Health Districts as Quality Improvement Collaboratives and Multi-Jurisdictional Entities

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Georgia Public Health PBRN, State Coordinating Center
Jiann Ping Hsu College of Public Health, Georgia Southern University
2012 Academy Health ARM Panel
Orlando, FL
June 26, 2012
Health Districts as Quality Improvement Collaboratives and Multi-Jurisdictional Entities

Authors:
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Jiann Ping Hsu College of Public Health, Georgia Southern University

Study supported by Robert Wood Johnson Foundation & NCC for Public Health PBRN

2012 Academy Health ARM Panel
11:30 am- 1:00 pm, June 26, 2012
Objectives

Participants will be able to:

• Describe the importance of Health Districts as Multi-Jurisdictional Entities in Georgia;

• Explain the relationship of Quality Improvement Collaborative (QIC) Assessment to Big QI (organizational culture); and

• Recognize the potential for PBRNs to develop the evidence and science for public health quality improvement and assurance.
Practice Based Research Network in Georgia

• Collaboration of Georgia Health Districts and Georgia Southern University, Jiann Ping Hsu College of Public Health.

• PBRNs are intended to address real life problems facing the public health practice community.

• PBRNs contribute to the scientific evidence for issues of concern to local and regional public health agencies.

• PBRN research has Implications for state and national public health infrastructure development.
Initial Georgia PBRN

**Challenge:** How can GA Public Health PBRN capacity to build evidence support Health Districts and County Health Departments in an increasingly challenging fiscal and political environment?

**Study:**
- Potential of the Georgia model of Health Districts to advance public health quality assurance and improvement,
- Role of regional public health model of Quality Improvement Collaboratives (QICs) for improving quality improvement for local public health agencies.
GA PBRN Founding Membership

- GA Health District 3-3
- GA Health District 5-1
- GA Health District 5-2
- GA Health District 6
- GA Health District 9-1
- GA Health District 9-2
- GSU Jiann-Ping Hsu College of Public Health - Academic Affairs Office
  Center for Rural Health
  Public Health Practice Office
- GA Department of Public Health Office of Performance Improvement
- GA Public Health Association (GPHA)
- GA State Office of Rural Health (SORH)
Georgia’s Rural Counties

- Pink < 35,000 (108)
- Green Legislatively designated

State Office of Rural Health
502 South 7th Street
Cordele, GA 31015

Sept 30, 2011
Concepts of Centralized vs Decentralized

• Normally conceptualized as relationship of LHD to State.
• Parker et al* conceptualized centralization as continuum of relationship between LHD and state for many factors
  – hiring and firing of agency heads,
  – approval of the LHD budget,
  – adoption of public health regulations, and
  – setting and imposing fees.
• GA Health Districts have major role in centralizing LHDs services, with District Directors having major impact
• Major Implications of GA Health Districts
  – Multi jurisdiction entities related to accreditation
  – Cross-jurisdictional sharing
  – LHD QI (Quality Improvement Collaboratives)
• Many factors rooted in laws and organization culture

Centralization Factors within Context of Authority

- Constitution – Overriding legal authority
- Statute – Usually formal legislative action
- Regulation - interpretation and implementation of statute, usually subject to formal review
- Executive Order – Administrative directive within prerogative of executive branch
- Organizational Culture – less formal, frequently not written, but can be overpowering, including emphasis or de-emphasis on formal laws.
<table>
<thead>
<tr>
<th>GA Characteristics: Local Public Health System</th>
<th>Authority</th>
<th>Mandated/Permissive</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. County is local health authority*</td>
<td>Statute</td>
<td>Mandated</td>
</tr>
<tr>
<td>2. Local tax authority for Public Health*</td>
<td>Statute</td>
<td>Permissive</td>
</tr>
<tr>
<td>3. County Board of Health*</td>
<td>Statute</td>
<td>Mandated</td>
</tr>
<tr>
<td>4. Multi-county authority – Health District*</td>
<td>Statute</td>
<td>Permissive</td>
</tr>
<tr>
<td>5. Local Government control (report to local officials)*</td>
<td>Statute</td>
<td>Mandated</td>
</tr>
<tr>
<td>6. Integration of local HD with local BOH*</td>
<td>3 &amp; Org Culture</td>
<td>Mix</td>
</tr>
<tr>
<td>7. Integration of Health District with State*</td>
<td>4 &amp; Exec order &amp; Org Culture</td>
<td>Mix</td>
</tr>
<tr>
<td>8. Employment mix of State (District) and County</td>
<td>Org Culture &amp; state &amp; county statute &amp; orders</td>
<td>Mix</td>
</tr>
<tr>
<td>9. IT systems for surveillance, EHR, HR, etc.</td>
<td>Org culture, statutes and orders</td>
<td>MIX</td>
</tr>
</tbody>
</table>

