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# The National Longitudinal Survey of Public Health Systems: Selected Findings and Applications

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# The National Longitudinal Survey of Public Health Systems: Selected Findings and Applications

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# Acknowledgements

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- Collaborators include Rick Ingram, PhD, Rachel Hogg, MA, Cezar Mamaril, PhD, Andrew Parks, MBA

# Data: public health production

## National Longitudinal Survey of Public Health Systems

- Cohort of 360 communities with at least 100,000 residents
- Followed over time: 1998, 2006, 2012
- Measured from local public health official's perspective:
  - **Scope**: availability of 20 recommended public health activities
  - **Network**: types of organizations contributing to each activity
  - **Effort**: contributed by designated local public health agency
  - **Quality**: perceived effectiveness of each activity

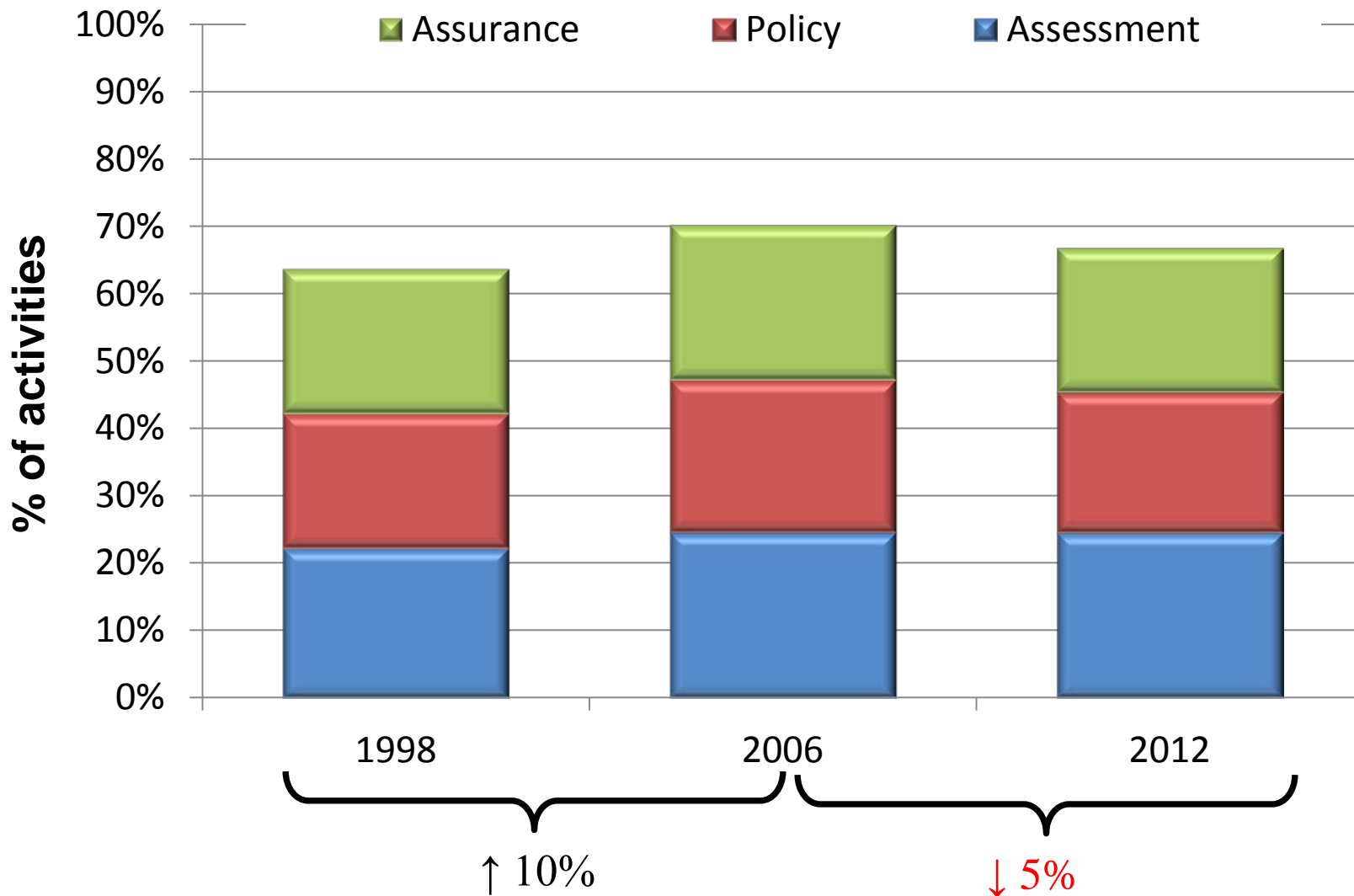
# Constructs reflected in the measures

- Changes in scope and scale of services delivered
- ***Intensive margin***: effort exerted by governmental public health
- ***Extensive margin***: other organizations contributing to public health
- ***Quality/effectiveness***: degree to which services meet community needs

