



*Strategies to Achieve Alignment, Collaboration, and Synergy across  
Delivery and Financing Systems*

# **Optimizing Governmental Health and Social Spending Interactions**

*Research In Progress Webinar  
Wednesday, January 24, 2017  
12:00-1:00 pm ET/ 9:00 am-10:00 pm PT*

*Funded by the Robert Wood Johnson Foundation*



**College of  
Public Health**

*Center for Public Health Systems  
and Services Research*

# Agenda

**Welcome:**

**Richard Ingram, DrPH**

*Assistant Professor, RWJF [Systems for Action](#) National Coordinating Center*  
University of Kentucky College of Public Health

**Presenters:**

**Beth Resnick, DrPH, PH**

*Senior Scientist, Office of Public Health Practice and Training*  
Johns Hopkins Bloomberg School of Public Health  
[bresnick@jhu.edu](mailto:bresnick@jhu.edu)

**David Bishai, MD, MPH, PhD**

*Professor*  
Johns Hopkins Bloomberg School of Public Health  
[dbishai1@jhu.edu](mailto:dbishai1@jhu.edu)

**Commentary:**

**Mac McCullough, PhD, MPH**

*Assistant Professor*  
School for the Science of Health Care Delivery  
College of Health Solutions  
Arizona State University  
[mccullough@asu.edu](mailto:mccullough@asu.edu)

**Questions and Discussion:** Moderated by Dr. Ingram, with Commentary and Q&A moderated by Dr. CB Mamaril



**Beth Resnick, DrPH, MPH**, Principal Investigator is a Senior Scientist at the Johns Hopkins Bloomberg School of Public Health and Director of the Office of Public Health Practice and Training.

Dr. Resnick was a 2012 Johns Hopkins Student Outreach Resource Center (SOURCE) Service-Learning Faculty Fellow where she engaged with the Baltimore community and nursing and medical school faculties to engage students with communities to advance a Culture of Health.

Prior to joining the Hopkins faculty, Dr. Resnick was Director of the Office of Environmental Health at the National Association of County and City Health Officials (NACCHO).

Dr. Resnick was the principal investigator on the development of the State Health Expenditure Dataset (SHED).



**David Bishai, MD, MPH, PhD**, is a Professor at the Johns Hopkins Bloomberg School of Public Health and directs the school's interdepartmental program in health economics.

Dr. Bishai has two roles in the project. He will lead the proposed econometric analysis and identification of funding inequities by income levels, race, and county health rankings.

Dr. Bishai has conducted a series of analyses of state and county public health spending data in work supported by the de Beaumont Foundation that provide a methodological foundation for the proposed vector autoregression analysis of state and local governmental spending on medical, public health and social service spending.

He maintains Board Certifications in Internal Medicine and Pediatrics as well as a part time practice four days per month at University of Maryland Saint Joseph Medical Center.



**Mac McCullough, PhD, MPH**, conducts research involving quantifying investments in public health and social services and on assessing how these investments are put to use in order to improve population health. He recently led the development of a new data source to track spending on health and social services at the local level.

Dr. McCullough serves as deputy director of the RWJF-funded National Safety Net Advancement Center and as health economist at the Maricopa County Department of Public Health.

He has worked at the National Academy of Sciences and the U.S. Department of State.

**Analyzing state and local governmental health,  
public health, social and community service spending  
for system alignment to reduce health disparities**



**JOHNS HOPKINS**  
BLOOMBERG SCHOOL  
*of* PUBLIC HEALTH



# Research Team

## Johns Hopkins Bloomberg School of Public Health

David Bishai, MD, PhD, MPH

Beth Resnick, DrPH, MPH

JP Leider, PhD

Natalia Alfonso, MS

## Partners

Mac McCullough, PhD, MPH - Maricopa County Department of Public Health

Building on prior research supported by the deBeaumont Foundation



## Agenda

1

Prior Work - State Health Expenditure Dataset (SHED)

A

What is SHED and its impact?

