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Medicaid Expansions & Public Health Spending: Cross-Subsidies, Complementarities, and Crowd- Out

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Medicaid Expansions & Public Health Spending: Cross-Subsidies, Complementarities, and Crowd-Out

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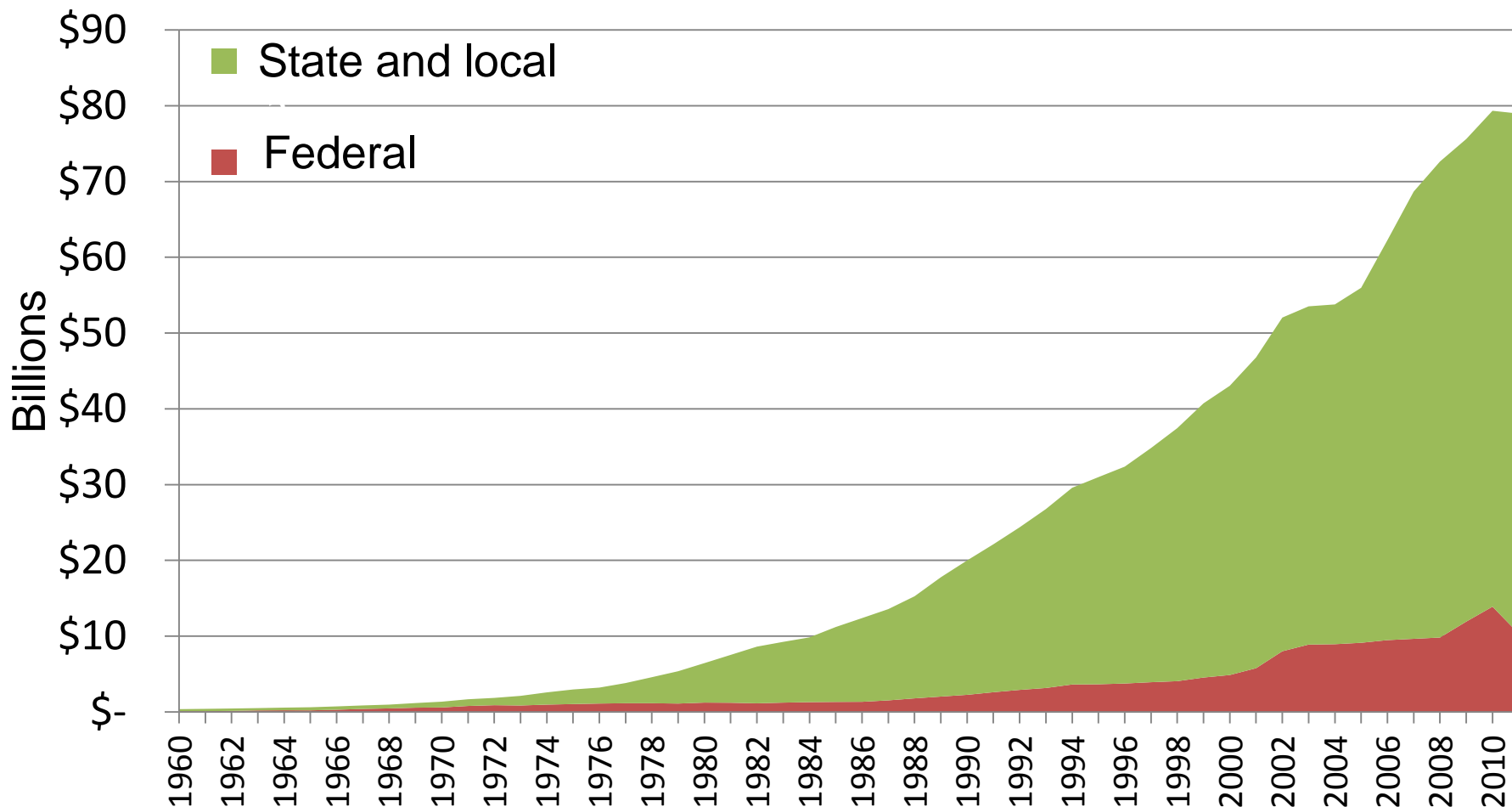
APHA Annual Meeting | New Orleans, LA | 18 November 2014