* Woodhouse et al, Deep South Public Health System Study, Keeneland Conference 2011
Participating Districts & County Health Departments in initial study

- 13 of 18 Health Districts
- 118 of the state’s 159 counties
- Included both urban and rural counties.
- Purposeful sample of two key opinion leaders from each county identified by each district.
Sampling and Methods

- Newly developed clinical care QIC instrument* was adapted for public health.
  - Expert Panel Review was conducted with 11 of 18 Health District Directors in GA.

- A purposeful sampling process was used to identify key informants of the practice community.

- 13 GA Health Districts participated in the study
  - Informants from 118 different counties
    - 269 key informants
      - 39 District office staff
      - 133 LHD staff
      - 97 BOH members

Sampling and Methods

- An electronic survey was sent out utilizing Survey Monkey.
- This was followed by a reminder email and then a series of 3 reminder phone calls was completed by the research associates.
- This rigorous follow-up effort resulted in a satisfactory response rate of 65%.
Why focus on Quality Improvement Collaborative (QIC) Assessment?

• Importance of Big QI versus Little QI

• Big QI = Organizational Culture of QI

• Little QI = Specific QI project, or use of specific QI techniques (root cause analysis, Pareto Chart, Plan-Do-Study-Act cycle)
Examples of QIC Assessment re: QI Culture Items

• 1.4 The Health District provides sufficient time for public health essential services quality improvement.

• 2.21 Our Health District staff work with county health department staff to focus on improving public health essential services outcomes.

• 3.31 Our Health District staff work with county health department staff to use measurements to track progress.

• 4.46 Our Health District staff and county health department staff support one another during quality improvement working meetings.
### Health Districts as Quality Improvement Collaboratives (QIC)

Validation Process to adapt instrument to Public Health Content Validity: Results from 11 person Expert Panel

<table>
<thead>
<tr>
<th>QI Collaborative Construct</th>
<th>Public Health Focus Score (1-5)</th>
<th>Public Health Focus Cronbach Alpha</th>
<th>Relevant in Georgia Score (1-5)</th>
<th>Relevant in Georgia Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health District Support (item n =8)</td>
<td>4.41</td>
<td>.954</td>
<td>4.21</td>
<td>.950</td>
</tr>
<tr>
<td>Effective multidisciplinary teamwork (item n =14)</td>
<td>4.53</td>
<td>.964</td>
<td>4.16</td>
<td>.978</td>
</tr>
<tr>
<td>Appropriate use of the improvement model (item n =12)</td>
<td>4.22</td>
<td>.783</td>
<td>4.20</td>
<td>.928</td>
</tr>
<tr>
<td>Helpful collaborative processes (item n =16)</td>
<td>4.19</td>
<td>.948</td>
<td>3.77</td>
<td>.979</td>
</tr>
</tbody>
</table>
Health Districts as Quality Improvement Collaboratives (QIC)

Internal Reliability (Cronbach alpha) with 176 key informants
Results from Full survey

<table>
<thead>
<tr>
<th>Factor/Construct Name</th>
<th>GA DISTRICT PH QIC</th>
<th>Schouten PC QIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health District support/Sufficient expert panel support</td>
<td>.956 (item n=8)</td>
<td>.85 (item n=7)</td>
</tr>
<tr>
<td>Effective multidisciplinary teamwork</td>
<td>.967 (item n=14)</td>
<td>.89 (item n=18)</td>
</tr>
<tr>
<td>Appropriate use of the improvement model</td>
<td>.956 (item n=12)</td>
<td>n/a</td>
</tr>
<tr>
<td>Helpful collaborative process</td>
<td>.965 (item n=16)</td>
<td>.88 (item n=15)</td>
</tr>
</tbody>
</table>