# Links to other data sources

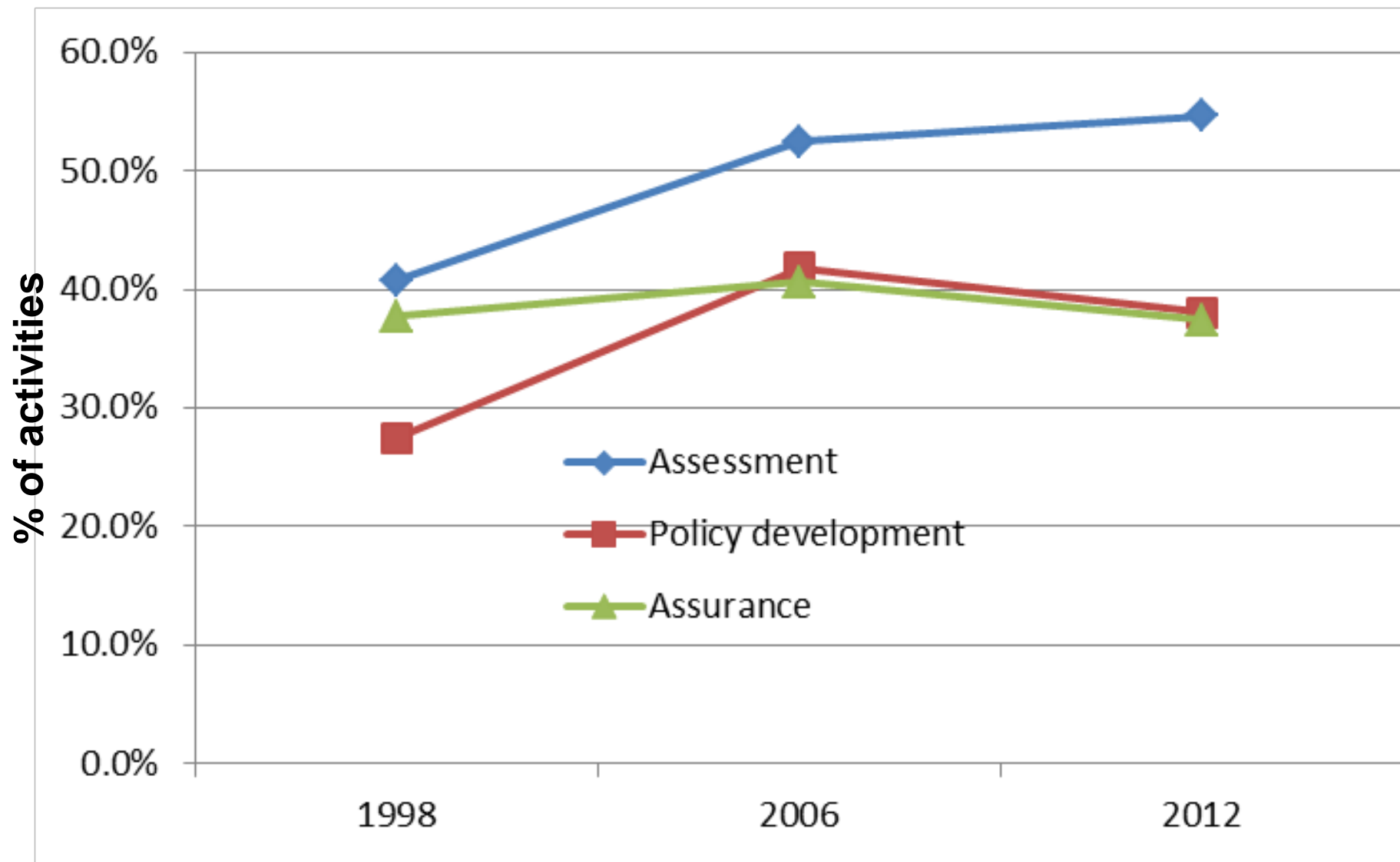
- **Area Resource File:** community and market characteristics, health resources
- **NACCHO Profile data:** local public health agency characteristics
- **ASTHO Profile data:** state public health agency characteristics
- **U.S. Census of Governments:** other state & local spending
- **Consolidated Federal Funds Report:** Other federal spending
- **Medicare Cost Report** data files: hospital ownership, market share, uncompensated care