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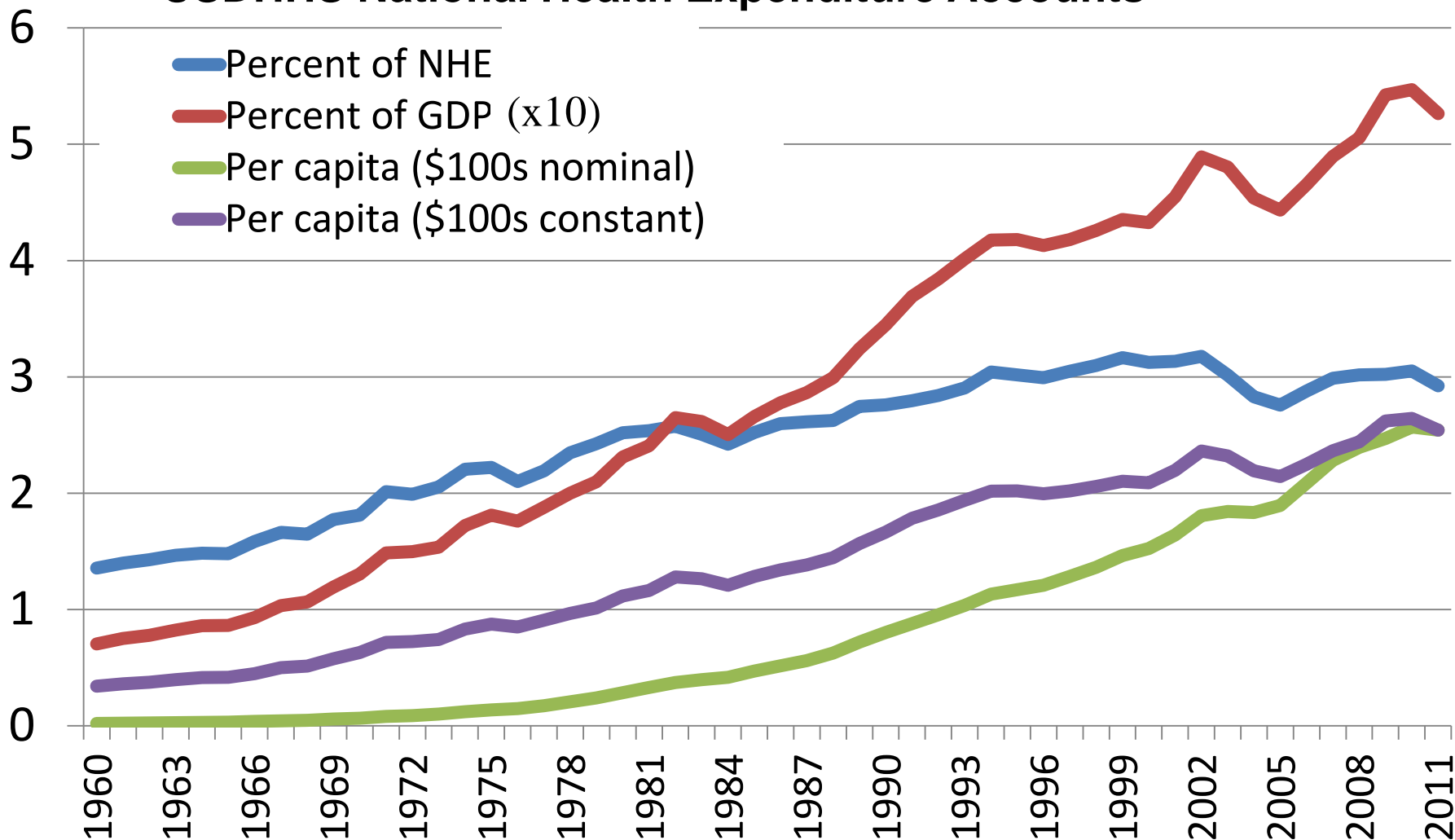
Governmental financing streams for public health

Governmental Expenditures for Public Health Activity, USDHHS National Health Expenditure Accounts



Trends in public health spending

Governmental Expenditures for Public Health Activity, USDHHS National Health Expenditure Accounts



Public Health in the ACA

- **\$19 billion** in new federal public health spending over 10 years (cut by \$6B in 2012)
- Public Health and Prevention Trust Fund
- **Incentives** for hospitals, health insurers, employers to invest in public health and prevention
- **Research** on optimal public health delivery

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

ACA's Medicaid expansion could have unintended consequences for public health

- States face higher Medicaid spending
 - previously-eligible/newly-enrolled beneficiaries
 - Enhanced benefits
 - Reduction in 100% FMAP for newly eligible after 2016
- Federal matching policies encourage states to channel health expenditures to Medicaid
- New Medicaid expenditures may crowd out other state and local public health spending

Research questions of interest

- Do states respond to increases in Medicaid spending by changing (reducing) spending on other public health activities?
- What are the likely health and economic effects of Medicaid-induced changes in public health spending?