B

Results

2

Future Work

A

Overview of aims

B

Questions

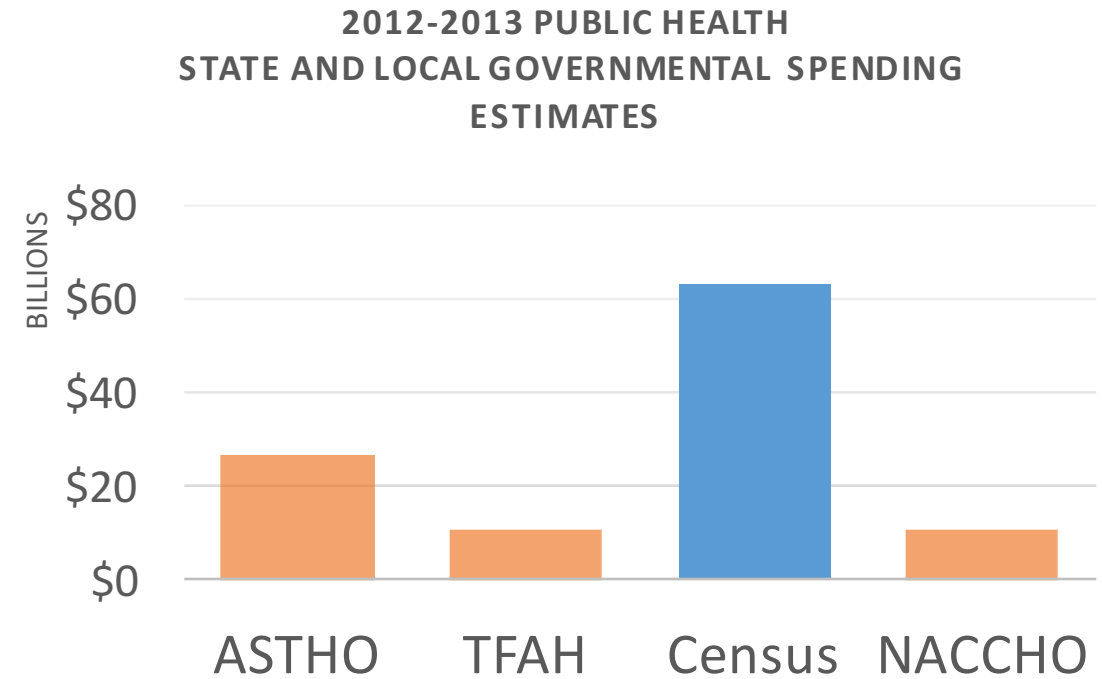
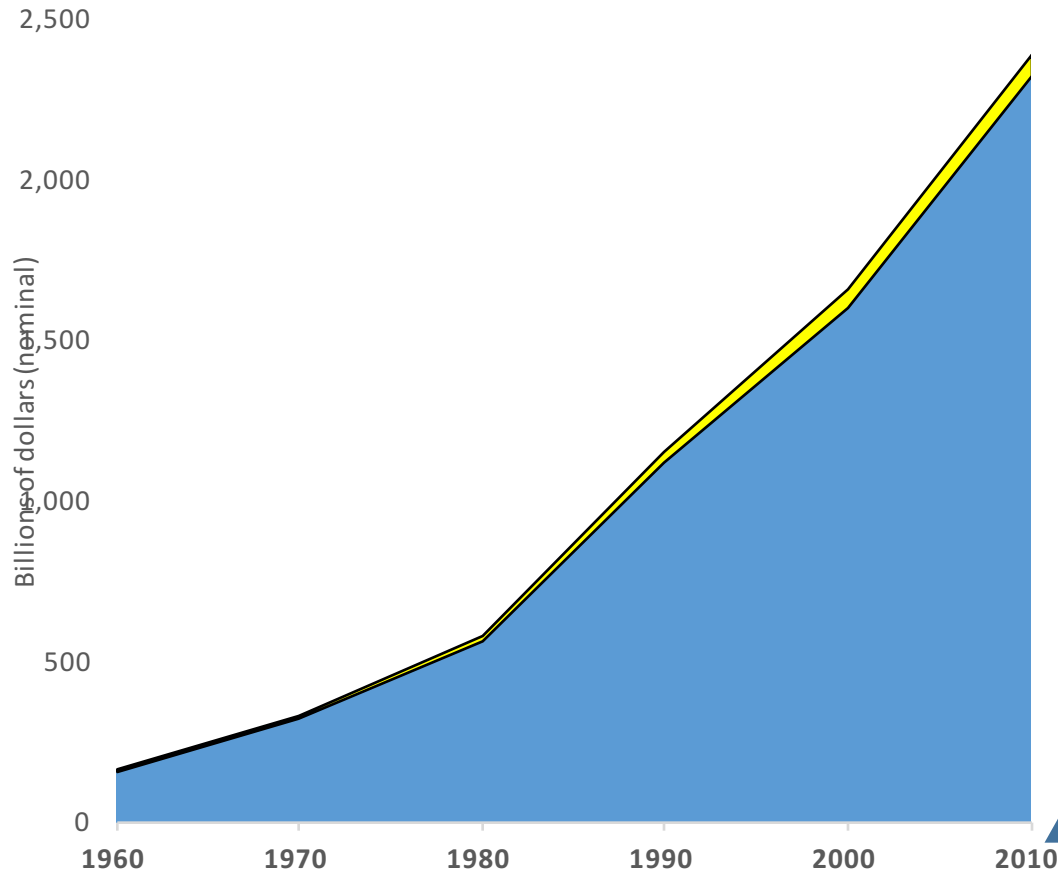
3

Discussion



# How much do we *really* spend on public health?

National estimates show **public health spending as 3%** of total health spending but field estimates are wide ranging ...



