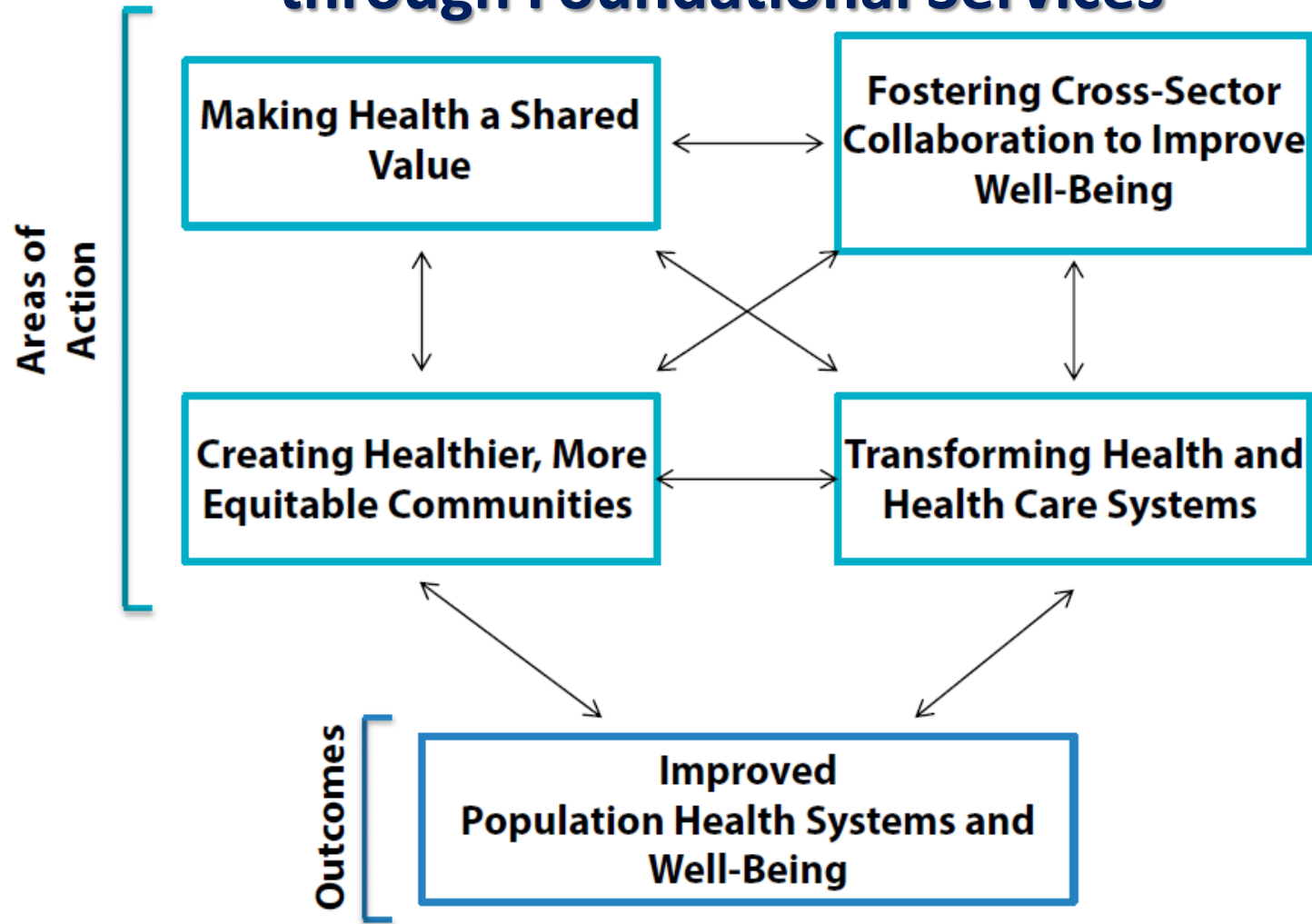
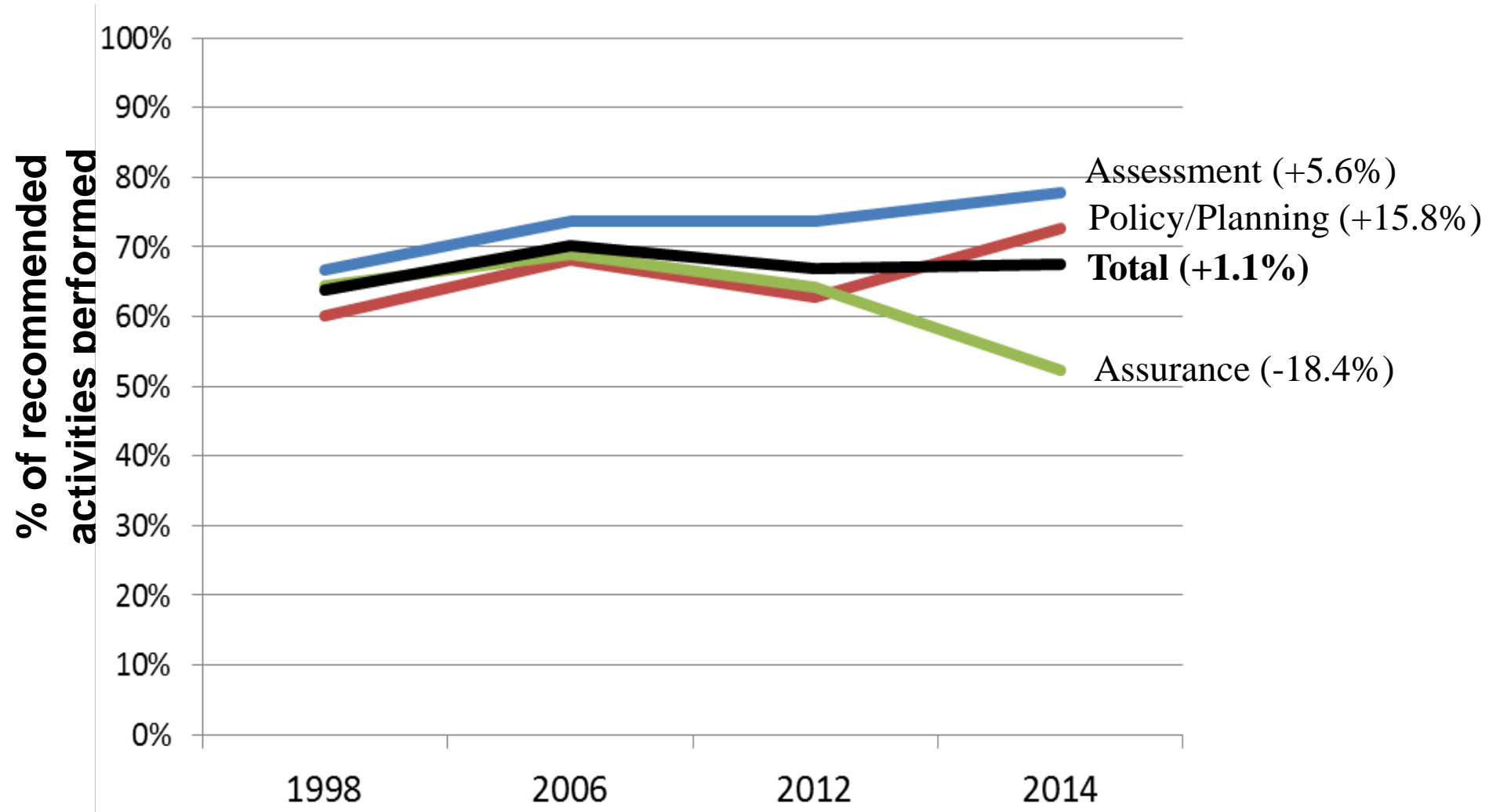