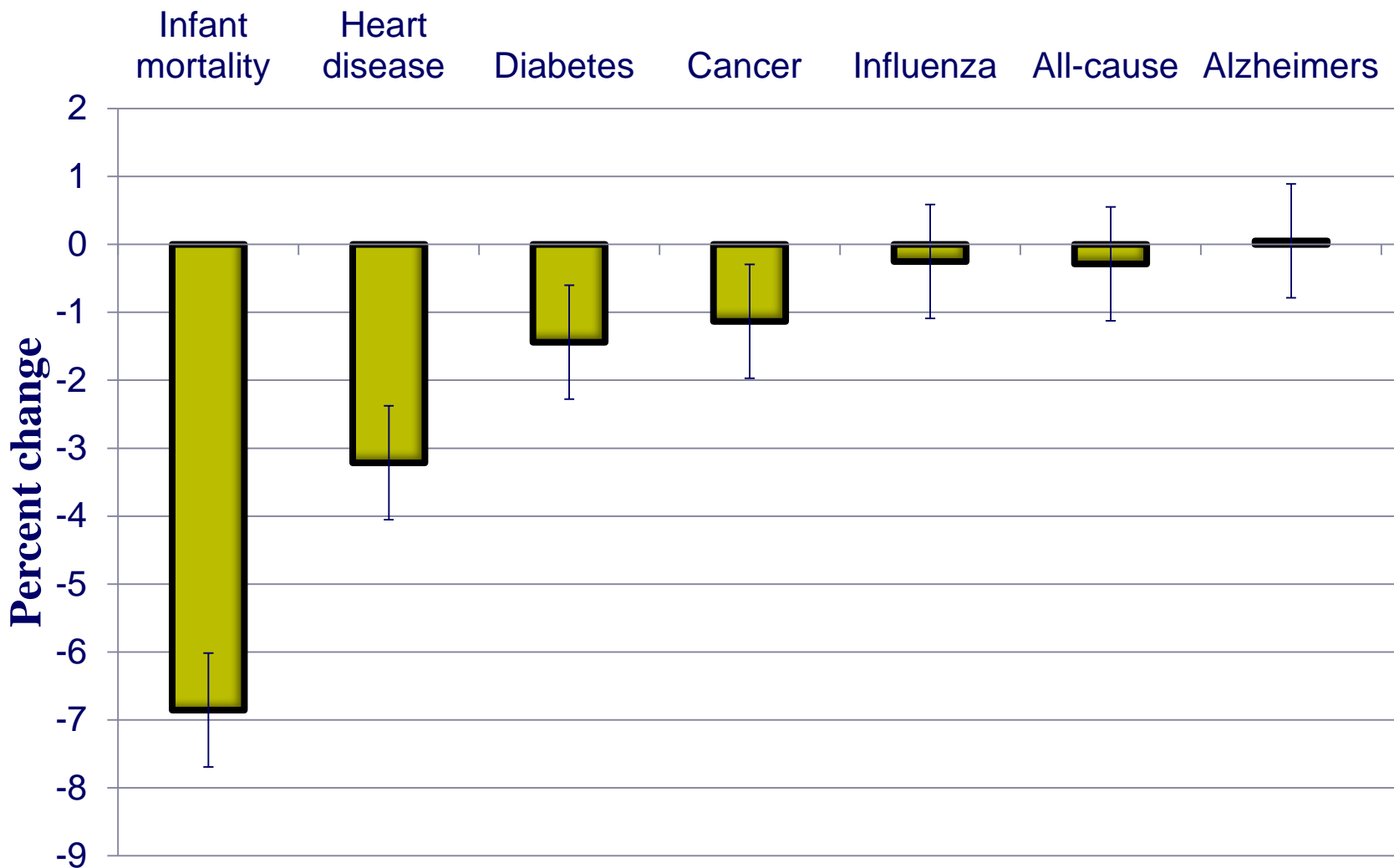
Defining public health activities

- 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 **assuring access** to medical care



Public Health
Prevent. Promote. Protect.

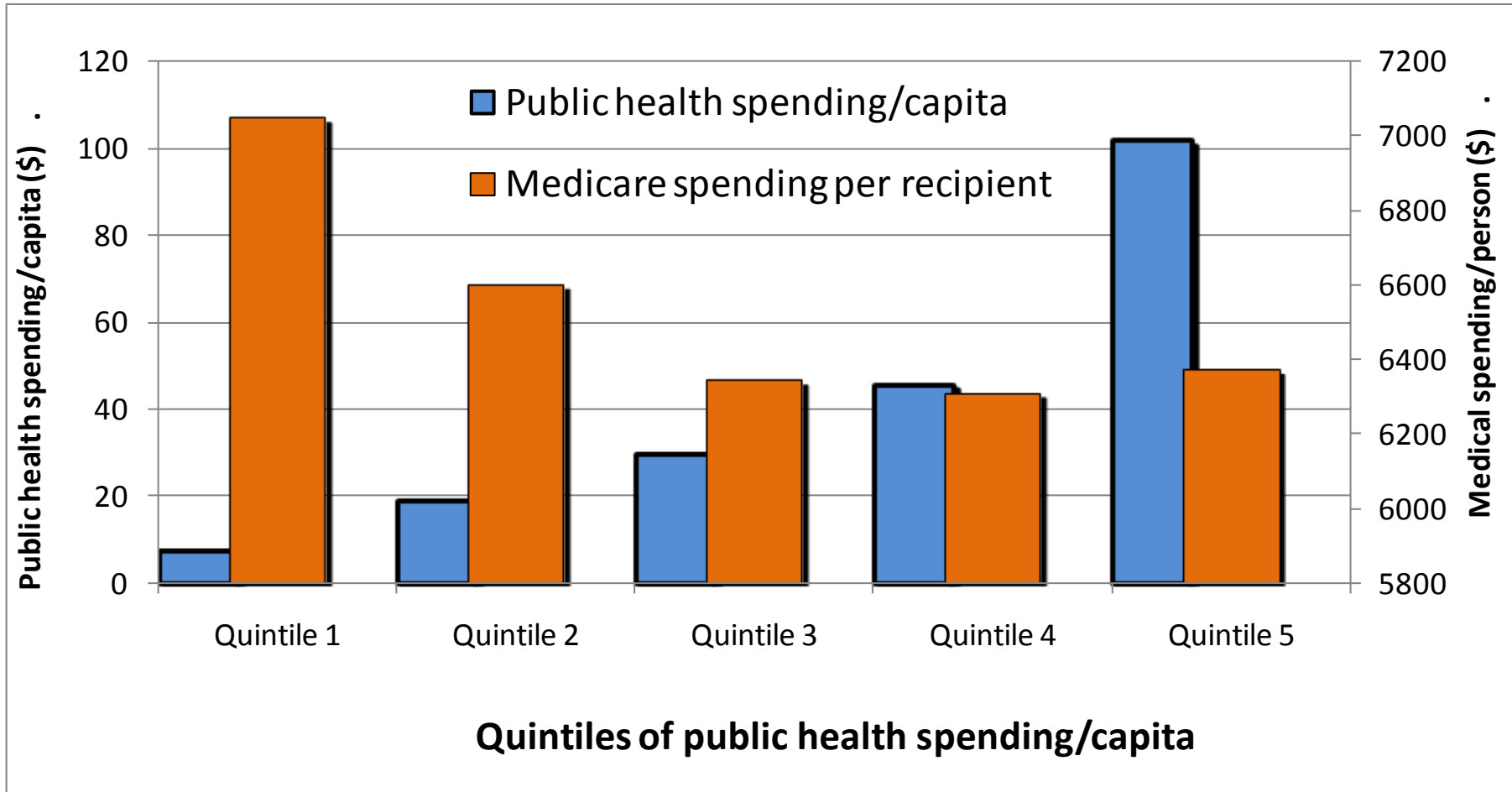
Prior Research: Mortality reductions attributable to local public health spending, 1993-2008



