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Using State and Local Health Survey Data to Advance PHSSR

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Using State and Local Health Survey Data to Advance PHSSR

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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

Descriptive

Inferential

Translational
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

Slater et al. 2007

Healthy eating programs
Physical activity programs
Obesity control programs
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

Mays et al. 2009

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

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

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

**Cluster Types**
- **Comprehensive**
  - Cluster 1
  - Cluster 4
- **Conventional**
  - Cluster 5
- **Limited**
  - Cluster 2
  - Cluster 3
  - Cluster 6
  - Cluster 7
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.
Conclusions: moving the field forward

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

- Policy & legal authority
- Funding
- Human capital
- Population needs & risks
- Agencies & Systems
- Service delivery
- Health & economic outcomes
Dealing with complex systems

Public Health System
- Resources & expertise
- Participation incentives
- Needs
- Preferences
- Risks
- Threats
- Population & Environment
- Resources
- Perceptions

Strategic Decisions
- Scale of operations
- Scope of activity
- Division of responsibility
- Compatibility of missions
- Nature & intensity of relationships
- Distribution of effort
- Participation incentives
- Decision Support
  - Accreditation
  - Performance measures
  - Practice guidelines

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