GA PH PBRN Study of Districts as QICs
Factor Analysis Results

Scree Plot

- Eigenvalue vs Component Number
PRELIMINARY FINDINGS
Essential Services Capacity (Complete or Almost Complete)
Comparison by Position Type

- CHD Staff:
  - County Only: 36.1%
  - District and County: 59.6%
  - Total: n=35

- BOH Members:
  - County Only: 30.8%
  - District and County: 64.1%
  - Total: n=12

- District Staff:
  - County Only: 13.8%
  - District and County: 56.7%
  - Total: n=4

Legend:
- County Only
- District and County
PRELIMINARY FINDINGS

Essential Services Capacity (Complete or Almost Complete)
Comparison by Rural vs. Non-rural

- County Only
- District and County

<table>
<thead>
<tr>
<th></th>
<th>&lt; 35,000</th>
<th>&gt; 35,000</th>
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<tbody>
<tr>
<td>n=34</td>
<td>33.0%</td>
<td></td>
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<tr>
<td>n=60</td>
<td>59.4%</td>
<td></td>
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<tr>
<td>n=17</td>
<td></td>
<td>27.4%</td>
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<tr>
<td>n=38</td>
<td></td>
<td>61.3%</td>
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</tbody>
</table>
PRELIMINARY FINDINGS

Essential Services Capacity (Complete or Almost Complete) Comparison by Population Size

- **County Only**
- **District and County**

<table>
<thead>
<tr>
<th>Population Size</th>
<th>County Only</th>
<th>District and County</th>
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</thead>
<tbody>
<tr>
<td>1,000,000 or more</td>
<td>20.6%</td>
<td>51.4%</td>
</tr>
<tr>
<td>35,000-100,000</td>
<td>35.7%</td>
<td>74.1%</td>
</tr>
<tr>
<td>&lt;35,000</td>
<td>33.0%</td>
<td>59.4%</td>
</tr>
</tbody>
</table>

Sample sizes:
- 1,000,000 or more: n=7, n=18
- 35,000-100,000: n=10, n=20
- <35,000: n=34, n=60
PRELIMINARY FINDINGS

Essential Services Capacity (Complete or Almost Complete)
Comparison by County Health Ranking

<table>
<thead>
<tr>
<th>Rank 1-39</th>
<th>Rank 40-78</th>
<th>Rank 79-117</th>
<th>Rank 118-156</th>
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<tbody>
<tr>
<td>County Only</td>
<td>District and County</td>
<td>County Only</td>
<td>District and County</td>
</tr>
<tr>
<td>36.4%</td>
<td>27.3%</td>
<td>31.9%</td>
<td>25.5%</td>
</tr>
<tr>
<td>57.6%</td>
<td>55.9%</td>
<td>67.4%</td>
<td>57.8%</td>
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</tbody>
</table>

n=12 n=9 n=15 n=31 n=12 n=26

County Health Rankings by Quartile. *note that unranked counties and unknown responses are not shown.
# Average of Mean Construct Scores: Job Title

<table>
<thead>
<tr>
<th>Job Title</th>
<th>Health District Support (8 statements)</th>
<th>Effective Multidisciplinary Support (14 statements)</th>
<th>Appropriate Use of the Model (12 statements)</th>
<th>Helpful Collaborative Processes (16 statements)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Respondents</td>
<td>3.83</td>
<td>3.80</td>
<td>3.63</td>
<td>3.60</td>
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<tr>
<td>CHD Staff</td>
<td>3.72</td>
<td>3.70</td>
<td>3.54</td>
<td>3.44</td>
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<tr>
<td>BOH Member</td>
<td>4.16</td>
<td>4.02</td>
<td>3.90</td>
<td>3.90</td>
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<tr>
<td>District Staff</td>
<td>3.77</td>
<td>3.80</td>
<td>3.60</td>
<td>3.60</td>
</tr>
<tr>
<td>UnKnown</td>
<td>4.17</td>
<td>4.23</td>
<td>3.90</td>
<td>4.33</td>
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</table>
### Individual Item Correlations for Structured QI Activities