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

Prior Research: Medical cost offsets attributable to local public health spending 1993-2008

Offset elasticity = -0.088



Research Design & Data

- Longitudinal cohort of the 51 states and their local governments during 1993-2011
- Census Bureau's Annual Survey of Government Finances and Census of Governments
- CMS Medicaid program expenditure data
- UK Poverty Research Center file on state economic and transfer program measures
- NACCHO Profile Survey of Local Health Departments: 1993, 1997, 2005, 2008, 2010
- National Longitudinal Survey of Public Health Systems 1998, 2006, 2012

Analytic Approach

- **Spending Share Equation models** (Craig and Howard 2013)

$$(\text{Medicaid}\$/\text{Total}\$)_{it} = \beta X_{it} + \delta Z_{it} + \mu_i + \varphi_t + \varepsilon_{ijt}$$

$$(\text{Other}\$/\text{Total}\$)_{it} = \alpha(\text{Medicaid}\$/\text{Total}\$)_{it} + \beta X_{it} + \lambda Z_{it} + \mu_i + \varphi_t + \varepsilon_{ijt}$$

$$(\text{PublicHealth}\$/\text{Total}\$)_{it} = \alpha(\text{Medicaid}\$/\text{Total}\$)_{it} + \pi(\text{Other}\$/\text{Total}\$)_{it} + \beta X_{it} + \mu_i + \varphi_t + \varepsilon_{ijt}$$

- Separate **state-level** (n=833) and **local-level** (n=9231) models
- State and year **fixed-effects**
- **Instrumental variables** (Z) to control for endogeneity of Medicaid spending

Analytic Approach

Demand & Supply Factors (X_{it})