FIGURE 1—Culture of Health action model.

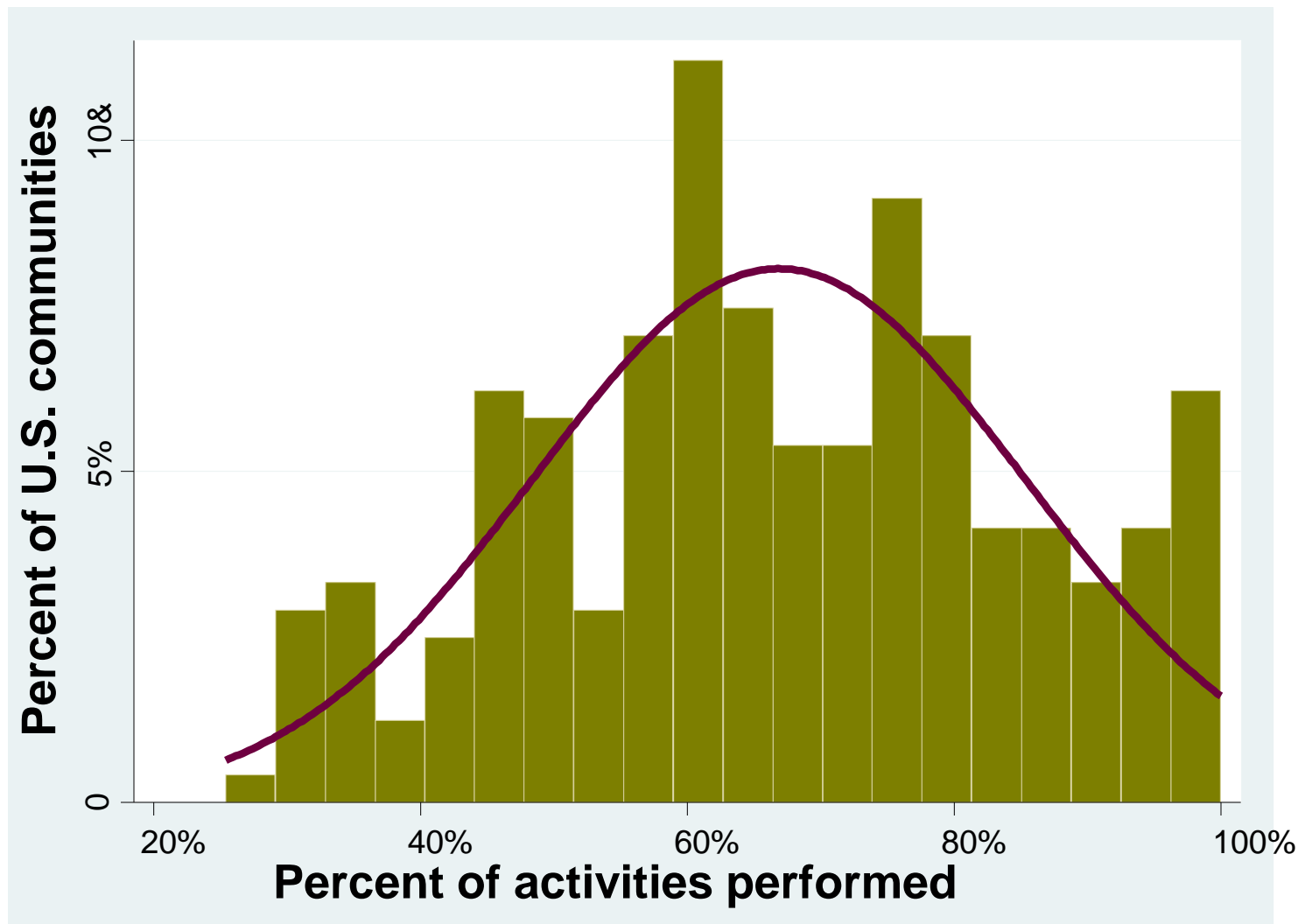
Changes in Delivery of Foundational Services, 1998-2014

National Longitudinal Survey of Public Health Systems



