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Using State and Local Health Survey Data to Advance PHSSR

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

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Using State and Local Health Survey Data to Advance PHSSR

Glen P. Mays, PhD, MPH
University of Kentucky

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Missed opportunities in public health delivery

Large segments of the populations at risk are not covered by evidence-based public health practices:

- Smoking cessation
- Aspirin use
- Influenza vaccination
- Hypertension control
- Nutrition and physical activity programming
- HIV prevention
- Family planning
- Substance abuse prevention
- Interpersonal violence prevention
- Maternal and infant home visiting for high-risk populations
Fundamental empirical questions

Which programs, interventions, policies, delivery systems (mechanisms)….

Work best (outcomes)…

In which institutional & community settings (contexts)…

And why (causal pathways, active ingredients)?

Pawson and Tilley 1997
PHSSR’s place in the continuum

**Intervention Research**
- What works – proof of efficacy
- Controlled trials
- *Guide to Community Preventive Services*

**Services/Systems Research**
- How to organize, implement and sustain in the real-world
  - Reach
  - Quality/Effectiveness
  - Cost/Efficiency
  - Equity/Disparities
- Impact on population health
- Comparative effectiveness & efficiency
Developmental path for PHSSR

- Measuring practice & performance
- Detecting variation in practice
- Examining determinants of variation
  - Organization
  - Financing
  - Workforce
- Determining consequences of variation
  - Health outcomes
  - Economic outcomes
- Testing strategies to reduce harmful, wasteful, & inequitable variation in practice and outcomes
The Need for Health Survey Data in Advancing PHSSR

- How are public health services & systems distributed in relation to population health needs?
  - Reach to populations at risk
  - Appropriateness of services
  - Responsiveness to community preferences
  - Inequities in delivery

- Do communities with more/better systems and services experience superior health?
Adoption of evidence-based practices

Missed Opportunities
Local Health Departments as Providers of Obesity Prevention Programs for Adolescents
Sandy J. Slater, PhD, Lisa M. Powell, PhD, Frank J. Chaloupka, PhD

Percent of local health departments offering evidence-based obesity programs

- Healthy eating programs
- Physical activity programs
- Obesity control programs

Slater et al. 2007
Variation in Local Public Health Spending

Gini = 0.472

“Local spending varies by a factor of 13 between the top 20% and bottom 20% of communities, even after adjusting for differences in demographics, SES, and service mix.”

Mays et al. 2009
Examining value: prospects for medical care cost savings

Mays et al. 2009
Variation in System Composition & Structure

- **Cluster 1**: High Differentiation, High Integration, Mod Centrality
- **Cluster 2**: High Differentiation, High Integration, Low Centrality
- **Cluster 3**: High Differentiation, Low Integration, High Centrality
- **Cluster 4**: Mod Differentiation, Mod Integration, Low Centrality
- **Cluster 5**: Mod Differentiation, Mod Integration, Mod Centrality
- **Cluster 6**: Low Differentiation, Low Integration, High Centrality
- **Cluster 7**: Low Differentiation, Mod Integration, Low Centrality

Mays et al. 2009
Comparing practice effectiveness across PH system types

Regression-adjusted means control for population size, density, age composition, poverty status, racial composition, and physician supply

Mays et al. Milbank Quarterly 2010.
Fixed-effects models control for population size, density, age composition, poverty status, racial composition, and physician supply.

Difference-in-Differences Estimates (Reference: Clusters 1-2)

Infant Deaths/1000 Births

Cancer deaths/100,000 population

Heart Disease Deaths/100,000

Influenza Deaths/100,000

Infectious Disease Deaths/100,000
Conclusions: moving the field forward

Local and state health survey data can get us inside the “black box” of public health agencies and systems.
Dealing with complex systems

**Public Health System**
- Resources & expertise
- Participation incentives
- Scope of operations
- Scale of activity
- Compatibility of missions
- Division of responsibility
- Distribution of effort
- Nature & intensity of relationships

**Public Health Agency**
- Legal authority
- Funding levels & mix
- Leadership
- Governing structure
- Intergovernmental relationships
- Scope of services
- Staffing levels & mix

**Needs**
- Perceptions
- Preferences
- Risks
- Threats
- Resources

**Population & Environment**
- Distribution of effort
- Nature & intensity of relationships

**Decision Support**
- Accreditation
- Performance measures
- Practice guidelines

**Strategic Decisions**

**Outputs and Outcomes**
- Reach
- Effectiveness
- Timeliness
- Adherence to EBPs
- Efficiency
- Equity

**Dealing with complex systems**