University of Kentucky

From the Selected Works of Glen Mays

Summer June 10, 2014

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

Glen P Mays, University of Kentucky

Available at: https://works.bepress.com/glen_mays/162/
Learning from Networks: Care Transitions, Market Competition, & Community Interventions

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AcademyHealth Annual Research Meeting • San Diego, CA • 10 June 2014
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

Within-network vs. Between network
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

<table>
<thead>
<tr>
<th>Scope</th>
<th>Centralization</th>
<th>Integration</th>
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<tbody>
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<td>High</td>
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% of communities

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

<table>
<thead>
<tr>
<th>Activity</th>
<th>PBRN Agencies Percent/Mean</th>
<th>National Sample Percent/Mean</th>
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</thead>
<tbody>
<tr>
<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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<tr>
<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>
</tr>
<tr>
<td>Research implementation composite</td>
<td>84.04 (27.38)</td>
<td>30.20 (31.38)</td>
</tr>
</tbody>
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For more information

Supported by The Robert Wood Johnson Foundation

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