Variation in Delivery of Foundational Services

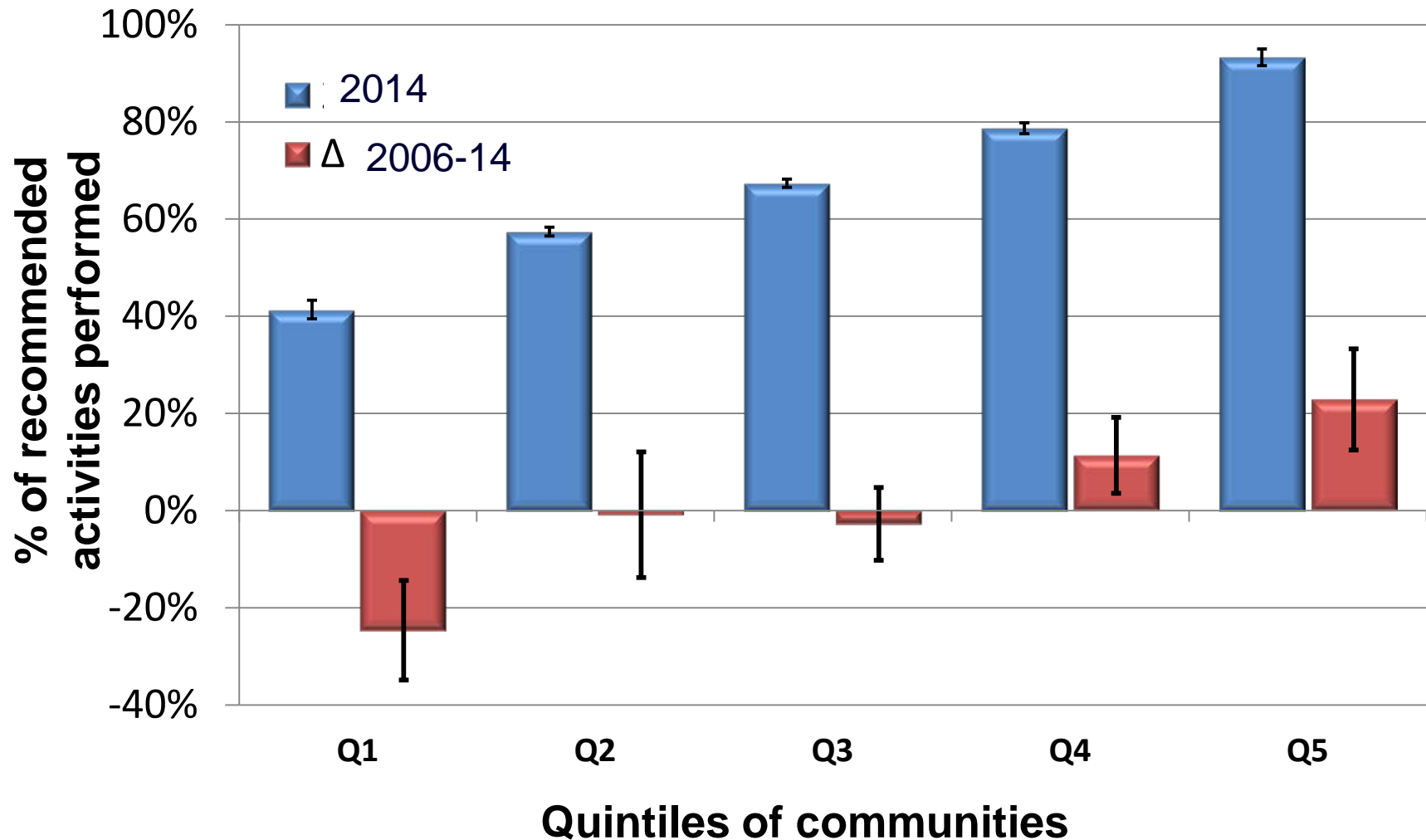
National Longitudinal Survey of Public Health Systems