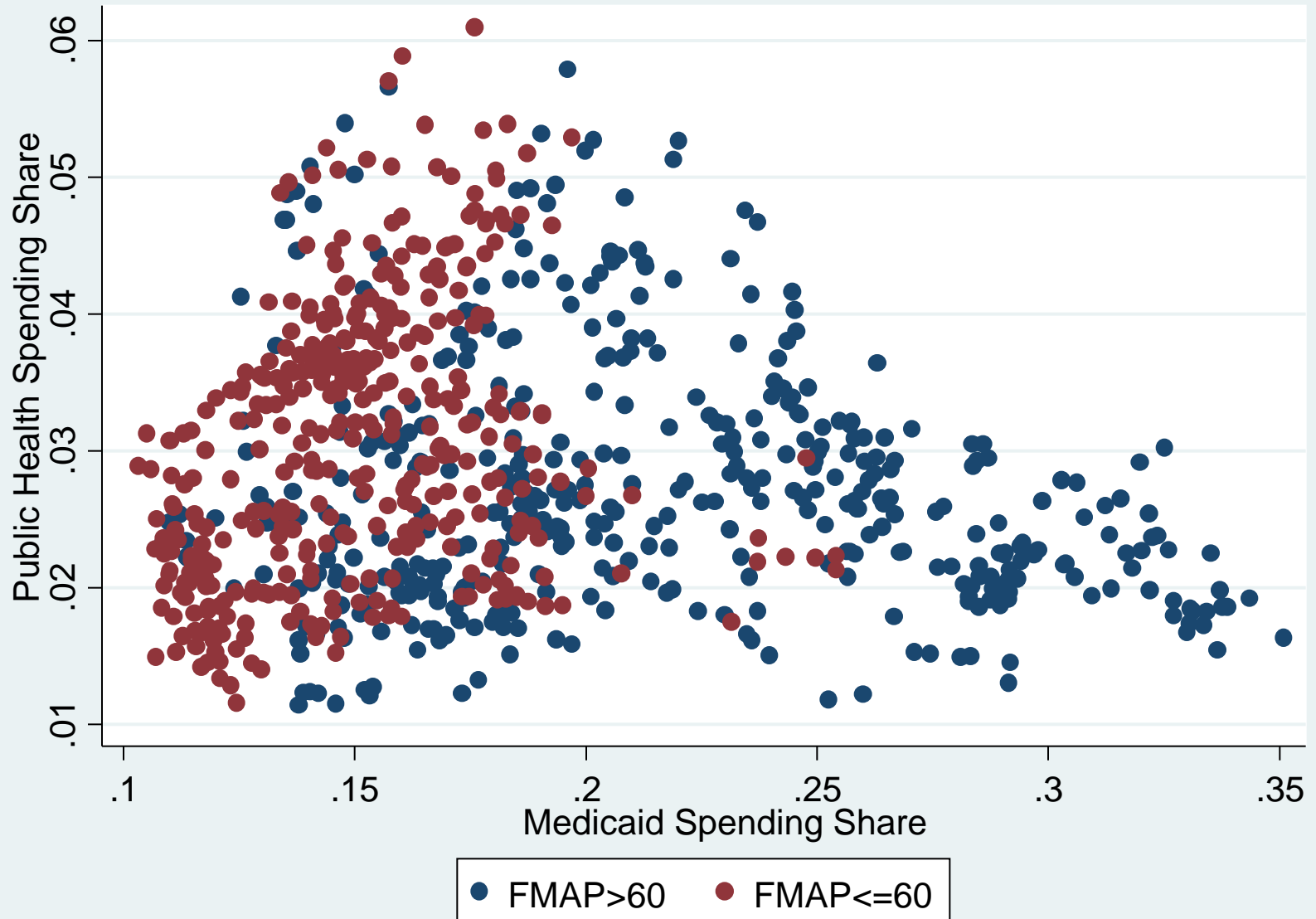
- Population size
- Income per capita
- Poverty rate
- Uninsured rate
- Smoking & obesity prevalence
- Tax burden
- Political party of Governor
- Political split of legislature

Instrumental Variables (Z_{it})

- FMAP, FMAP²
- Share of population TANF
- Share of population SSI
- Share of population SNAP
- Share of population FSB
- Federal intergovernmental transfers/capita

→ Federally directed policies
(exogenous to state/local decisions)

Results: Medicaid and Public Health Shares of State Spending



Results: Determinants of Medicaid Spending

Effects of IVs on Medicaid Spending Share

<u>Instruments</u>	<u>Coeff.</u>	<u>S.E.</u>	
FMAP	0.890	0.436	**
FMAP ²	-0.008	0.004	*
TANF recipients	-0.251	0.139	*
SSI recipients	2.873	0.641	***
SNAP recipients	0.118	0.132	
School Breakfast recipients	2.715	0.319	***
Federal transfers/capita	-0.023	0.009	**

Partial F (17,767) = 17.45***

Excludability J test = 1.73

***p<0.01 **p<0.05 *p<0.10

Results: Estimated Crowd Out Effects

Effects of Medicaid Spending Share on **State** Public Health Spending Share

<u>Model</u>	<u>Coeff.</u>	<u>S.E.</u>	
Reduced form (FMAP)	-0.006	0.002	***
Fixed-effects	-0.112	0.012	***
IV fixed effects	-0.082	0.031	***

