Learning from Networks: Care Transitions, Market Competition, & Community Interventions

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Learning from Networks: Care Transitions, Market Competition, & Community Interventions

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Dependent data structures in US policy & delivery innovations

- Health insurance exchanges → new markets
- Managing care transitions → coordinated care
- ACOs & PCMHs → incentives for efficiency, quality
- Population health improvement → community-level collective actions
Networks and HSR

- Networks as the institutional and/or community *context* for policy implementation
- Networks as interventions (*mechanisms*)
- Networks as *outcomes*

Pawson and Tilley 1997; Berwick 2008
Network-based interventions

- Targeting and tailoring challenges
Dealing with complexity

- Multiple services
- Multiple providers
- Patient heterogeneity
- Heterogeneity in community/market context
Applying network analytic methods in HSR

- Design
- Sampling
- Measurement
- Analysis
- Translation/dissemination
Using networks for population health improvement strategies

- Designed to achieve large-scale health improvement: neighborhood, city/county, region
- Target fundamental and often multiple determinants of health
- Mobilize the collective actions of multiple stakeholders in government & private sector
  - Usual and unusual suspects
  - Infrastructure requirements

Using networks to overcome collective action problems

- Incentive compatibility → public goods
- Concentrated costs & diffuse benefits
- Time lags: costs vs. improvements
- Uncertainties about what works
- Asymmetry in information
- Difficulties measuring progress
- Weak and variable institutions & infrastructure
- Imbalance: resources vs. needs
- Stability & sustainability of funding

Ostrom E. 1994
Inter-organizational relationships in public health delivery systems
Bridging capital in public health delivery systems
Trends in betweenness centrality

* Change from prior years is statistically significant at p<0.05
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
A typology of public health delivery systems

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Source: Mays et al. 2010; 2012
Population health and delivery system change

Percent Changes in Preventable Mortality Rates Attributable to Delivery System Type

Fixed-effects models control for population size, density, age composition, poverty status, racial composition, and physician supply.
### Networks and Research Translation

Local Health Departments Engaged in Research Implementation & Translation Activities During Past 12 months

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<th>Activity</th>
<th>PBRN Agencies Percent/Mean</th>
<th>National Sample Percent/Mean</th>
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<td>Identifying research topics</td>
<td>94.1%</td>
<td>27.5% (***)</td>
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<tr>
<td>Planning/designing studies</td>
<td>81.6%</td>
<td>15.8% (***)</td>
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<tr>
<td>Recruitment, data collection &amp; analysis</td>
<td>79.6%</td>
<td>50.3% (***)</td>
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<td>Disseminating study results</td>
<td>84.5%</td>
<td>36.6% (***)</td>
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<tr>
<td>Applying findings in own organization</td>
<td>87.4%</td>
<td>32.1% (***)</td>
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<tr>
<td>Helping others apply findings</td>
<td>76.5%</td>
<td>18.0% (***)</td>
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<tr>
<td>Research implementation composite</td>
<td>84.04 (27.38)</td>
<td>30.20 (31.38) (***)</td>
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<td>N</td>
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For more information

Supported by The Robert Wood Johnson Foundation

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