New Directions in Public Health Systems Research: The U.S. Context

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New Directions in Public Health Systems Research: the U.S. Context

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www.systemsforaction.org
Where we’ve been: 1998-2015

- Measuring variation in the performance of core public health functions
- Exploring causes of variation
  - Spending
  - Staffing
  - Governance and organizational structures
- Exploring consequences of variation
  - Health outcomes
  - Medical expenditures
  - Health disparities

Where we’re headed: 2016 and beyond

Identify strategies to align delivery and financing systems for **public health**, **medical care**, and **social services** in ways that improve population health

- Health and well-being
- Equity
- Efficiency

[www.systemsforaction.org](http://www.systemsforaction.org)
The Culture of Health Action Framework

ACTION AREA 1
MAKING HEALTH A SHARED VALUE

ACTION AREA 2
FOSTERING CROSS-SECTOR COLLABORATION TO IMPROVE WELL-BEING

ACTION AREA 3
CREATING HEALTHIER, MORE EQUITABLE COMMUNITIES

ACTION AREA 4
STRENGTHENING INTEGRATION OF HEALTH SERVICES AND SYSTEMS

What Foundational Capabilities support collective actions in health?

Public health as chief health strategist for the system:

- Articulate population health needs & priorities
- Engage community stakeholders
- Plan with clear roles & responsibilities
- Recruit & leverage resources across sectors
- Develop and enforce policies
- Ensure coordination across sectors
- Promote equity and target disparities
- Support evidence-based practices
- Monitor and feed back results
- Ensure transparency & accountability

Comprehensive Public Health Systems
One of RWJF’s 40 Culture of Health National Metrics

- **Broad scope** of Foundational Capabilities
- **Dense network** of multi-sector relationships
- **Central actors** to coordinate actions

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**Access to public health**

47.2% of population served by a comprehensive public health system. Individuals are more likely to have access if they are non-White (51.5 percent vs. 45.5 percent White) or live in a metropolitan area (48.7 percent vs. 34.1 percent in nonmetropolitan areas).

Comprehensive Public Health Systems
U.S. Average in 2014

Node size = degree centrality
Line size = % activities jointly contributed (tie strength)
What do we know about the benefits of Comprehensive Public Health Systems?

- Greater concordance with national recommendations
  - IOM Core Functions
  - Essential Public Health Services
  - PHAB national accreditation standards
  - Foundational Public Health Services
- Fewer governmental resources per capita: more for less
- Over time, larger gains in population health
### Prevalence of Public Health System Configurations 1998-2014

#### Scope
- **Cluster 1**: High
- **Cluster 2**: High
- **Cluster 3**: High
- **Cluster 4**: Mod
- **Cluster 5**: Mod
- **Cluster 6**: Low
- **Cluster 7**: Low

#### Centrality
- **Cluster 1**: High
- **Cluster 2**: Mod
- **Cluster 3**: High
- **Cluster 4**: High
- **Cluster 5**: High
- **Cluster 6**: Low
- **Cluster 7**: Low

#### Density
- **Cluster 1**: High
- **Cluster 2**: High
- **Cluster 3**: High
- **Cluster 4**: Mod
- **Cluster 5**: Low
- **Cluster 6**: Mod
- **Cluster 7**: Mod

#### System Configurations
- **Limited**: 2012, 2014
### Changes in system prevalence and coverage

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<td><strong>Comprehensive systems</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>% of communities</td>
<td>24.2%</td>
<td>36.9%</td>
<td>31.1%</td>
<td>32.7%</td>
<td>25.7%</td>
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<td>% of communities</td>
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<td>19.9%</td>
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<td>16.7%</td>
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<td>% of population</td>
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<td>23.4%</td>
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<td>19.6%</td>
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Variation in public health implementation

National Longitudinal Survey of Public Health Systems

Percent of U.S. communities

Percent of activities performed
Comprehensive systems do more with less

<table>
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<tr>
<th>Type of delivery system</th>
<th>Expenditures per capita</th>
<th>% of recommended activities performed</th>
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<tbody>
<tr>
<td>Comprehensive</td>
<td>$60</td>
<td>90%</td>
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<tr>
<td>Conventional</td>
<td>$70</td>
<td>80%</td>
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<tr>
<td>Limited</td>
<td>$50</td>
<td>70%</td>
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<tr>
<td>Very limited</td>
<td>$40</td>
<td>60%</td>
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</table>
Equity in public health implementation
Delivery of recommended public health activities, 2006-14

Quintiles of communities:
-40%
-20%
0%
20%
40%
60%
80%
100%

Q1 Q2 Q3 Q4 Q5

2012
∆ 2006
-12%

2014
∆ 2006-14
-14%

% of recommended activities performed

Quintiles of communities
Health and economic impact of comprehensive systems

Models also control for racial composition, unemployment, health insurance coverage, educational attainment, age composition, and state and year fixed effects. N=779 community-years **p<0.05  *p<0.10
Making the case for equity: larger gains in low-resource communities

Log IV regression estimates controlling for community-level and state-level characteristics
Opportunities on the horizon

- Deeper exploration of system capabilities for intervening on social & economic determinants
- Advancing implementation science in public health systems: scale and spread successes
- Learning from cross-national comparisons of system structures and performance
For More Information

Systems for Action
National Coordinating Center
Systems and Services Research to Build a Culture of Health

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For more information

- Defining Comprehensive Public Health Delivery Systems
  https://works.bepress.com/glen_mays/198/

- CPHS methodology: Milbank Quarterly 2010
  http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2888010/

- Health/economic benefits of comprehensive systems: AJPH 2015

- Longitudinal Survey of Public Health Systems
  http://works.bepress.com/glen_mays/38/

- Customized system feedback report
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