National Longitudinal Survey of Public Health Systems, 2014

Variation and Change in Delivery

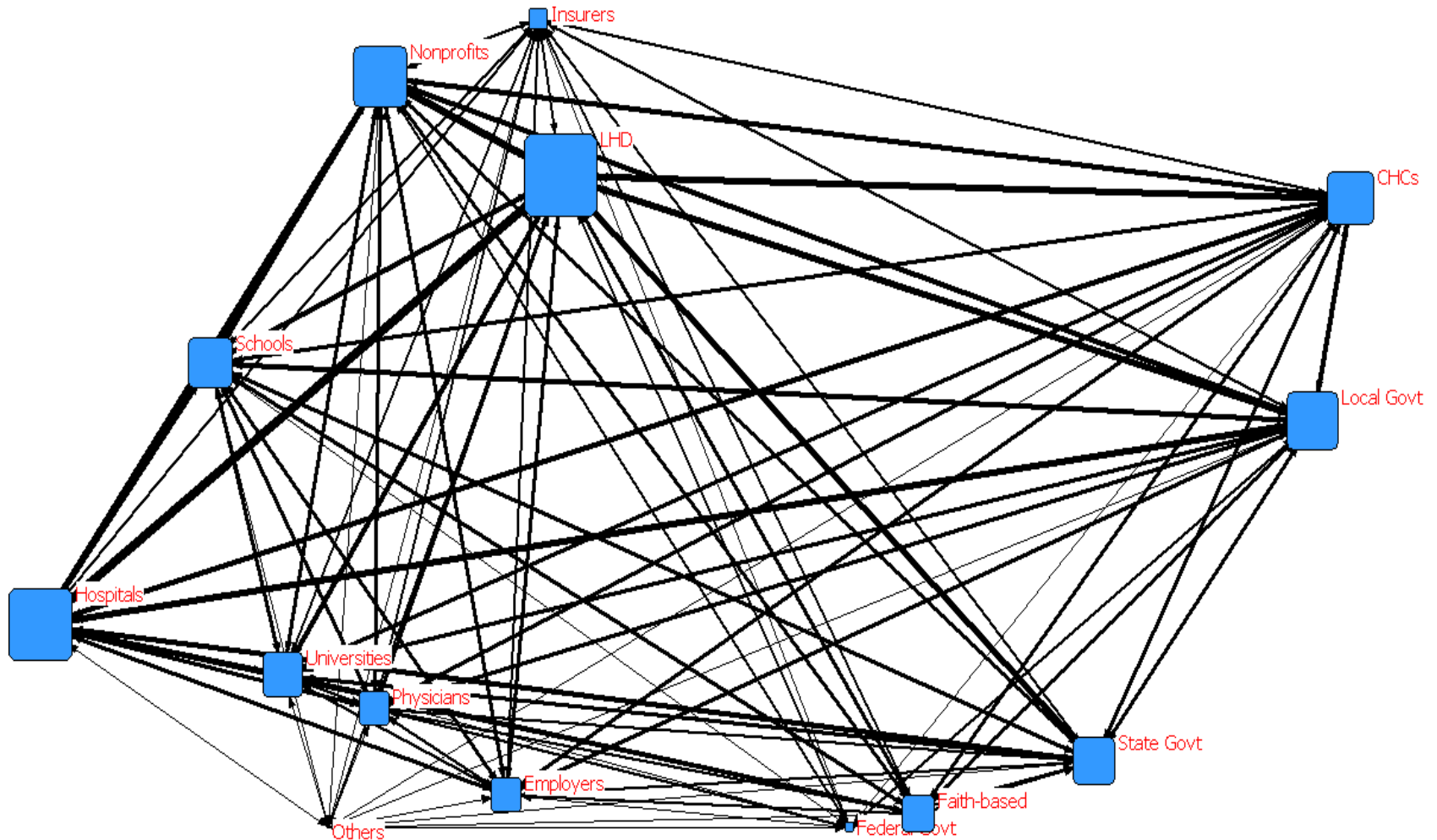
Delivery of recommended public health activities, 2006-14



