

Summer June 8, 2014

Does Medicaid Crowd Out Other Public Health Spending? Projecting ACA's Health & Economic Effects

Glen P. Mays, *University of Kentucky*

Does Medicaid Crowd Out Other Public Health Spending? Projecting ACA's Health & Economic Effects

Glen Mays, PhD, MPH
University of Kentucky
glen.mays@uky.edu

AcademyHealth Annual Research Meeting | San Diego, CA | 8 June 2014

Acknowledgements

- Funded by the **Robert Wood Johnson Foundation** through the National Coordinating Center for Public Health Services & Systems Research
- Supported by the **NIH National Center for Advancing Translational Science** through the Kentucky Center for Clinical and Translational Science
- Data provided by the **University of Kentucky Center for Poverty Research**, supported by USDHHS/ASPE
- Additional data provided by the **National Association of County and City Health Officials**, National Profile of Local Health Departments

Health spending and preventable disease burden

>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 U.S. health spending is allocated to public health and prevention

Public health activities

How to optimally deploy a diverse collection of responsibilities, resources, actors & expectations?

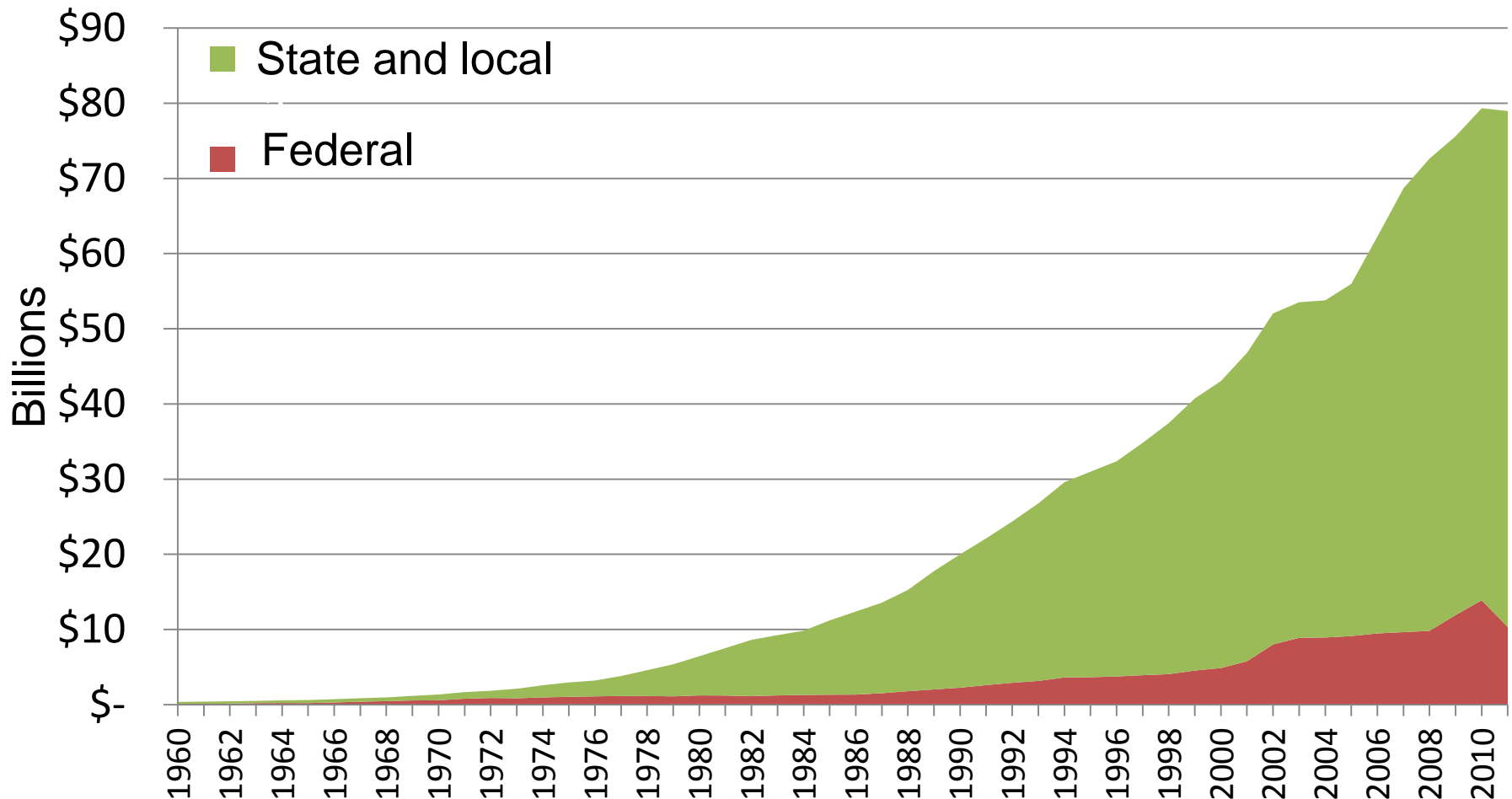
- Epidemiologic **surveillance & investigation**
 - Community health **assessment & planning**
 - Communicable disease control
 - Chronic disease and injury prevention
 - Health education and communication
 - Environmental health **monitoring and assessment**
 - Enforcement of health **laws and regulations**
 - 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.