# Delivery of recommended public health activities



National Longitudinal Survey of Public Health Systems, 2012

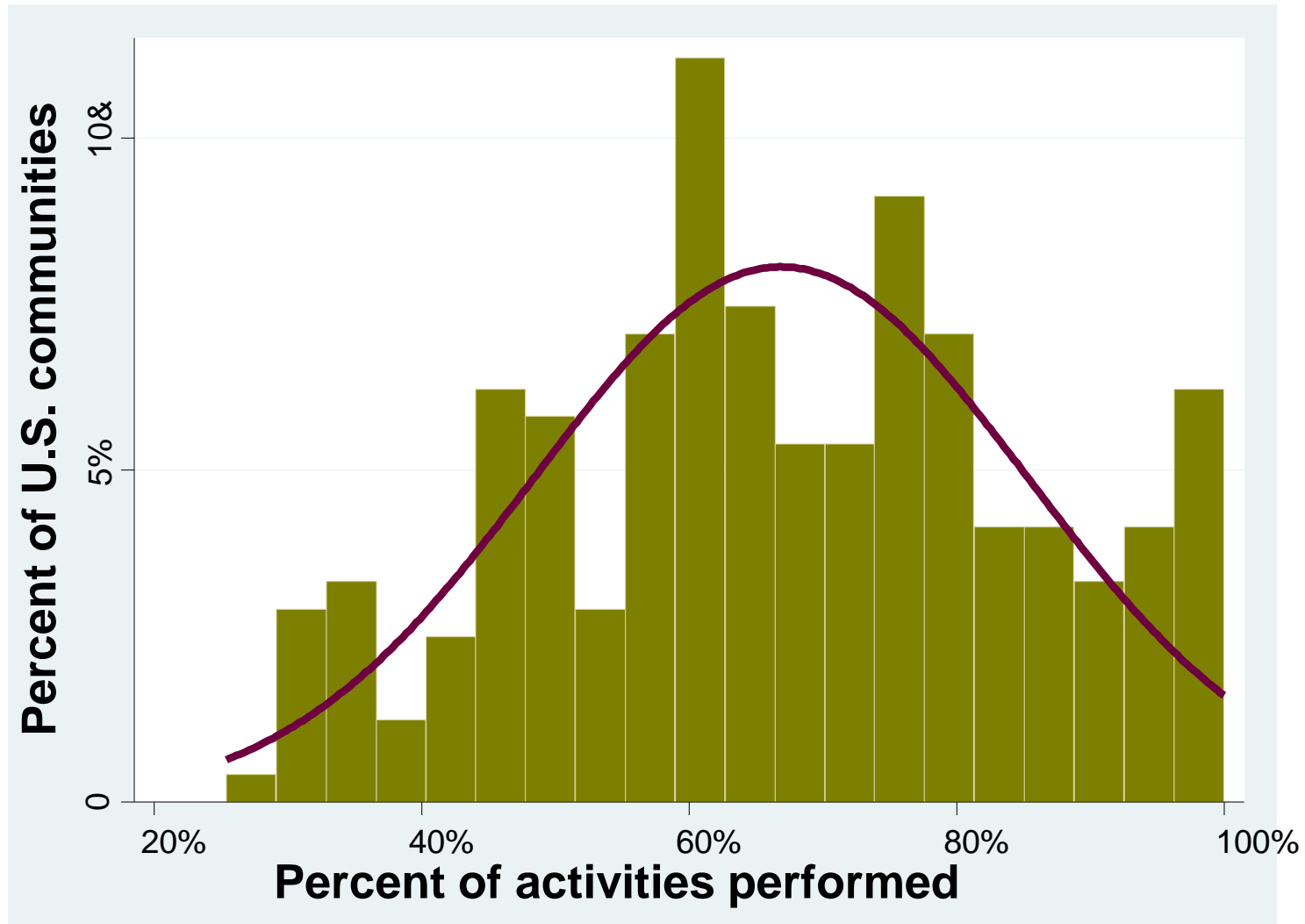
# Delivery of recommended public health activities





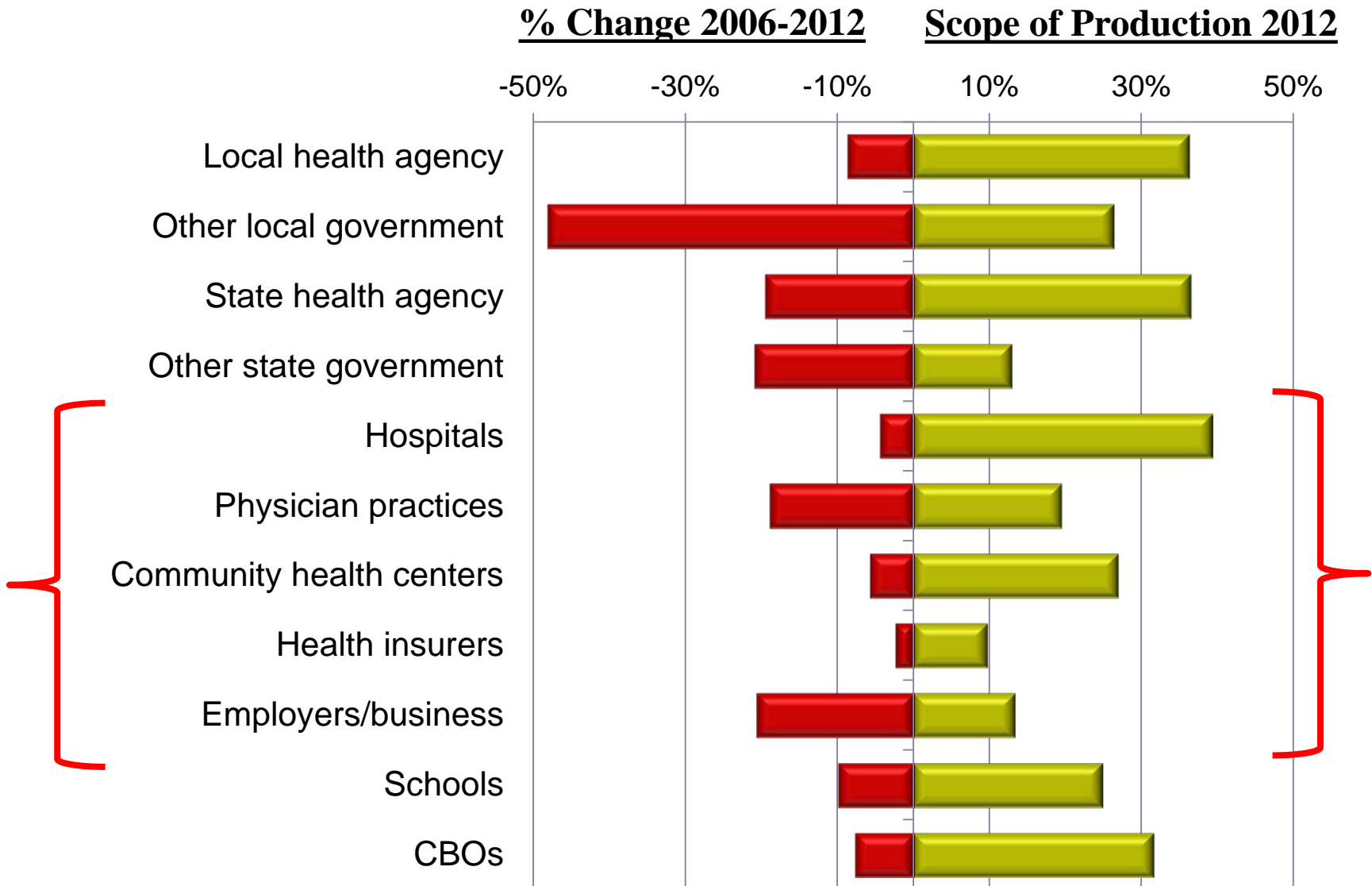
# Variation in Scope of Public Health Delivery

