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

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

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

Glen Mays, PhD, MPH
University of Kentucky

glen.mays@uky.edu
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
- 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

% of activities

↑ 10%

↓ 5%

Delivery of recommended public health activities

Variation in Scope of Public Health Delivery

Delivery of recommended public health activities, 2012

Percent of U.S. communities

Percent of activities performed

Organizations contributing to local public health production

<table>
<thead>
<tr>
<th>% Change 2006-2012</th>
<th>Scope of Production 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>-50%</td>
<td>-30%</td>
</tr>
<tr>
<td>Local health agency</td>
<td>Other local government</td>
</tr>
<tr>
<td>State health agency</td>
<td>Other state government</td>
</tr>
<tr>
<td>Hospitals</td>
<td>Physician practices</td>
</tr>
<tr>
<td>Community health centers</td>
<td>Health insurers</td>
</tr>
<tr>
<td>Employers/business</td>
<td>Schools</td>
</tr>
<tr>
<td>CBOs</td>
<td></td>
</tr>
</tbody>
</table>

Inter-organizational relationships in public health delivery systems

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

Results from Multivariate GLLAMM Models

Hospitals -0.3 -0.2 -0.1 0 0.1 0.2 0.3 0.4 0.5

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

Elasticity estimates

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