National Longitudinal Survey of Public Health Systems, 2014

Delivery System Structures for Foundational Services

National Longitudinal Survey of Public Health Systems

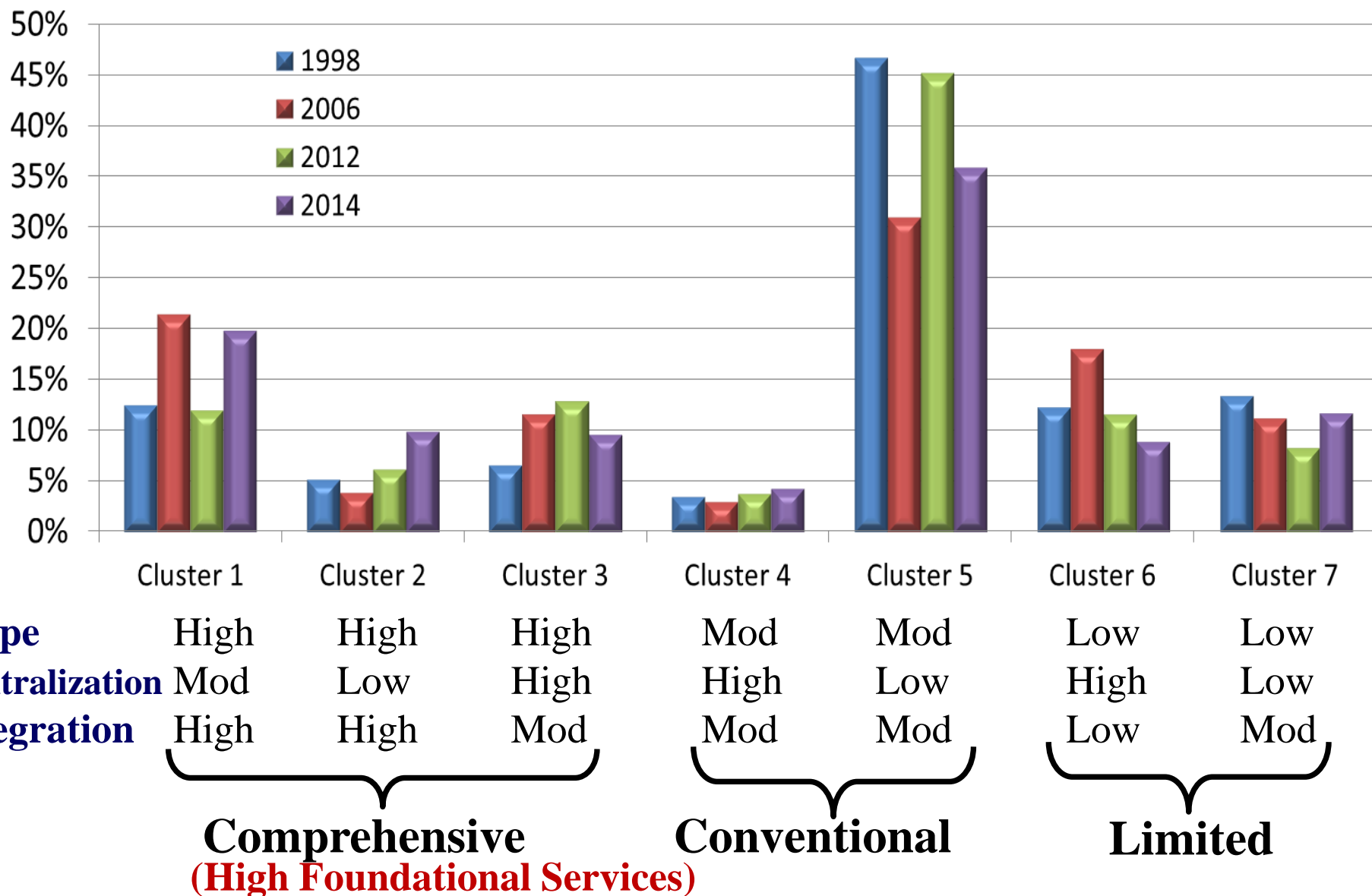


Node size = centrality

Line size = % activities jointly contributed (tie strength)