## Delivery of recommended public health activities, 2012

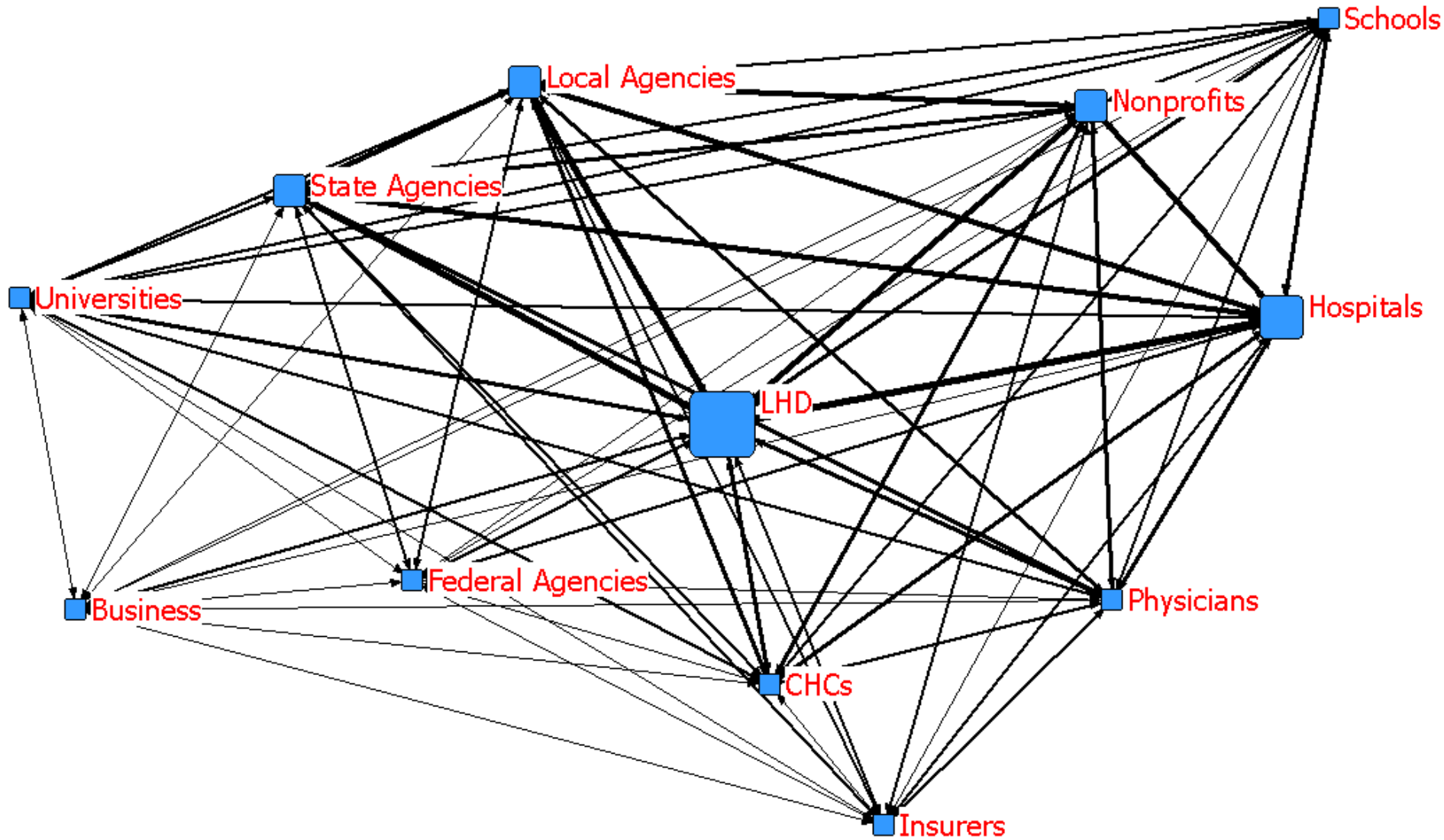


National Longitudinal Survey of Public Health Systems, 2012

# Organizations contributing to local public health production



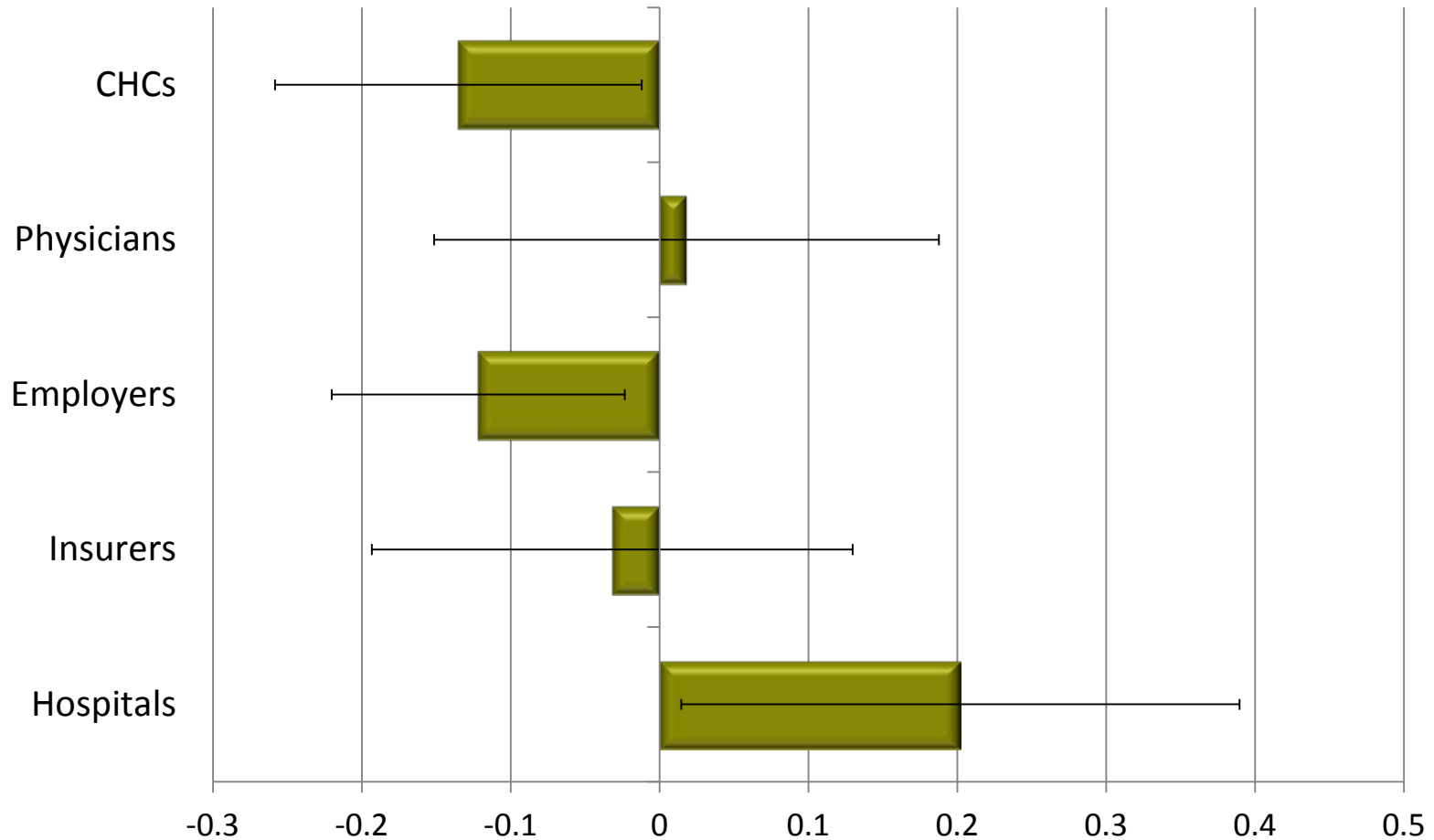
# Inter-organizational relationships in public health delivery systems



