Measuring Performance of Public Health Systems

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Conceptual Framework of the Public Health System as a Basis for Measuring Public Health System Performance

PHS Mission and Purpose

Philosophy
Goals
“Core Functions”

Structural Capacity

Information Resources
Organizational Resources
Physical Resources
Human Resources
Fiscal Resources

Processes

The 10 Essential
Public Health Services

Outcomes

Effectiveness
Efficiency
Equity
Public Health Infrastructure

- Essential Scientific Capabilities
  - Basic Infrastructure
- Public Health Response
  - Bioterrorism
  - Emerging Infections
  - Other Public Health Programs
- Surveillance
- Laboratory Practice
- Epidemic Investigations
- Information Systems
- Workforce
- Organizational Capacity
A partnership effort with national and state public health organizations to improve the public health delivery system through...

- The development of local and state based performance standards;
- The systematic collection and analysis of performance based data;
- A national leadership effort to improve system wide performance.
National Partners

- American Public Health Association
- Association of State and Territorial Health Officials
- National Association of County and City Health Officials
- National Association of Local Boards of Health
- Public Health Foundation
National Public Health Performance Standards Program Goals

Improve Quality
Increase Accountability
Increase Science-Base for Public Health Practice
Three Systems Levels

- State
- Local
- Governance
Structure of Assessment Tools

Essential Public Health Service

- Indicator
  - Model Community Standard
  - Questions
Example From Local Tool

Essential Service # 1: Monitor health status to identify community health problems

Indicator: Population-based Community Health Profile

Model Community Standard: The LPHS conducts regular community health assessments to monitor progress towards health related objectives. The information gathered from assessment activities are compiled into a community health profile. Etc.
Example From Local Tool (cont)

1.1.1 Has the LPHS conducted a community health assessment?

If so:

1.1.1.1 Is the community health assessment updated at regular intervals?

1.1.1.2 Are data from the assessment compared to data from other representative areas or populations?

1.1.1.3 Does the LPHS use data from community health assessments to monitor progress towards health-related objectives?
Structure of State and Local Tool

- Local Tool
  - 10 EPHS
  - 33 Indicators
  - 121 1st Tier Questions
  - 66 Likert Scale

- State Tool
  - 10 EPHS
  - 50 Indicators
  - 200 1st Tier Questions
  - 100 Likert Scale
Focus of Field Testing

- Instrument Clarity
- Question Analysis
- Validity and Reliability of Data
- Time Burden
- Process of Implementation
## Field Testing Assessment Tools

<table>
<thead>
<tr>
<th>State</th>
<th>Local</th>
<th>Governance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Texas</td>
<td>No</td>
<td>61</td>
</tr>
<tr>
<td>Florida</td>
<td>Yes</td>
<td>67</td>
</tr>
<tr>
<td>Ohio</td>
<td>Yes</td>
<td>11</td>
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<tr>
<td>Missouri</td>
<td>Yes</td>
<td>50</td>
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<tr>
<td>Minnesota</td>
<td>Yes</td>
<td>47</td>
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<tr>
<td>Mississippi</td>
<td>Yes</td>
<td>81</td>
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<tr>
<td>Hawaii</td>
<td>Yes</td>
<td>8</td>
</tr>
<tr>
<td>Other</td>
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</tbody>
</table>
Scoring

- Three responses – Yes (1), Partial (.5), No (0)
- Indicators within each essential public health service are weighted equally
- Essential public health services weighted equally
- Overall score is percent of yes/partial responses
## Percent Capacity of State Public Health Systems to Provide Essential Public Health Services