***p<0.01

Results: Estimated Crowd Out Effects

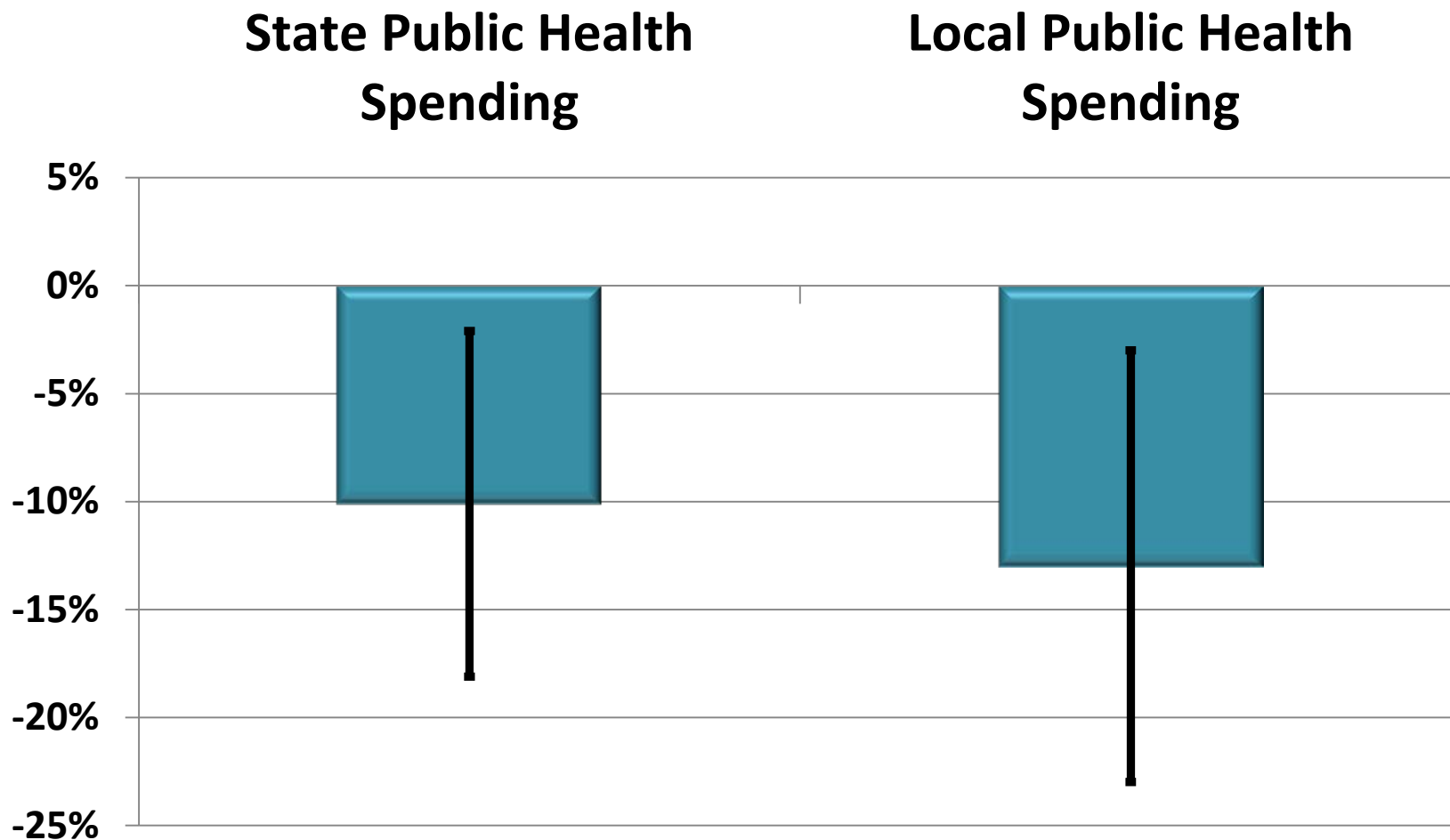
Effects of Medicaid Spending Share on **Local** Public Health Spending Share

<u>Model</u>	<u>Coeff.</u>	<u>S.E.</u>	
Reduced form (FMAP)	-0.004	0.001	**
Fixed-effects	-0.089	0.019	***
IV fixed effects	-0.077	0.038	***

***p<0.01 **p<0.05

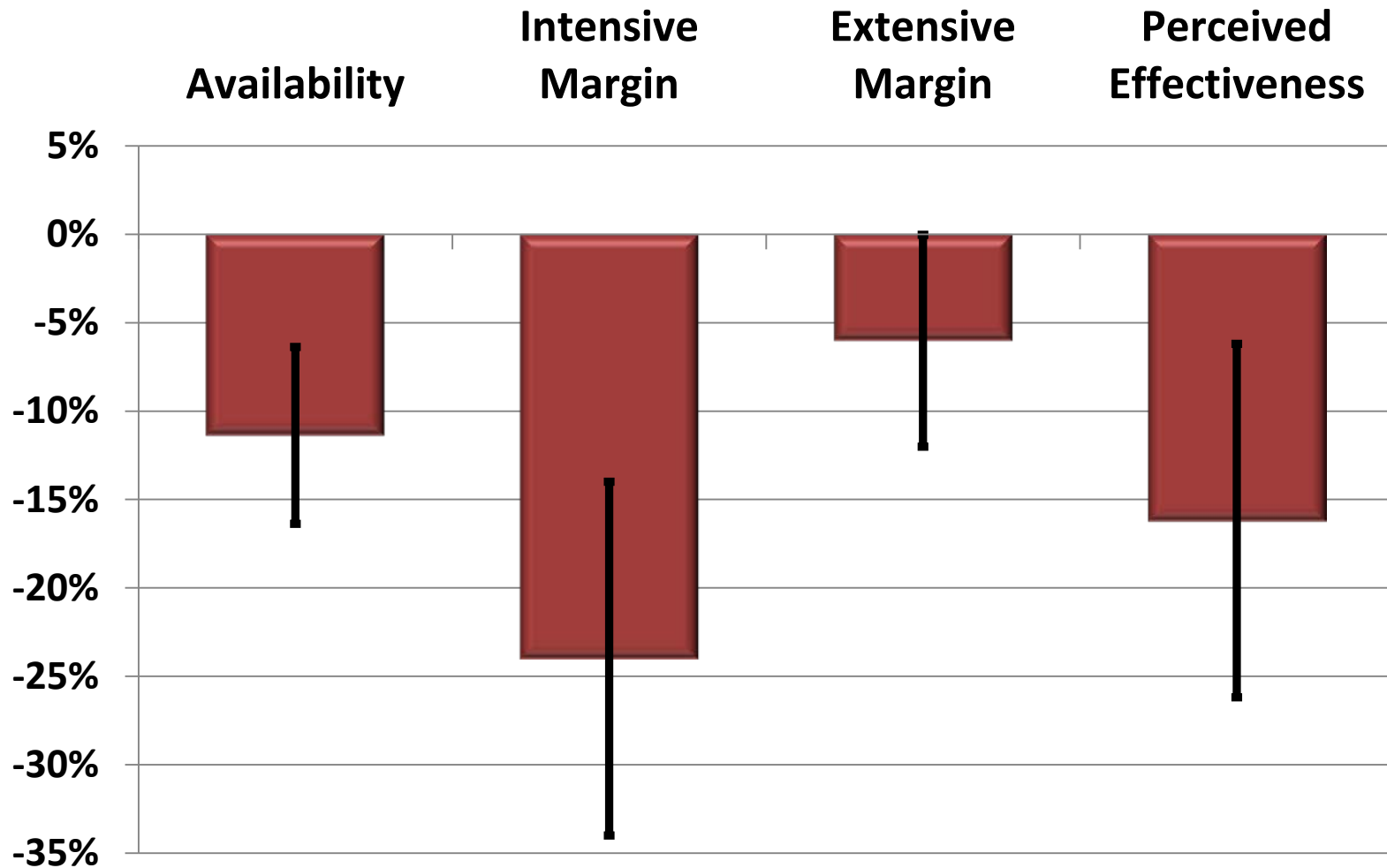
Estimated Effect of Medicaid Spending Growth on Public Health Spending/Capita