National Longitudinal Survey of Public Health Systems, 2012

# Do other organizations complement or substitute for local public health agency effort?

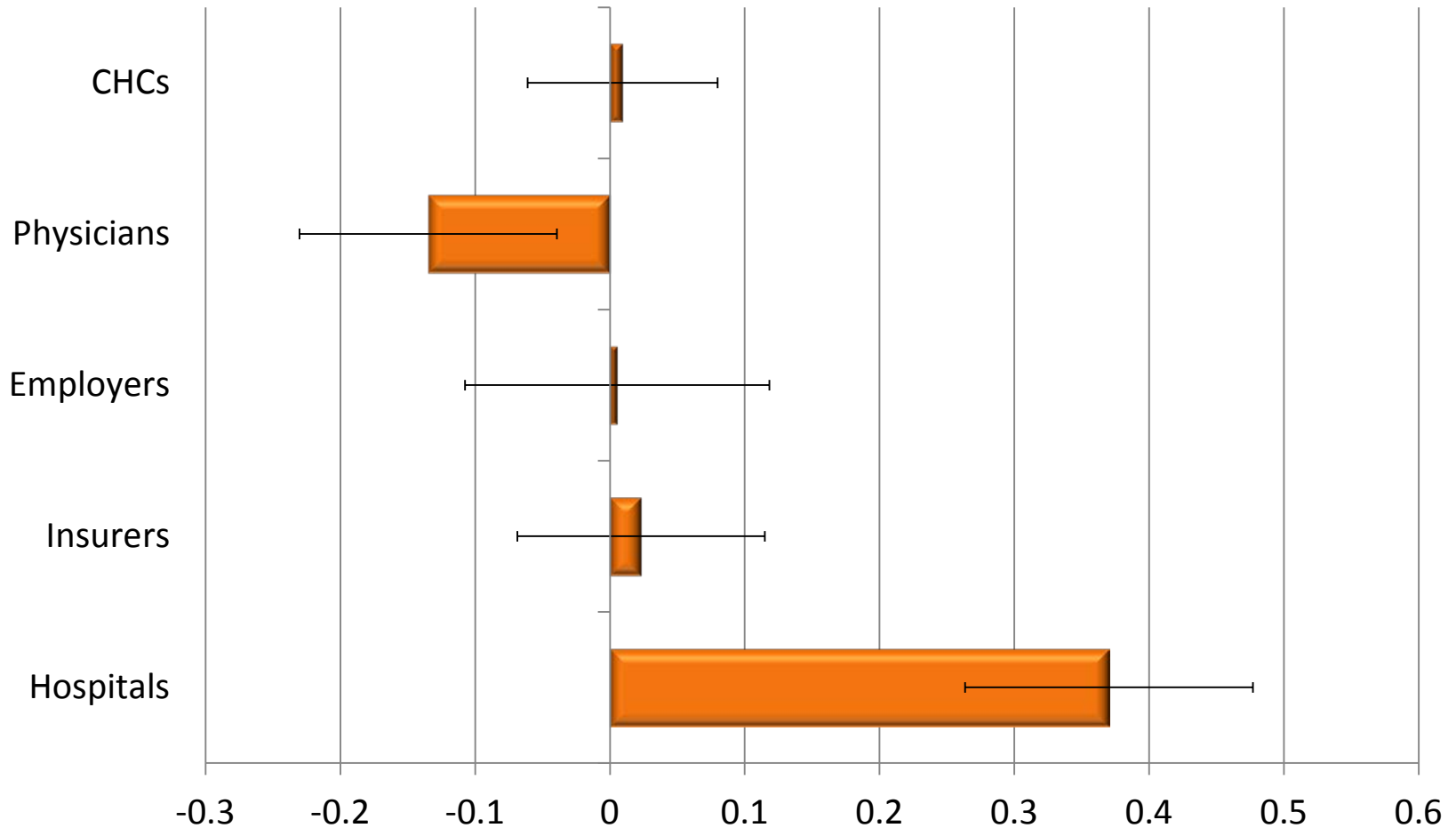
## Results from Multivariate GLLAMM Models