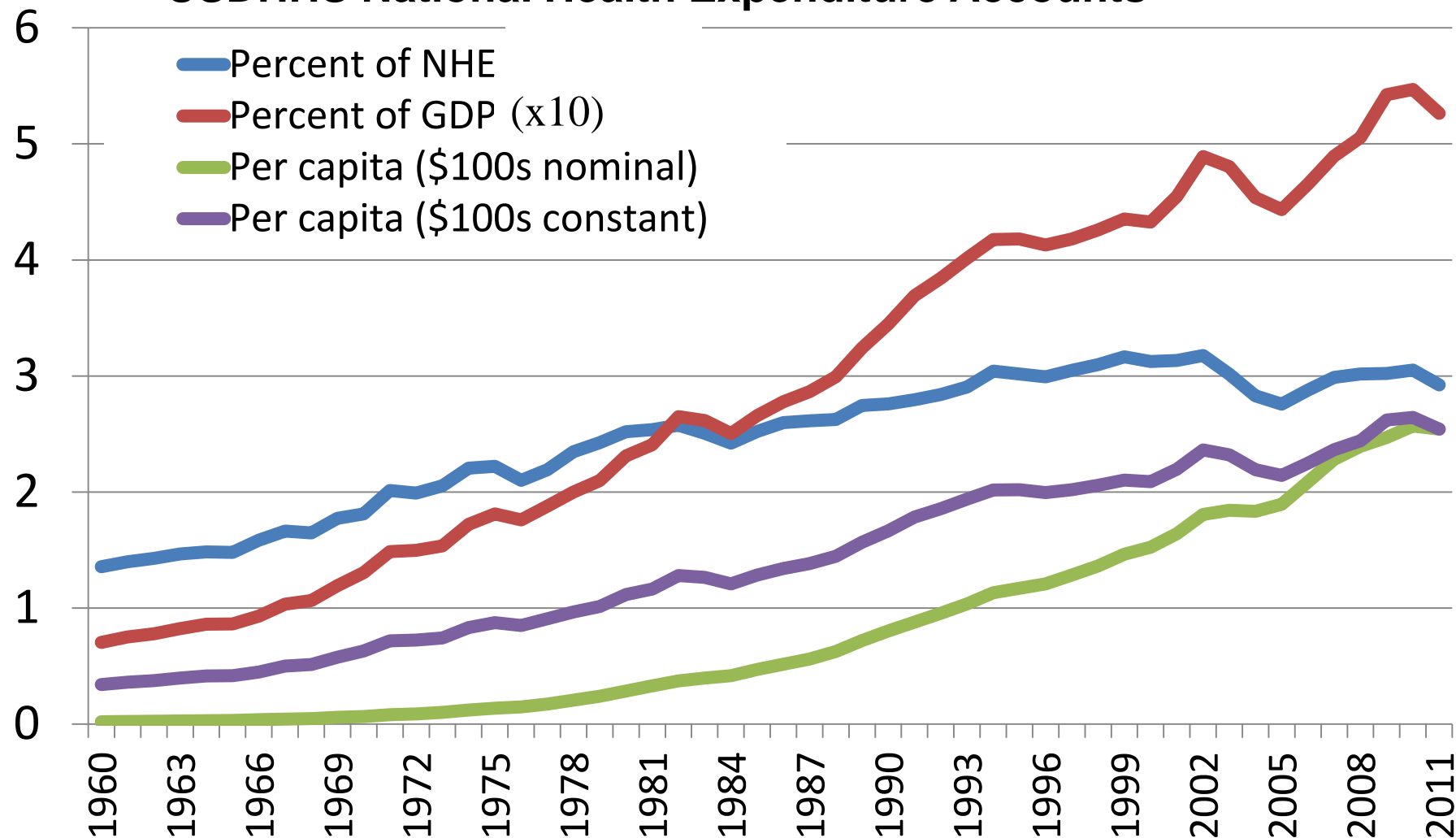
Governmental financing for public health