# State Health Expenditure Dataset (SHED)

Available at: <https://www.icpsr.umich.edu/icpsrweb/ICPSR/studies/36741>

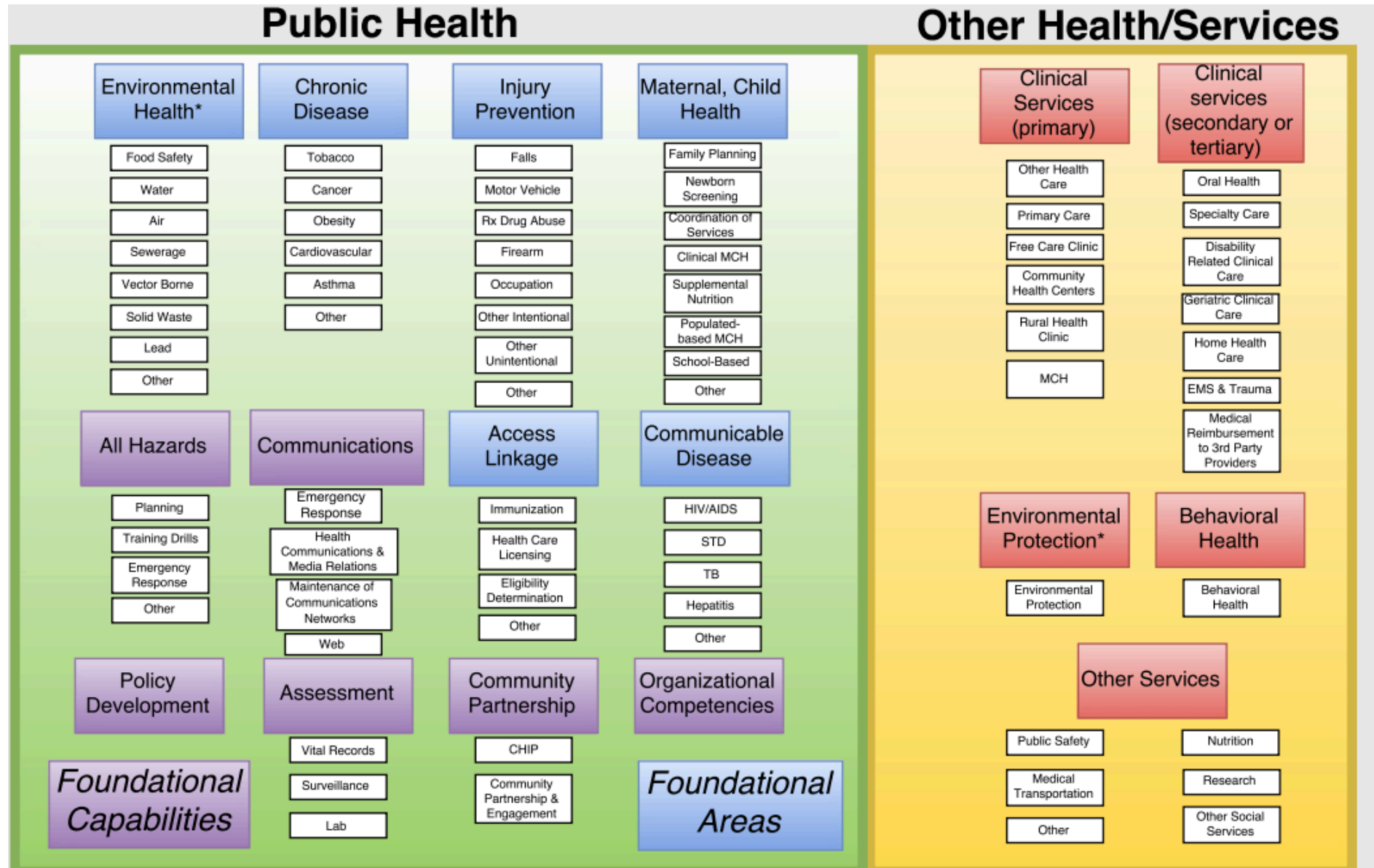
## Strengths

- Recoded Census State Finance Division Data
- Basis of Public Health Activity estimate in NHEA
- Includes spending by all state agencies
- Includes other agencies with health functions (not just health departments)
- Highly detailed line item expenditures that allows parsing by specific activity

## Limitations

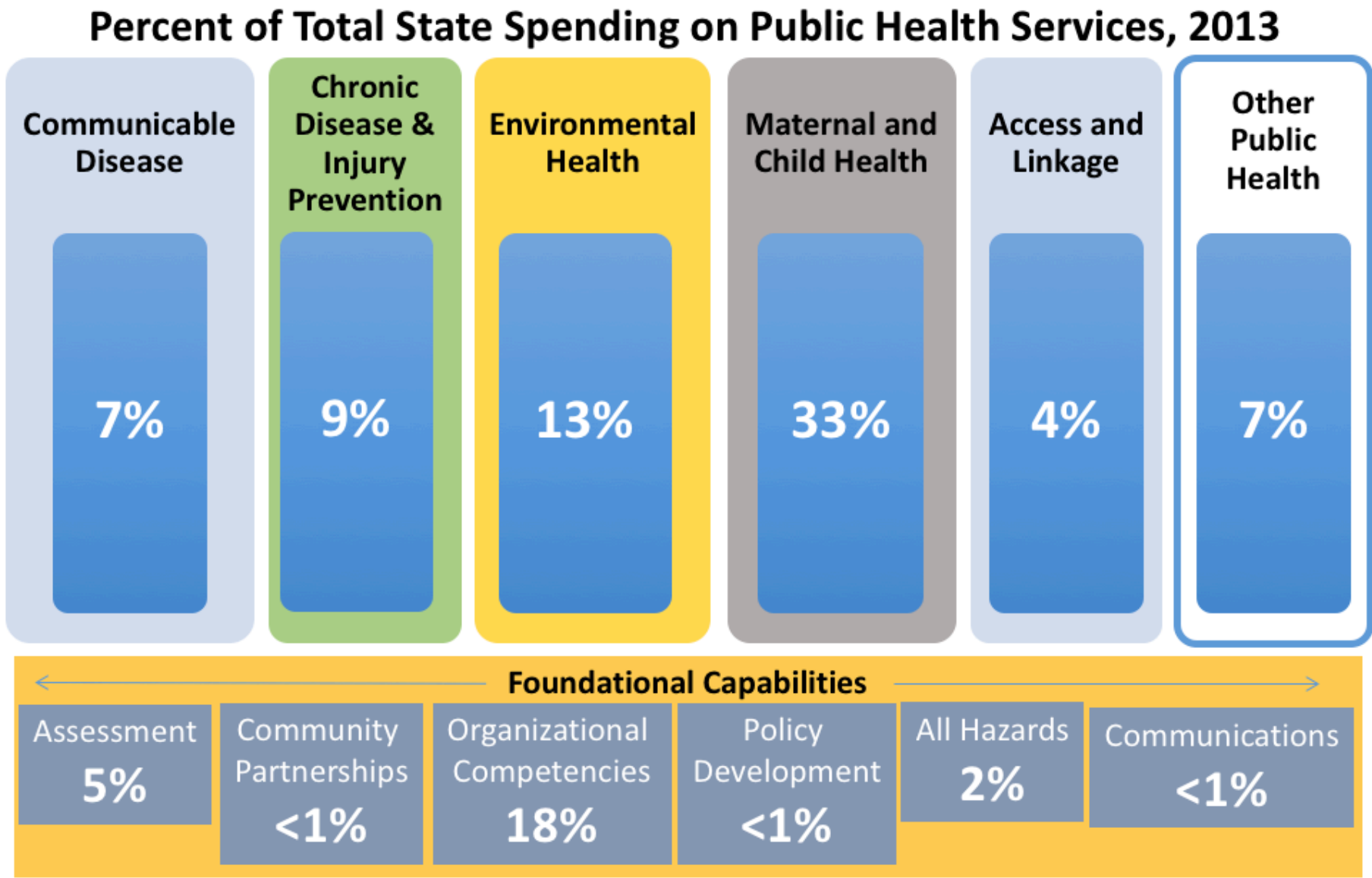
- Inconsistencies across states in accounting for local public health spending and intergovernmental state to local transfers
- Incomplete data prior to 2008 and absence of California spending data
- Limitations due to initial state coding in South Carolina
- Beholden to Census coding determinations