Note: GLLAMM estimates, holding all other variables constant in the model

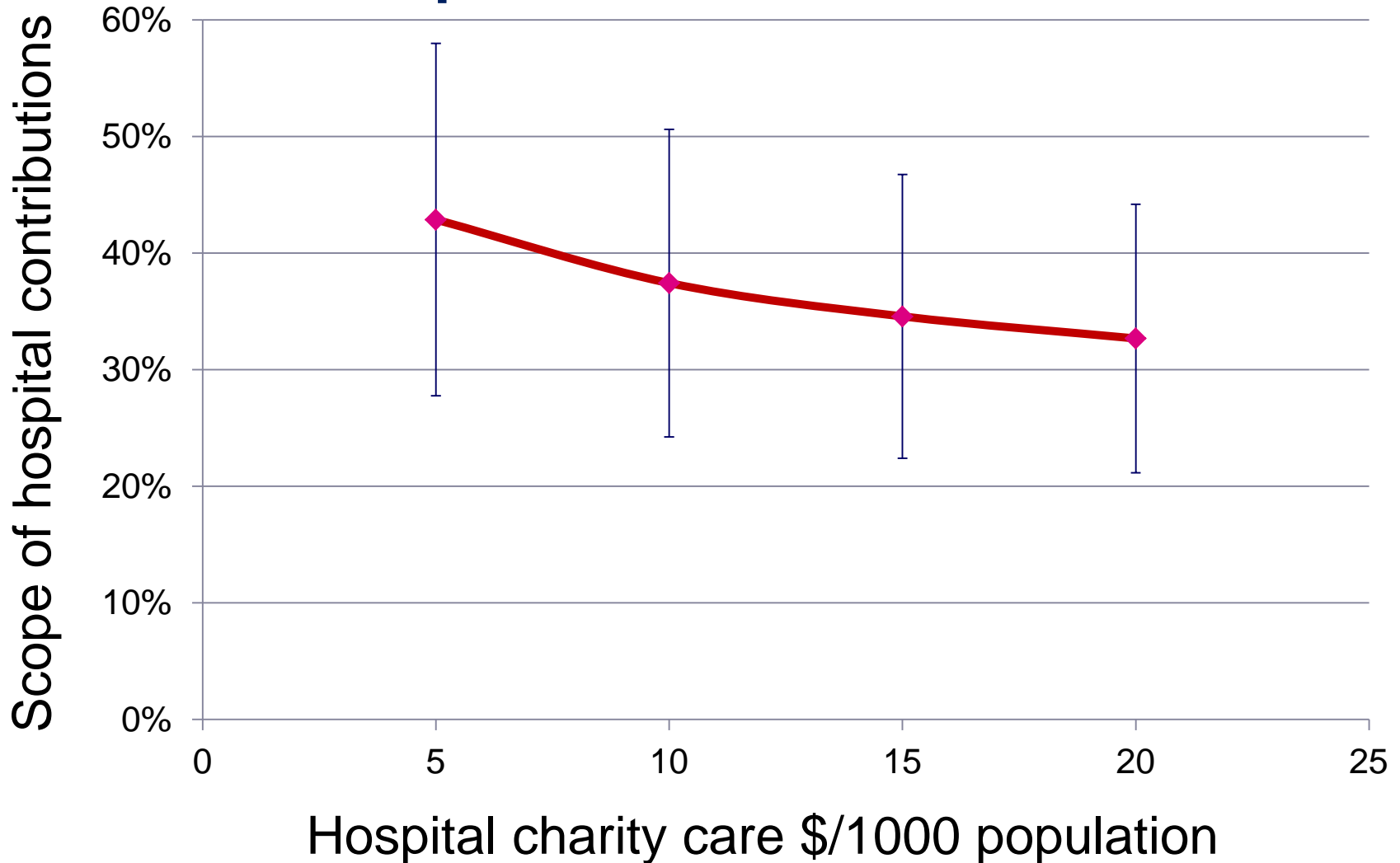
# How do other organizations affect the total supply of public health activities?