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

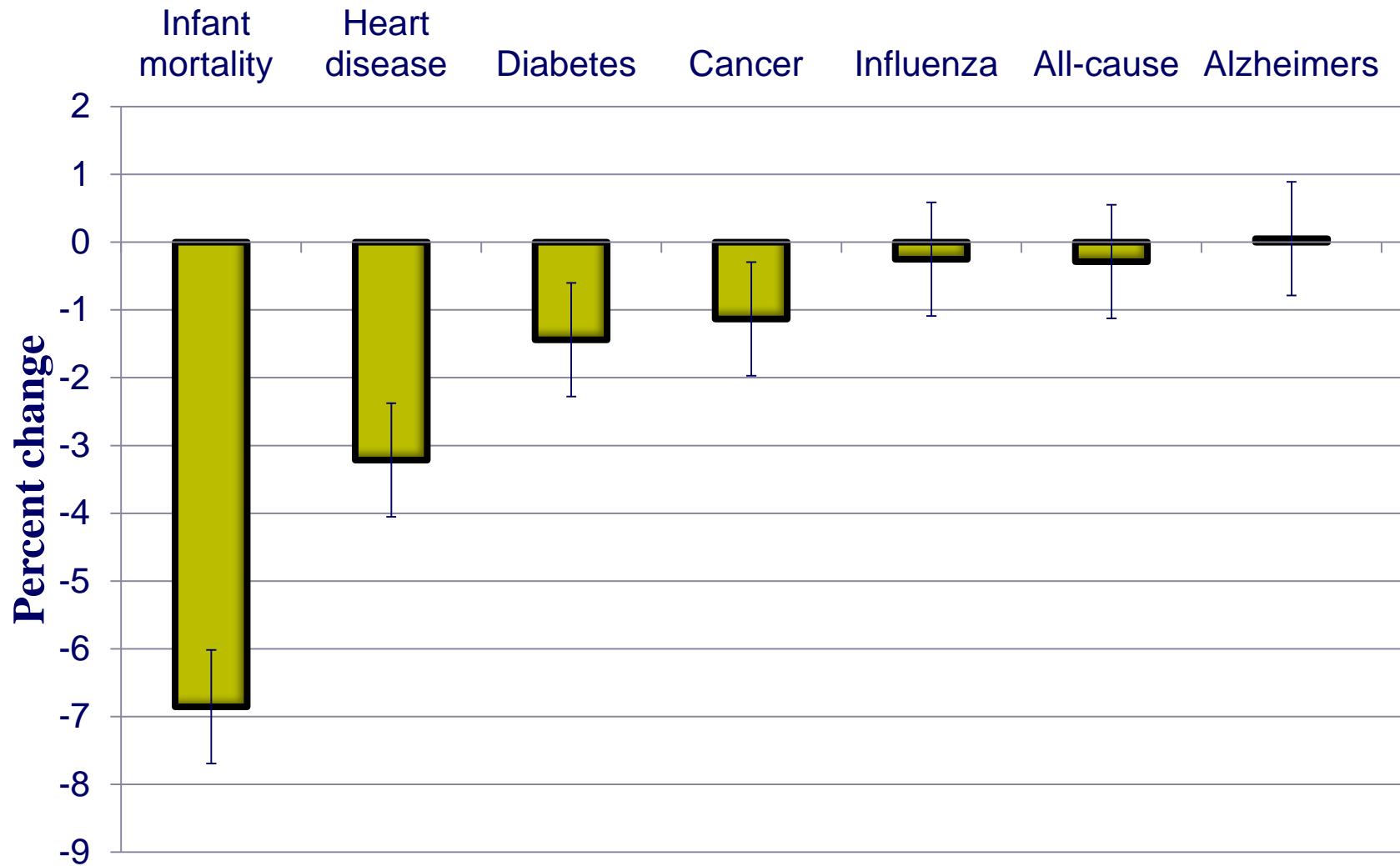
SEC. 4301. RESEARCH ON OPTIMIZING THE DELIVERY OF PUBLIC HEALTH SERVICES.