# SHED Coding Framework Built on the Foundational Public Health Services Model



\*"Environmental Health" refers to prevention (permitting, education, regulation) activities, "Environmental Protection" refers to remediation and environmental quality

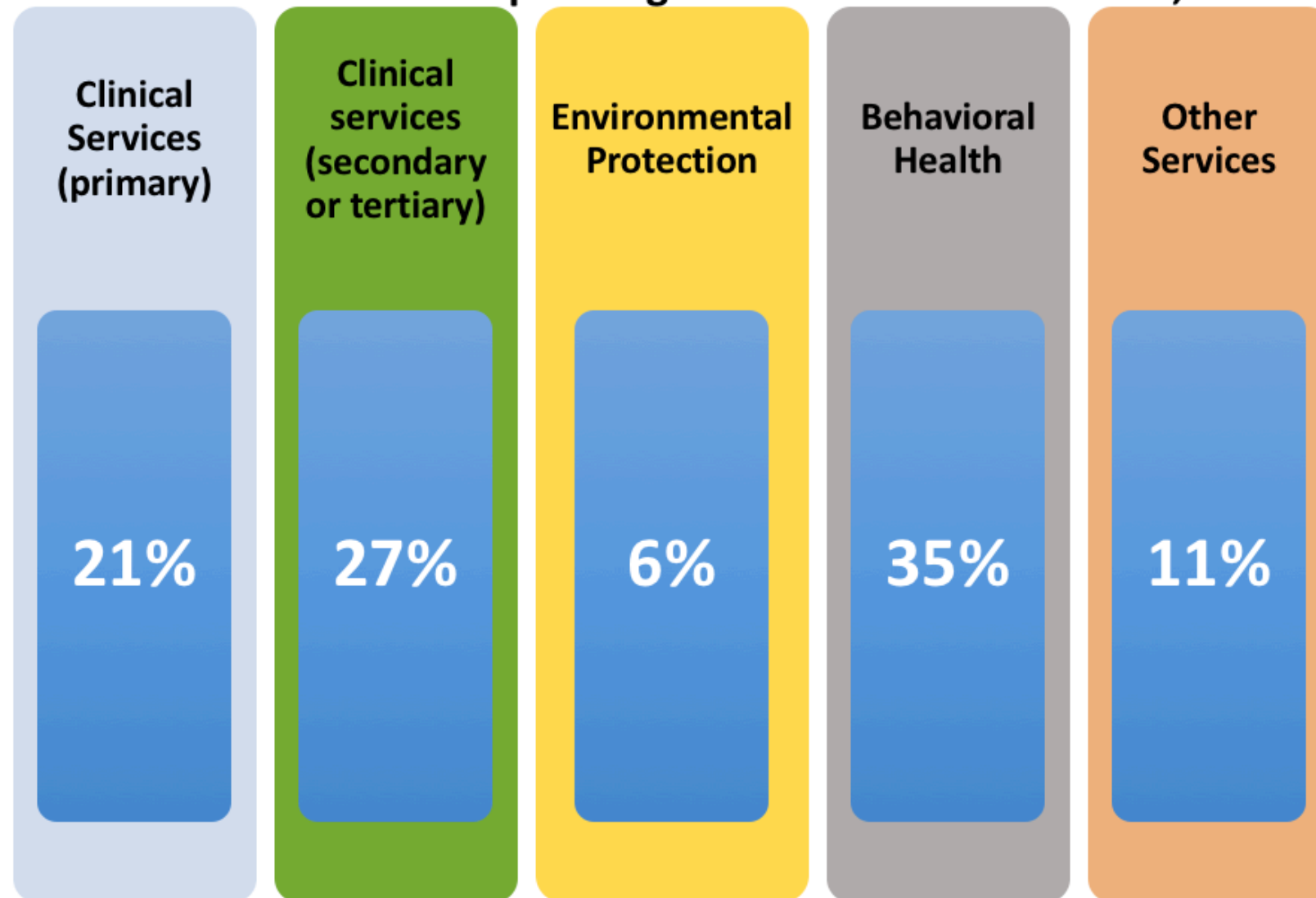
# Results



\*Only public health component using the FPHS coding framework, as a percentage of Code 32 spending