<table>
<thead>
<tr>
<th>Service</th>
<th>State A</th>
<th>State B</th>
<th>State C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor Health Status</td>
<td>46</td>
<td>78</td>
<td>32</td>
</tr>
<tr>
<td>Diagnose and Investigate</td>
<td>78</td>
<td>90</td>
<td>88</td>
</tr>
<tr>
<td>Inform, Educate and Empower</td>
<td>51</td>
<td>36</td>
<td>32</td>
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<tr>
<td>Mobilize Community Partnerships</td>
<td>33</td>
<td>35</td>
<td>22</td>
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<tr>
<td>Develop Policies and Plans</td>
<td>45</td>
<td>64</td>
<td>33</td>
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<tr>
<td>Enforce Laws and Regulations</td>
<td>72</td>
<td>41</td>
<td>64</td>
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<tr>
<td>Link People to Needed Services</td>
<td>68</td>
<td>46</td>
<td>33</td>
</tr>
<tr>
<td>Assure Competent workforce</td>
<td>34</td>
<td>29</td>
<td>10</td>
</tr>
<tr>
<td>Evaluate Effectiveness</td>
<td>71</td>
<td>36</td>
<td>64</td>
</tr>
<tr>
<td>Research</td>
<td>65</td>
<td>50</td>
<td>26</td>
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<tr>
<td><strong>State Average</strong></td>
<td><strong>53</strong></td>
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<td><strong>40</strong></td>
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</table>
### Percent Capacity of Local Public Health Systems to Provide Essential Public Health Services

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<tbody>
<tr>
<td>Monitor Health Status</td>
<td>42</td>
<td>38</td>
<td>44</td>
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<tr>
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<td>61</td>
<td>80</td>
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<tr>
<td>Inform, Educate and Empower</td>
<td>83</td>
<td>75</td>
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Performance Scores
Florida Counties 1999

Grand Mean
- Highest 25% (Range: 69.2 - 91.3)
- Middle 50% (50.2 - 69.2)
- Lowest 25% (22.8 - 50.2)
- Incomplete
Structure of Performance Measurement Tool and Relation to Validity Measures

Are we measuring public health performance?

- Essential Public Health Services
  - Indicator(s)
    - Model Standard(s)
      - Specific Questions Measuring Attainment of Indicator/Standard

- How well do these measure (or describe) what public health does?
- Are these achievable?

- Do these describe all public health activities involved in the EPHS?
- Do these adequately measure performance in each EPHS?
- Are these the right indicators/standards?
- Do these contain key elements of good public health practice?
Individual Jurisdiction Analysis

- Overall average score (0 – 100%)
- Average score for each EPHS (0 – 100%)
- Score for each indicator (0 – 100%)
- Assessment of standards
  - Fully met
  - Substantially met
  - Partially met
  - Not met
Potential Summary and Comparative Analyses

- Comparison of state scores
- Comparison of local jurisdiction with states
- Comparison with peer jurisdiction
- Comparison of average local jurisdictions across states
- Comparison of average local jurisdiction across states by EPHS
- Correlation of scores with morbidity/ mortality outcomes, socioeconomic and other variables
Timeline

1998
- February - Performance Measures Workgroup

1999
- April - Texas pilot
- October/November - Florida, Missouri, and Ohio pilot

2000
- July - OMB clearance for field testing local and governance tool
- July - Hawaii field test
- August - Performance Standards Scientific Consultation Group
- August-October - Minnesota and Mississippi field test

2001
- January/February - Final changes made to final draft
- March-August - OMB clearance for final draft
- Fall - National implementation
ISSUES

- Performance Measurement vs Capacity Assessment
- Surveillance vs Quality Improvement
- Accreditation of Local Public Health Agencies
- Modules
- Linkage to CHSI Project (HRSA, PHF)
- Local Health Department Registry
Research Questions

- What “Performance” are we measuring?
- What factors determine a good performer?
- Do good performers have better community health outcomes?
- What are good measures to use in a surveillance system?
Accessing Web-based Survey

- www.phppo.cdc.gov/takesurvey
- Close instructions and Begin Survey
- Survey Number 660; Password – Local5b
- User ID PXS13; Password SCG
- Have fun!
THANK YOU