(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 state and local public health spending

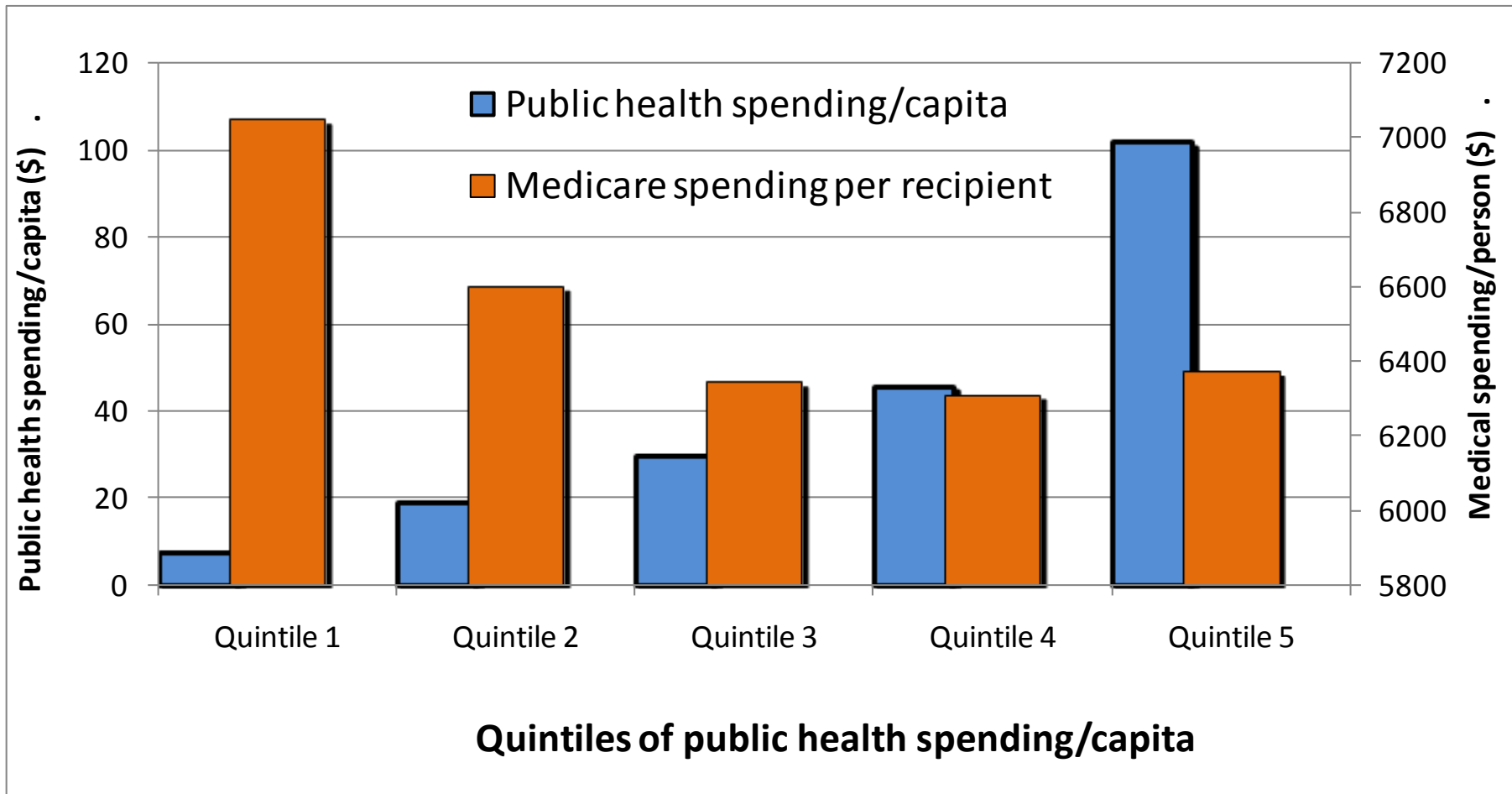
Prior Research: Mortality reductions attributable to local public health spending, 1993-2008



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 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?