# Results

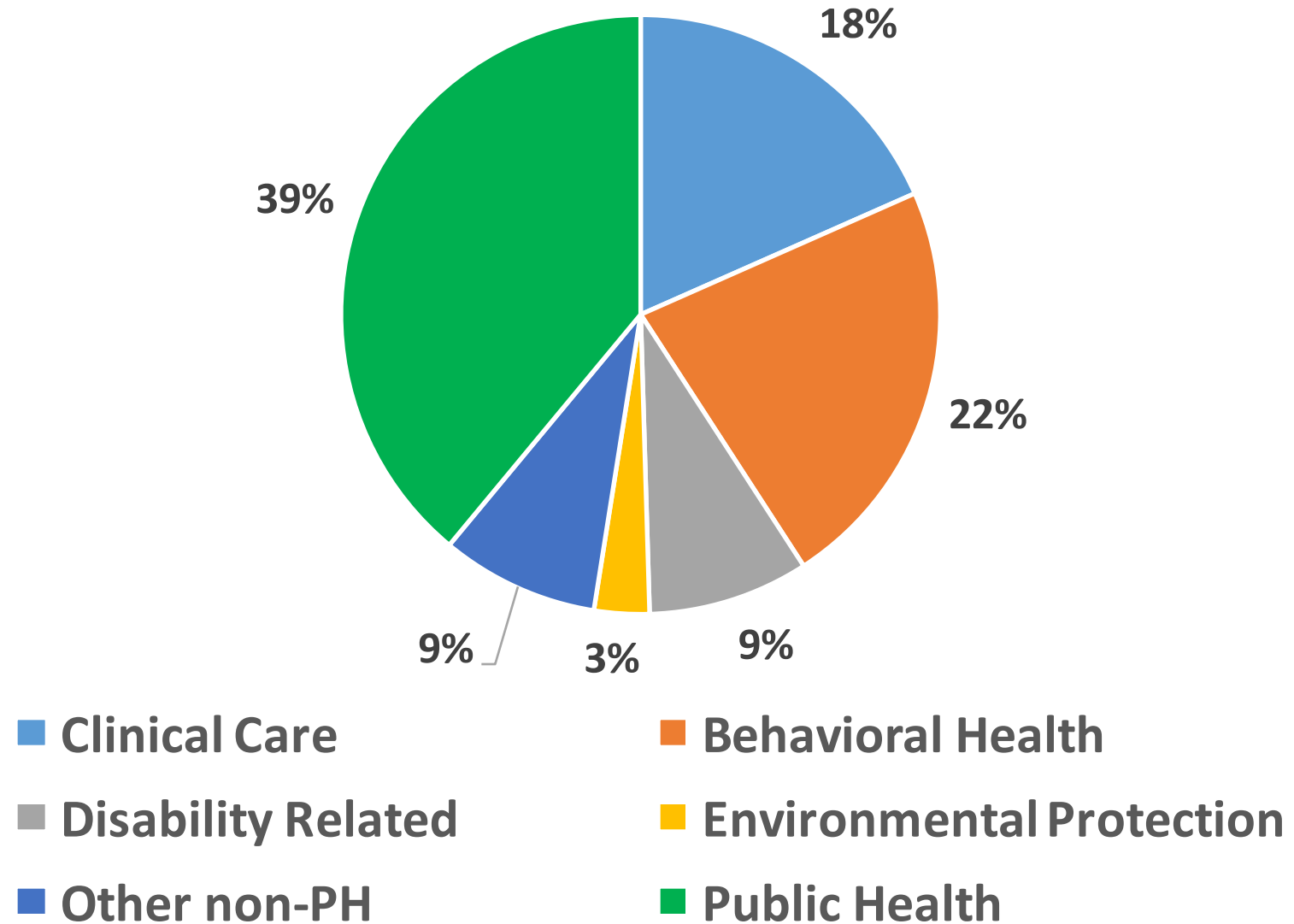
## Percent of Total State Spending on Other Health Services, 2013



\*Only other health component using the FPHS coding framework, as a percentage of Code 32 spending