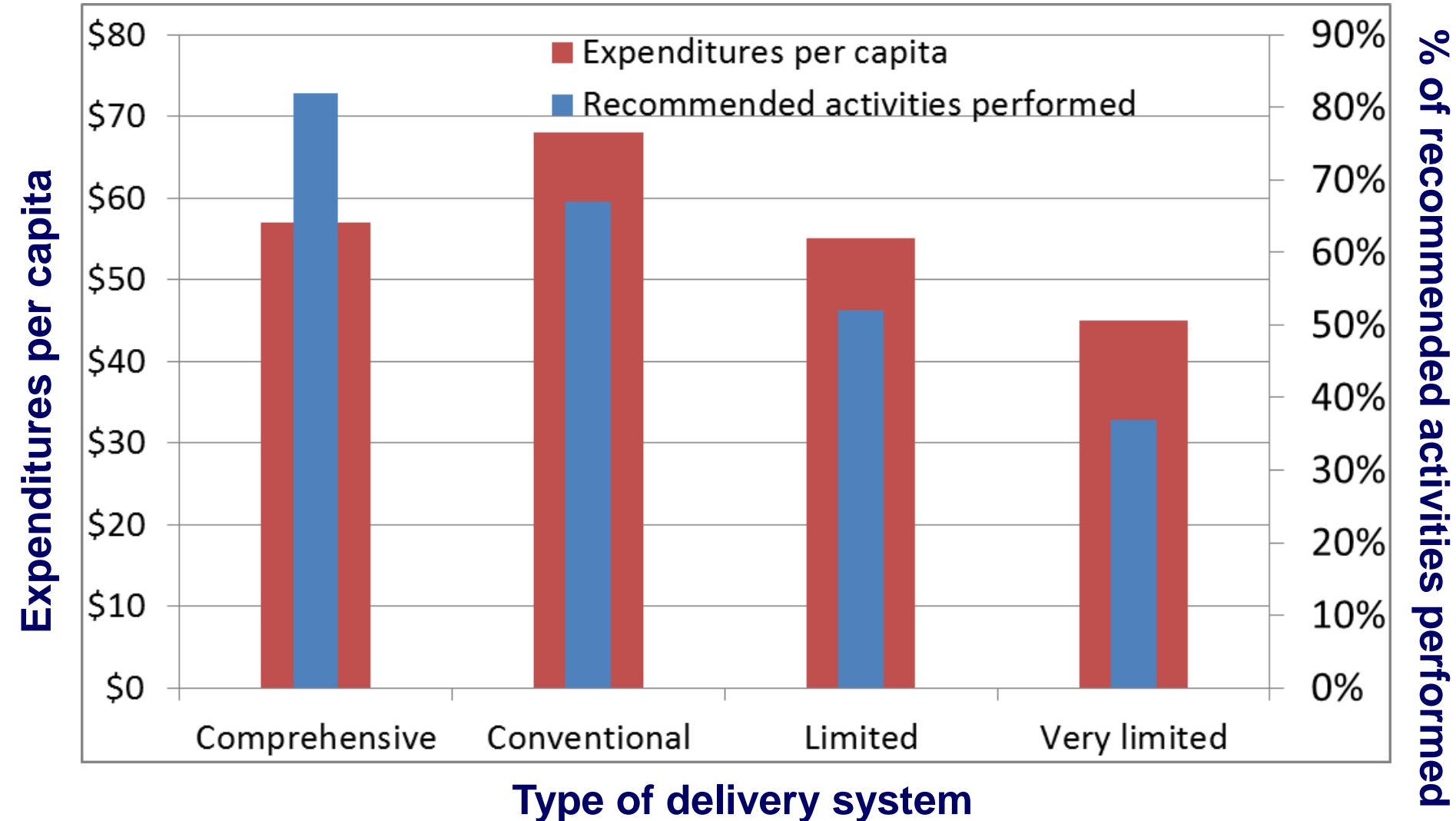
Prevalence of Public Health System Configurations, 1998-2014