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

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

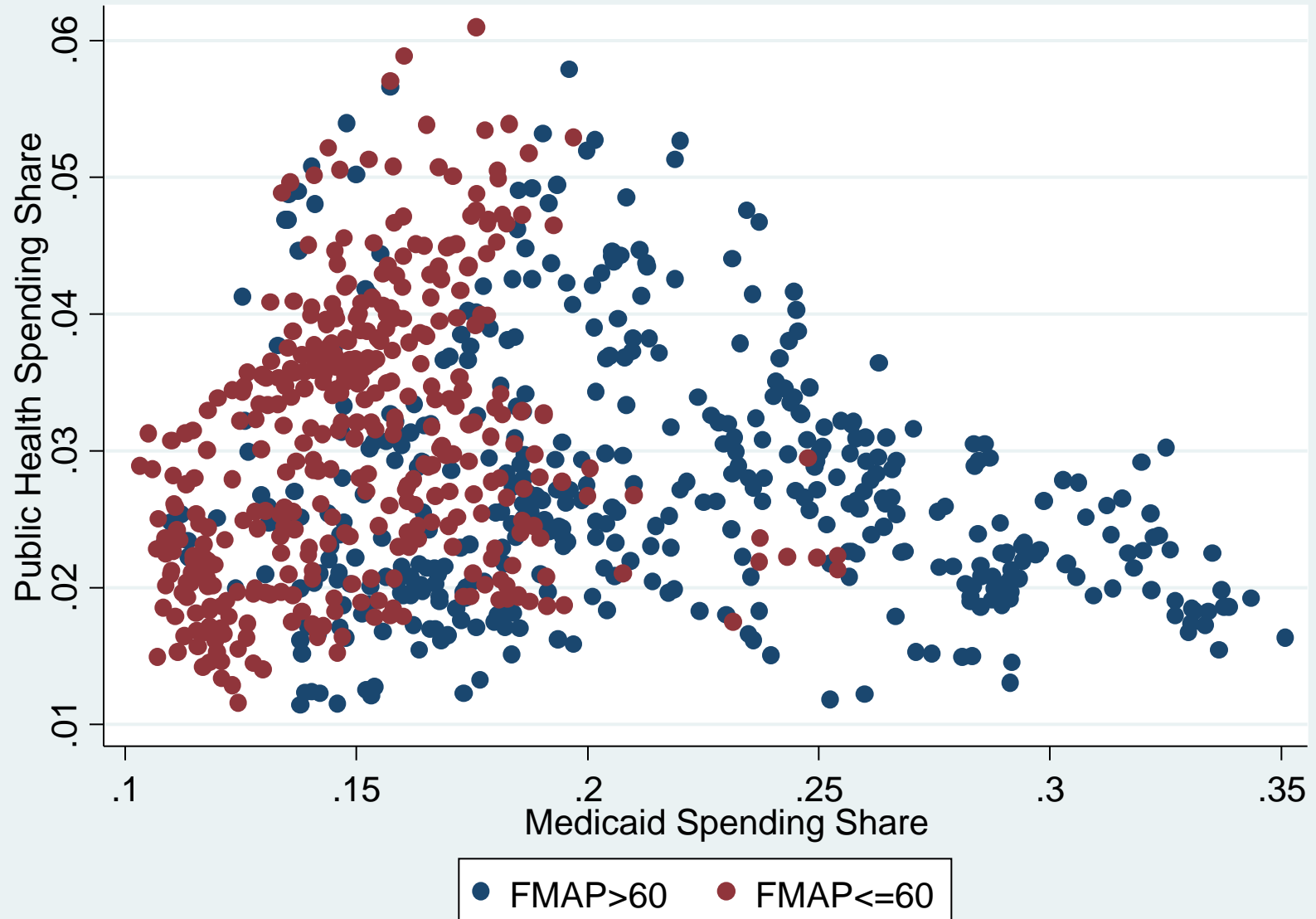
Instrumental Variables (Z_{it})

- 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	***



23.1% decline for the
median state in 2011

*** $p < 0.01$

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	***



34.8% decline for the
median local govt in 2011

***p<0.01 **p<0.05

Projected Health Effects of Crowd Out

- At median levels of crowd-out:
 - 12.3% increase in infant mortality rate
 - 5.5% increase in cardiovascular mortality rate
 - 2.7% increase in diabetes mortality rate
 - 1.9% increase in cancer mortality rate
- Reduce or fully offset the direct mortality gains from increases in health insurance coverage (e.g. Sommers et al 2014)

Using 10-year mortality effect estimates from Mays and Smith, *Health Affairs* 2011

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 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
- Public health and Medicaid services as complements vs. substitutes
- 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

Glen P. Mays, Ph.D., M.P.H.

glen.mays@uky.edu

Email: publichealthPBRN@uky.edu

Web: www.publichealthsystems.org

Journal: www.FrontiersinPHSSR.org

Archive: works.bepress.com/glen_mays

Blog: publichealtheconomics.org