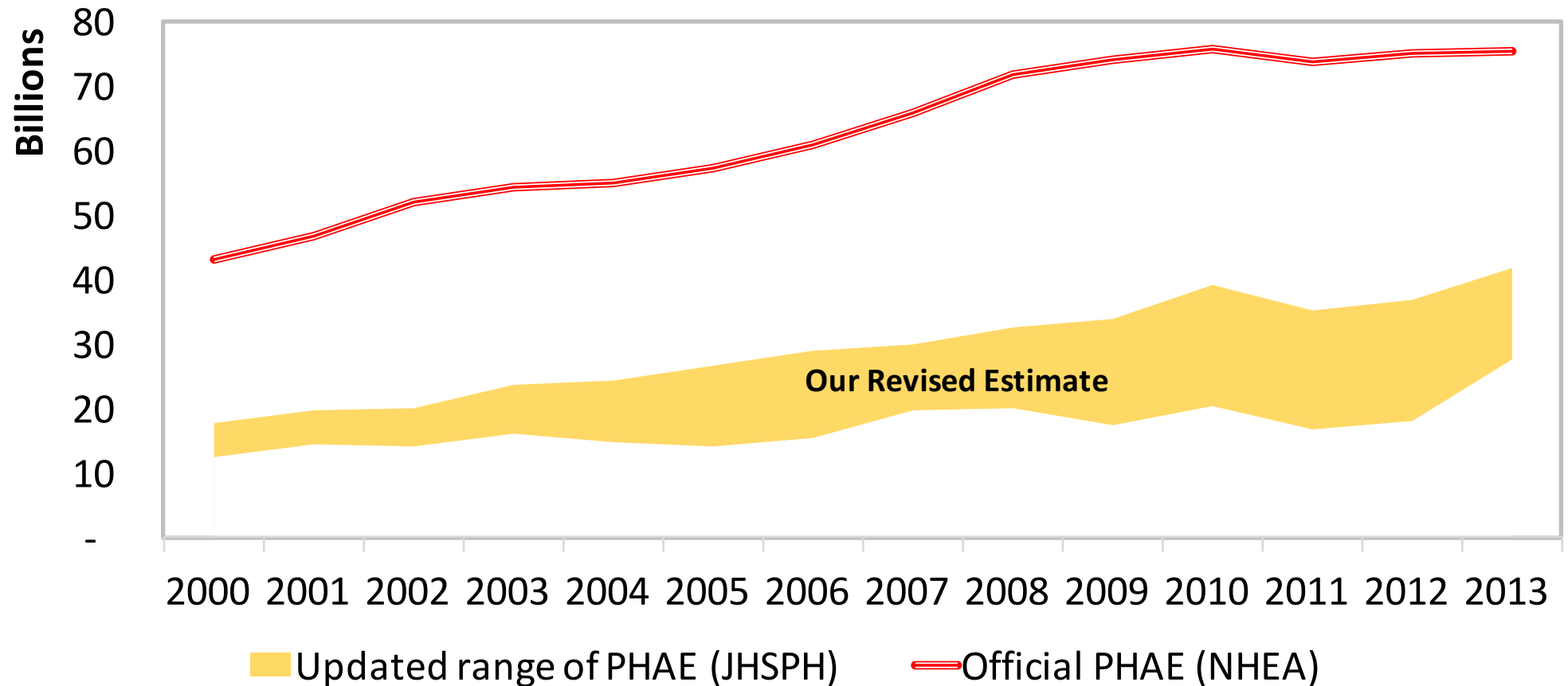
# Results

## State spending in the Census Public Health Activity estimate (2000-2013)



# Results

## National Public Health Activity Estimate



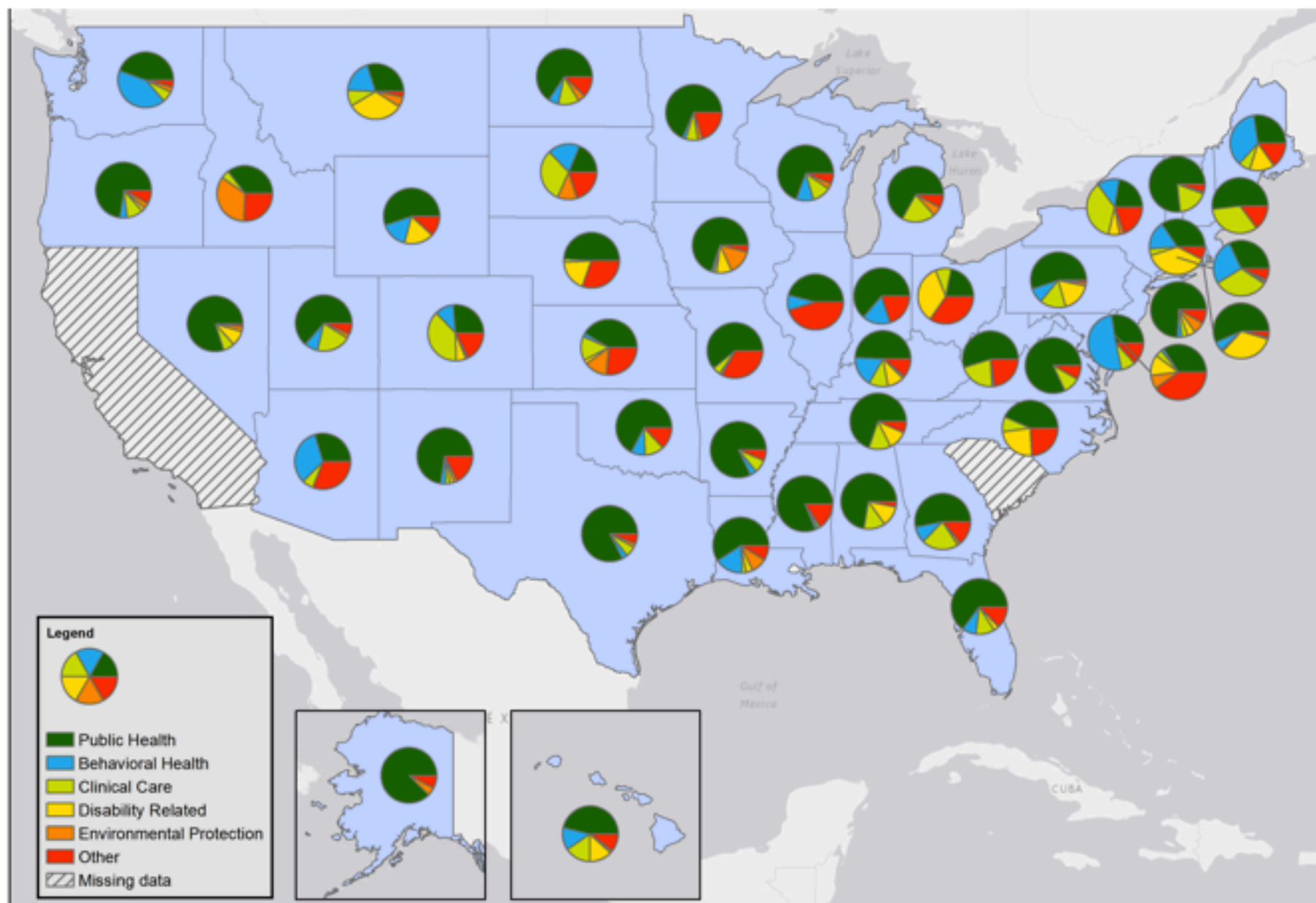
\*JHSPH estimate includes added-back federal dollars.

\*\*JHSPH estimate is a range to include margin of error.