National Longitudinal Survey of Public Health Systems



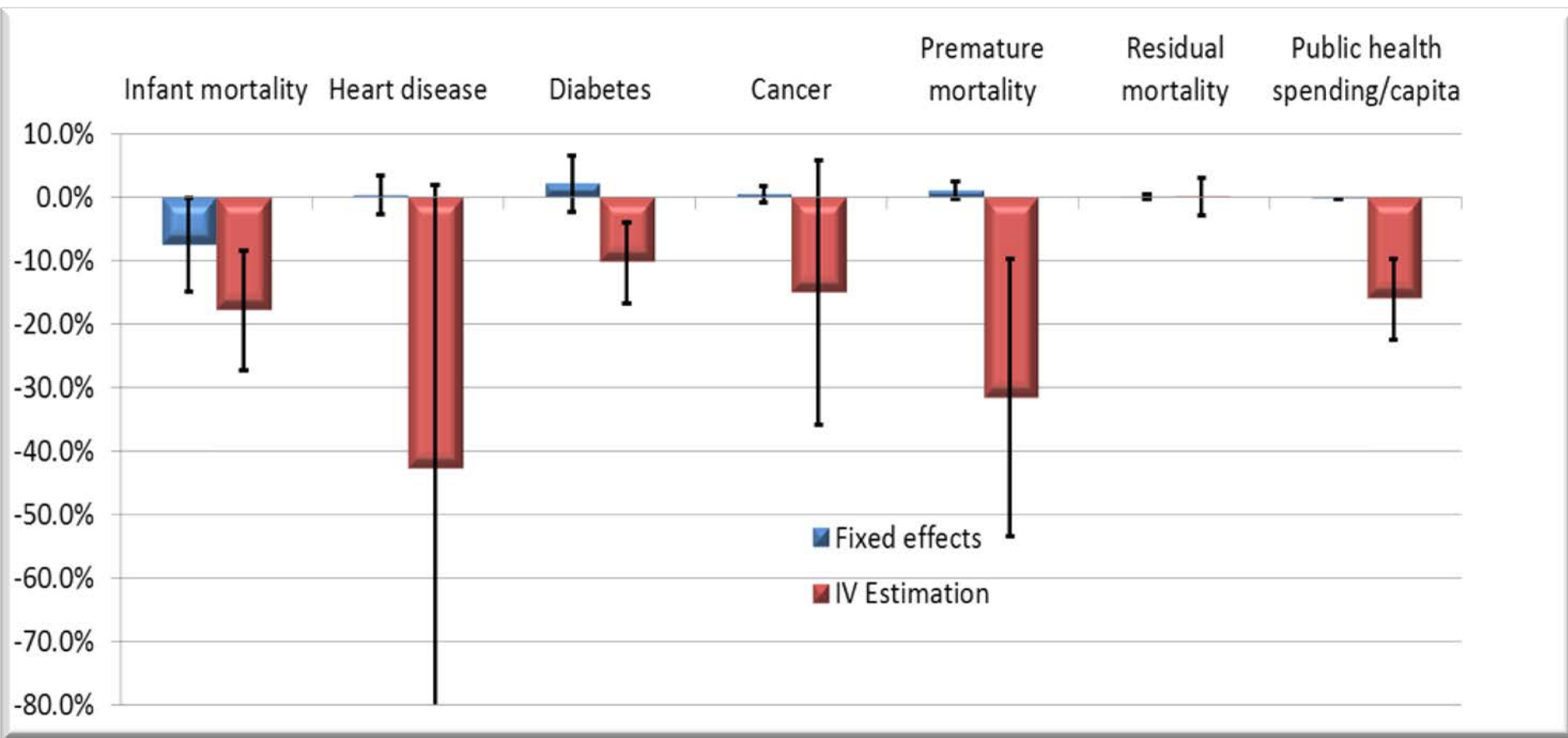
Comprehensive systems do more with less

National Longitudinal Survey of Public Health Systems



Health & economic impact of comprehensive systems

Effects of Comprehensive System Capital on Mortality and Spending: 1998-2014



Models also control for racial composition, unemployment, health insurance coverage, educational attainment, age composition, and state and year fixed effects.
N=779 community-years **p<0.05 *p<0.10