## Results from Multivariate GLLAMM Models



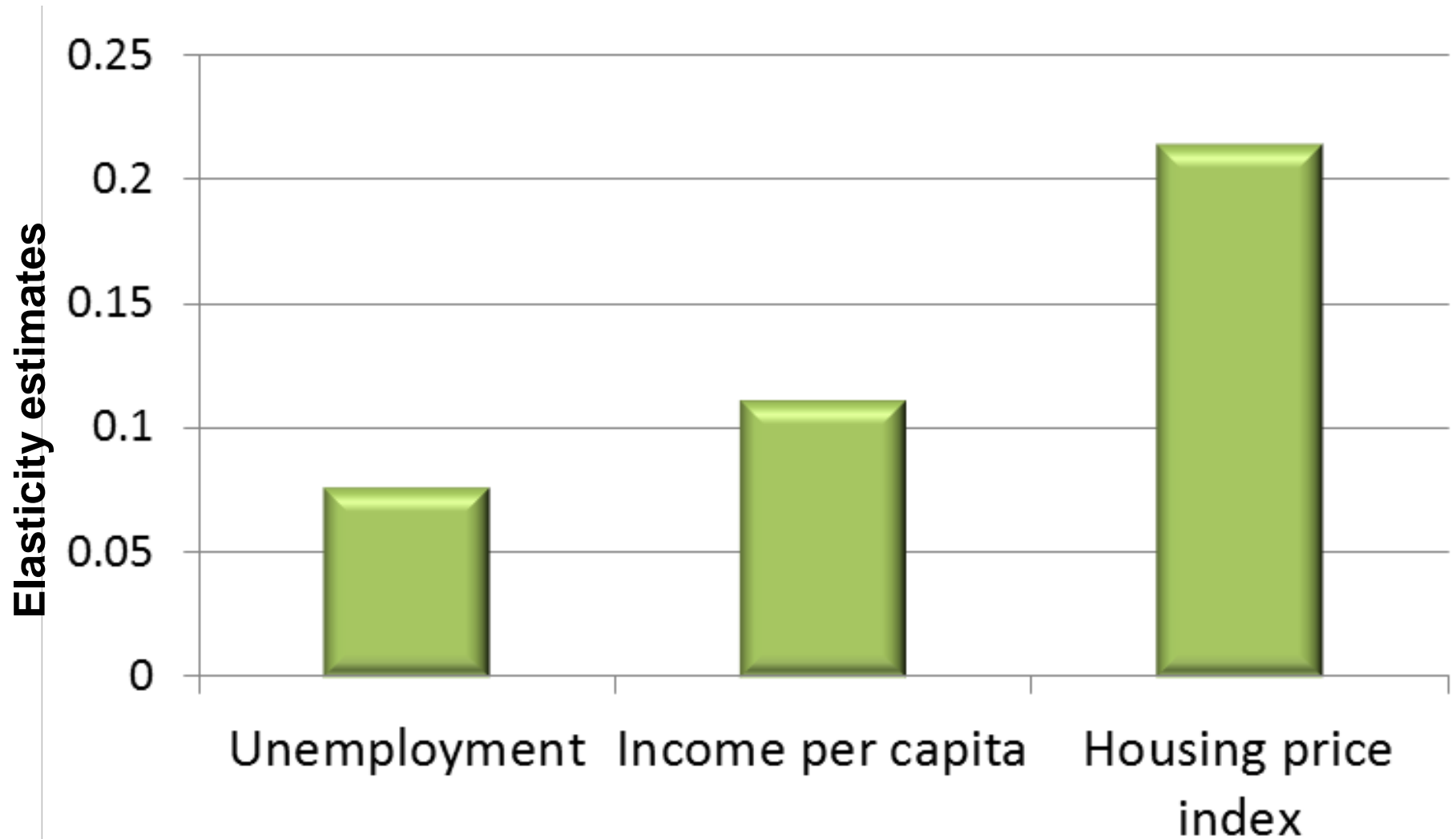
Note: GLLAMM estimates, holding all other variables constant in the model