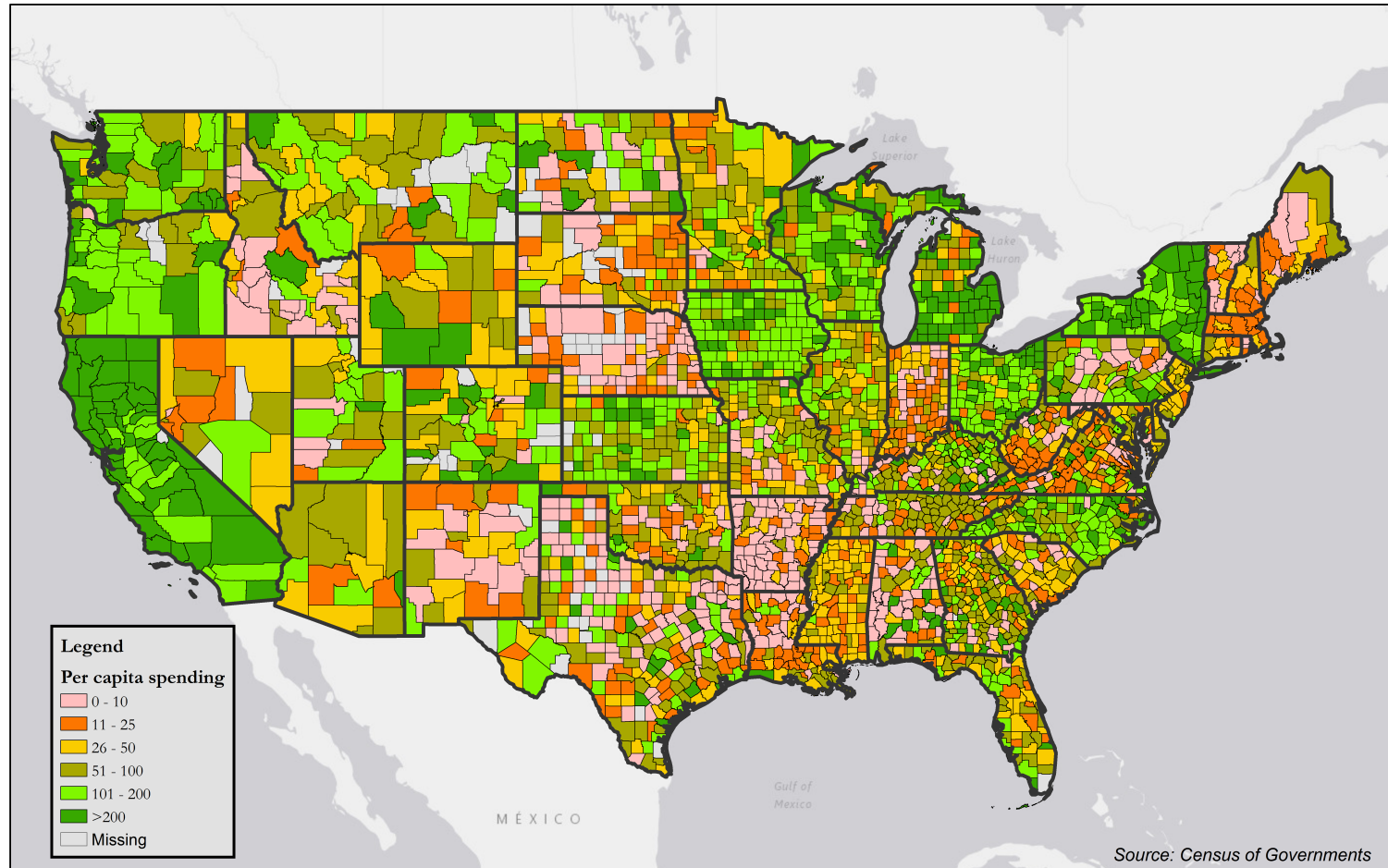
# Results

## State Spending Variation, 2012



# Local Level Public Health Spending Estimates

Local government per capita community and public health spending (excluding hospital and welfare) in 2012



# Key Findings

- County level spending on health and public health statistically significantly lowered all cause mortality
  - Models controlled for county spending on hospitals and total county revenue
  - Based on data from 2850 counties from 1972- 2012
  - Fixed effects models with Koyck lags
- Effect sizes were larger in counties with a high proportion of African American
  - Can infer that county health spending lowers racial disparities in mortality

# RWJ Funded Research

## Future Research

1

Add Social and Community Service Spending to State Health Expenditure Dataset (SHED – X)