At Median Medicaid Budget Share Growth of 3.9%

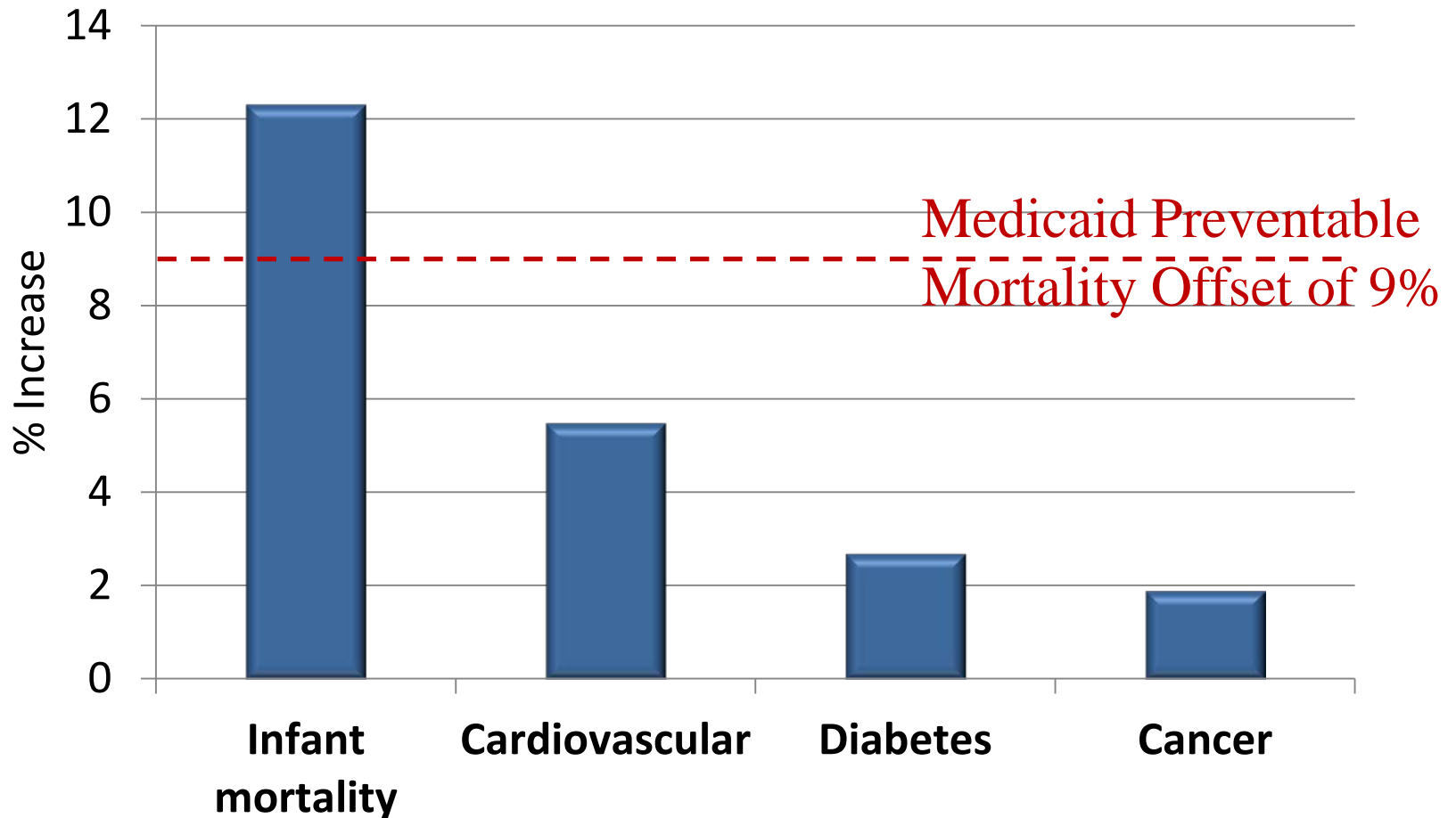


Estimated Effect of Medicaid Spending Growth on Delivery of Recommended Public Health Services