# Estimated crowd-out in hospital contributions to public health activities



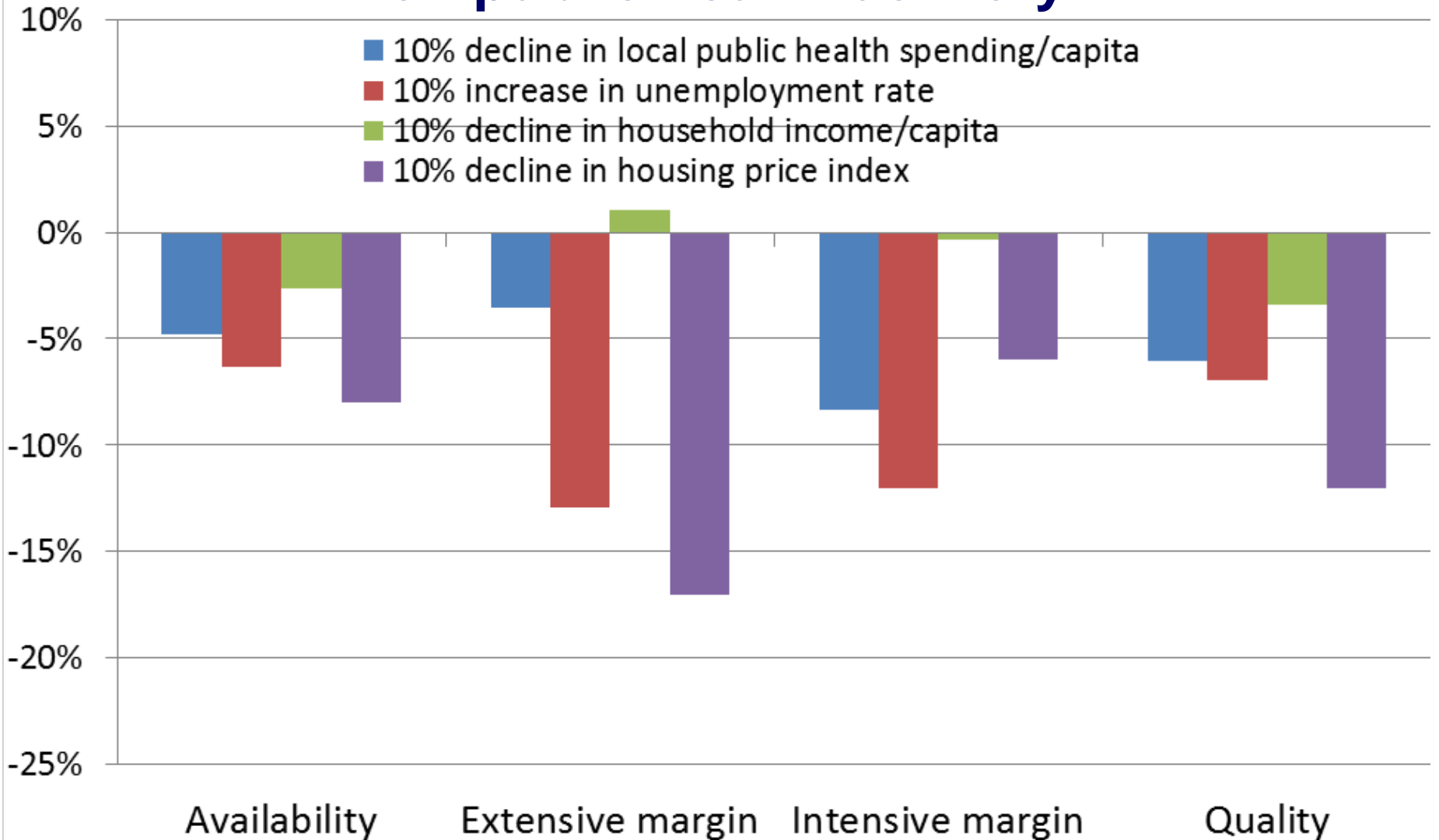
Note: GLLAMM estimates, holding all other variables constant in the model

# Effects of economic indicators on public health spending



GEE regression estimates with logarithmic link function, controlling for population size, age composition, racial composition, physician and hospital supply, and governance structure

# Effects of economic indicators on public health delivery



GEE regression estimates with logarithmic link function, controlling for population size, age composition, racial composition, physician and hospital supply, and governance structure



# For More Information



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