2

Analyze State to Local Governmental Transfer Spending

A

Disparities in spending across localities

3

Examine Spending Impact

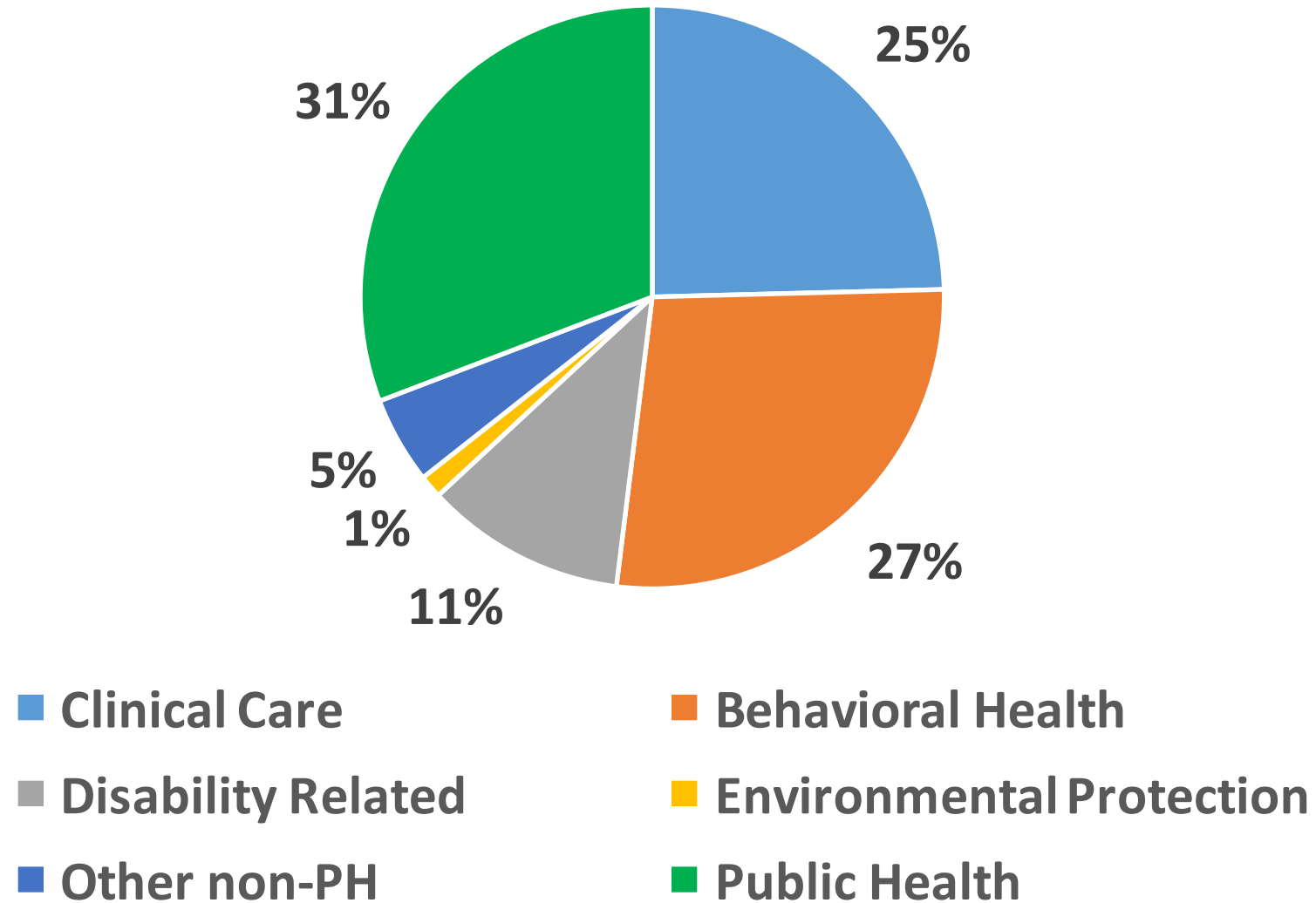
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Implications for system alignment to reduce health disparities

# SHED-X

- Incorporate other areas of social services spending (education, other health/hospital, housing and urban development, public safety, welfare)
- Connect state and local spending totals, with focus on intergovernmental transfers

## State to local transfers (2000-2013)



# Summary

- We spend considerably less on population health than estimates indicate
- Better understanding of what we *really* spend on public health as well as social and community services is needed to:
  - Accurately assess impact of such spending
  - Uncover spending disparities
  - Inform future resource allocations



# Implications for Public Health Practice.....

Dr. Mac McCullough

Health Economist

Maricopa County Department of Public Health

Assistant Professor

Arizona State University

Thank you!

# Upcoming Webinars

## Archives

<http://systemsforaction.org/research-progress-webinars>

## Upcoming

Wednesday, February 7, 12-1pm ET/ 9-10am PT

### **STRENGTHENING THE CARRYING CAPACITY OF LOCAL HEALTH AND SOCIAL SERVICE NETWORKS**

*Trailhead Institute in Colorado*

*Principal Investigators: Danielle Varda, PhD, and Katie Edwards, MPA*

Wednesday, February 21, 12-1pm ET/ 9-10am PT

### **LINKING MEDICAL HOMES TO SOCIAL SERVICE SYSTEMS FOR MEDICAID POPULATIONS**

*National Committee for Quality Assurance*

*Principal Investigators: Sarah Scholle, DrPH, and Keri Christensen, MS*

Wednesday, April 11, 12-1pm ET/ 9-10am PT

### **TESTING AN INTEGRATED DELIVERY AND FINANCING SYSTEM FOR OLDER ADULTS WITH HEALTH AND SOCIAL NEEDS**

*New York Academy of Medicine, New York University*

*Principal Investigators: Jose Pagan, PhD, and Elisa Fisher, MPH, MSW*

# Acknowledgements

***Systems for Action*** is a National Program Office of the Robert Wood Johnson Foundation and a collaborative effort of the Center for Public Health Systems and Services Research in the College of Public Health, and the Center for Poverty Research in the Gatton College of Business and Economics, administered by the University of Kentucky, Lexington, Ky.



*Center for Public Health Systems  
and Services Research*

and



# Topic Summary

The United States spends more money on healthcare than other developed countries, yet experiences significantly worse health outcomes. But, understanding healthcare spending alone is not enough. While the importance of nonmedical barriers to health, such as lack of adequate housing, education, transportation is well known, how governmental social spending affects health outcomes is less clear.

This study will examine total government spending across both medical care and social service sectors in order to characterize the impact of spending at the state and local levels on health outcomes and disparities. The research team will create a novel longitudinal dataset that merges medical, public health, social services and community service governmental spending with population health outcomes.

Based on U.S. Census of State and Local Governmental Finance data, this new dataset will allow researchers to examine public spending across medical, public health, social and community service sectors at both the state and county levels. Findings from this work will engage cross-sector stakeholders in conversations about aligning public spending to achieve better health and reduced health disparities.