Changes in system capital prevalence and coverage

National Longitudinal Survey of Public Health Systems

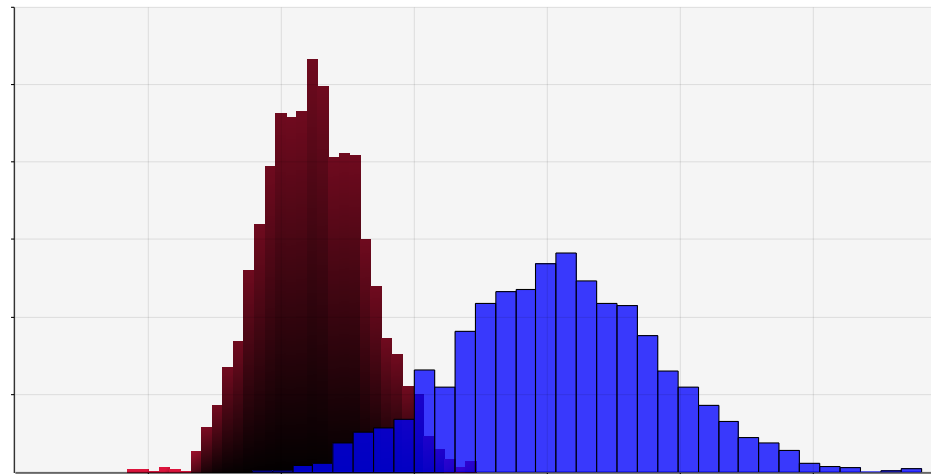
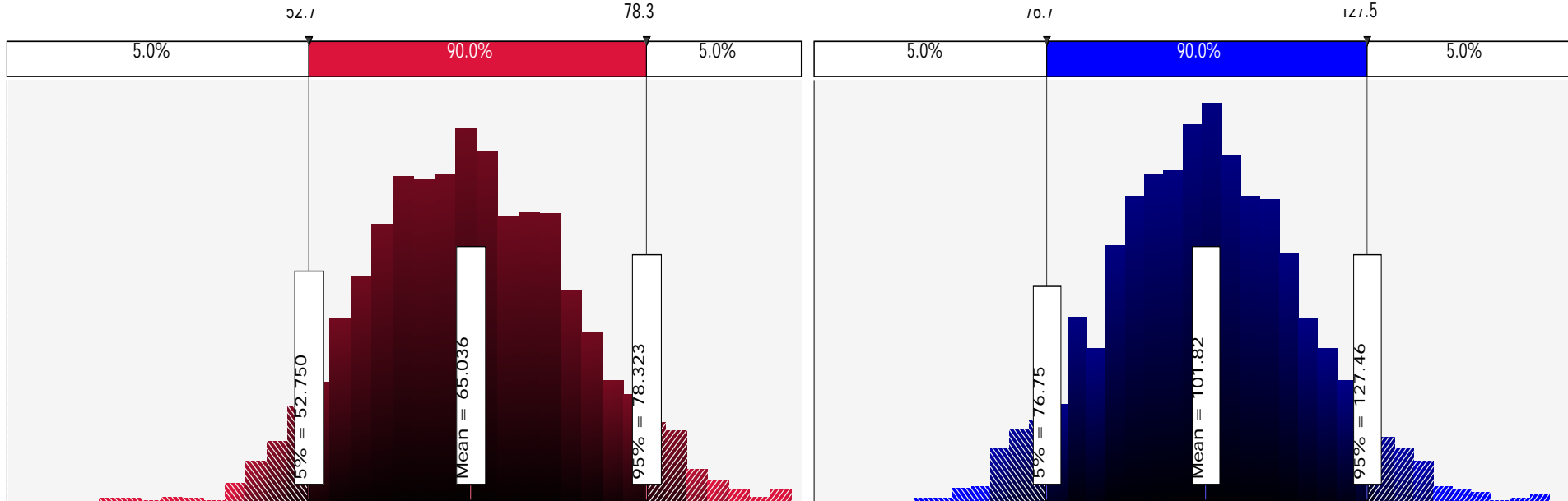
| System Capital Measures | 1998 | 2006 | 2012 | 2014 | 2014 (<100k) |
|------------------------------|-------|-------|-------|-------|-----------------|
| Comprehensive systems | | | | | |
| % of communities | 24.2% | 36.9% | 31.1% | 32.7% | 25.7% |
| % of population | 25.0% | 50.8% | 47.7% | 47.2% | 36.6% |
| Conventional systems | | | | | |
| % of communities | 50.1% | 33.9% | 49.0% | 40.1% | 57.6% |
| % of population | 46.9% | 25.8% | 36.3% | 32.5% | 47.3% |
| Limited systems | | | | | |
| % of communities | 25.6% | 29.2% | 19.9% | 20.6% | 16.7% |
| % of population | 28.1% | 23.4% | 16.0% | 19.6% | 16.1% |

Estimating Resource Requirements for Foundational Services

Pilot Results from a National Costing Study

Current

Projected



Foundational Services: the bottom line

- Business as usual is increasingly not an option in public health
- Foundational Services are **catalytic functions** that can improve public health's reach, influence, engagement, & coordination
- Expanded implementation of Foundational Services may improve public health impact, equity & efficiency – but only with adequate financing.
- If not governmental public health, then who will perform these vital functions for the health system?

For More Information



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