At Median Medicaid Budget Share Growth of 3.9%

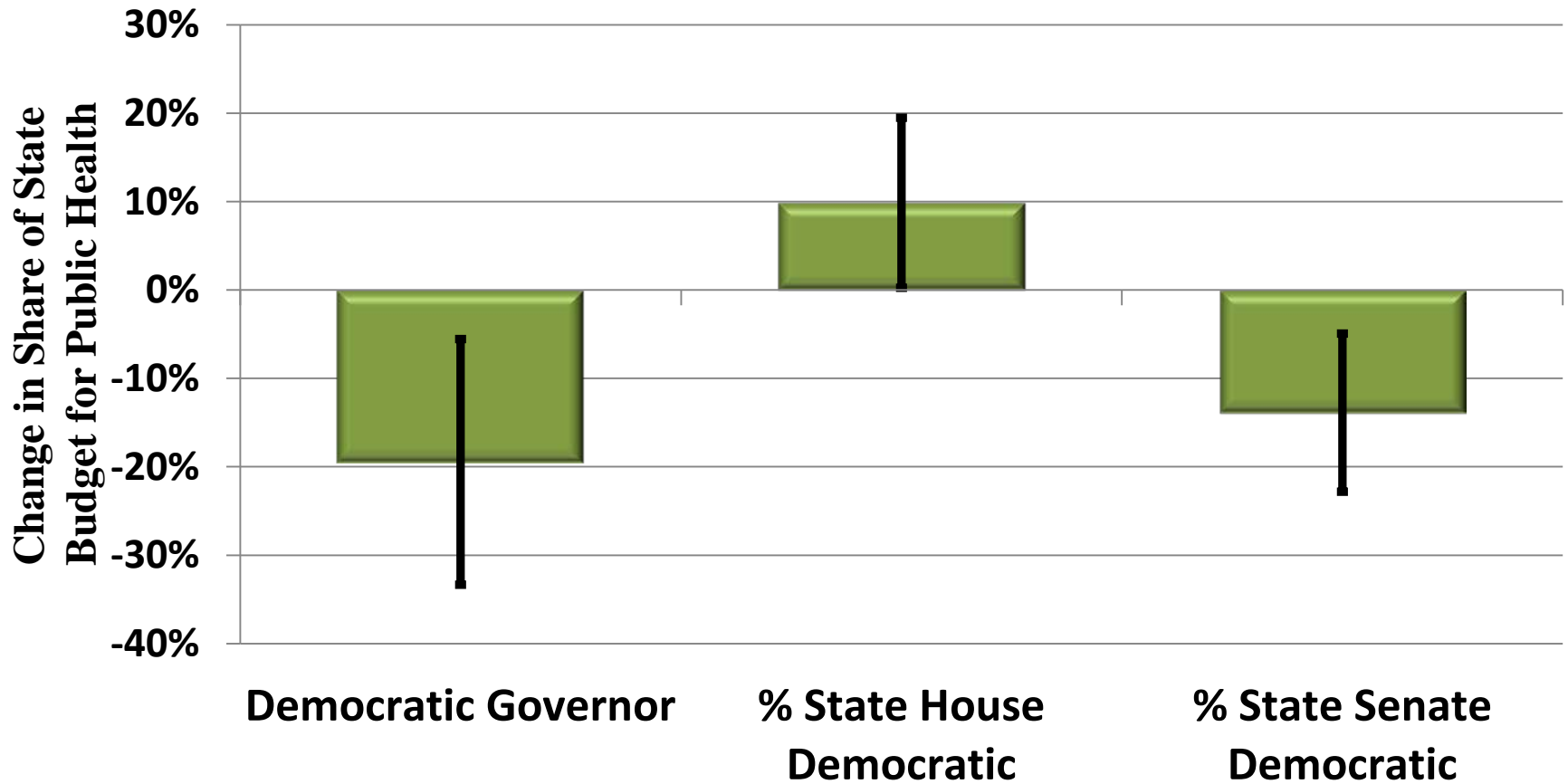


10-Year Projected Effects of Crowd-out on Preventable Mortality Rates



Using 10-year mortality effect estimates from Mays and Smith, *Health Affairs* 2011
Medicaid mortality effect estimates from Sommers et al. *Annals of Internal Medicine* 2014

An Aside: Effects of State Political Party Control on Medicaid Crowd-out of Public Health Spending



Conclusions

- Substantial crowd-out in public health spending results from Medicaid spending growth
- The magnitude of crowd-out is sufficient to produce sizeable health effects over time
- Crowd-out may reduce or fully offset the direct mortality gains from increases in health insurance coverage (e.g. Sommers et al 2014)
- Crowd-out may be larger for lower-resource states and communities

Implications for Policy & Practice

- Roles for federal spending, e.g. Prevention & Public Health Fund
- Maintenance of effort requirements/incentives
- Nongovernmental contributions to public health
- Alignment between primary care & public health

Limitations and Next Steps

- Aggregate and imprecise spending measures
- Lagged effects
- ACA experience may differ from past Medicaid expansions
- Accounting for mortality effects of Medicaid and public health simultaneously

For More Information



Supported by The Robert Wood Johnson Foundation

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