**Construct 4: Helpful Collaborative Processes**

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<tbody>
<tr>
<td>4.35 Useful knowledge and skills given during QI meetings.</td>
<td>1.00</td>
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<td>4.36 QI meetings focus on practical application</td>
<td>.812</td>
<td>1.00</td>
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<tr>
<td>4.37 Share experiences at QI meetings.</td>
<td>.748</td>
<td>.842</td>
<td>1.00</td>
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<tr>
<td>4.38 Focus on joint learning</td>
<td>.705</td>
<td>.790</td>
<td>.880</td>
<td>1.00</td>
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<tr>
<td>4.39 Develop skills in planning changes during QI meetings.</td>
<td>.727</td>
<td>.780</td>
<td>.840</td>
<td>.872</td>
<td>1.00</td>
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<tr>
<td>4.40 Develop skills in processing changes at QI meetings.</td>
<td>.742</td>
<td>.789</td>
<td>.830</td>
<td>.845</td>
<td>.931</td>
<td>1.00</td>
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<tr>
<td>4.41 Develop confidence in achievable changes at QI meetings.</td>
<td>.761</td>
<td>.788</td>
<td>.786</td>
<td>.794</td>
<td>.856</td>
<td>.858</td>
<td>1.00</td>
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<tr>
<td>4.42 Reflect on results at QI meetings.</td>
<td>.735</td>
<td>.837</td>
<td>.854</td>
<td>.882</td>
<td>.910</td>
<td>.896</td>
<td>.876</td>
<td>1.00</td>
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<tr>
<td>4.43 Work with coworkers from other agencies at QI meetings.</td>
<td>.585</td>
<td>.651</td>
<td>.692</td>
<td>.708</td>
<td>.739</td>
<td>.756</td>
<td>.737</td>
<td>.774</td>
<td>1.00</td>
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<td></td>
</tr>
<tr>
<td>4.44 Learn from progress reporting by other District &amp; CHDs at QI meetings.</td>
<td>.598</td>
<td>.695</td>
<td>.723</td>
<td>.692</td>
<td>.782</td>
<td>.778</td>
<td>.774</td>
<td>.771</td>
<td>.805</td>
<td>1.00</td>
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<tr>
<td>4.45 Receive feedback on progress from leadership QI meetings.</td>
<td>.719</td>
<td>.759</td>
<td>.755</td>
<td>.782</td>
<td>.791</td>
<td>.791</td>
<td>.810</td>
<td>.828</td>
<td>.764</td>
<td>.776</td>
<td>1.00</td>
<td></td>
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<tr>
<td>4.46 Support one another at QI meetings.</td>
<td>.730</td>
<td>.764</td>
<td>.779</td>
<td>.787</td>
<td>.781</td>
<td>.771</td>
<td>.794</td>
<td>.816</td>
<td>.737</td>
<td>.704</td>
<td>.795</td>
<td>1.00</td>
<td></td>
<td></td>
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<tr>
<td>4.47 Competition between CHDs during the joint QI meetings.</td>
<td>.003</td>
<td>.034</td>
<td>.067</td>
<td>.000</td>
<td>.047</td>
<td>.082</td>
<td>.010</td>
<td>.041</td>
<td>.075</td>
<td>.055</td>
<td>.050</td>
<td>.003</td>
<td>1.00</td>
<td></td>
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</tr>
<tr>
<td>4.48 Moment to reflect on achieved results during QI meetings.</td>
<td>.489</td>
<td>.694</td>
<td>.628</td>
<td>.631</td>
<td>.633</td>
<td>.622</td>
<td>.598</td>
<td>.657</td>
<td>.549</td>
<td>.550</td>
<td>.586</td>
<td>.524</td>
<td>.245</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>4.49 Information, ideas, and suggestions are actively exchanged at QI meetings.</td>
<td>.606</td>
<td>.673</td>
<td>.709</td>
<td>.727</td>
<td>.727</td>
<td>.719</td>
<td>.753</td>
<td>.762</td>
<td>.640</td>
<td>.694</td>
<td>.720</td>
<td>.691</td>
<td>.054</td>
<td>.612</td>
<td>1.00</td>
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<tr>
<td>4.50 Staff exchange information outside QI meetings.</td>
<td>.529</td>
<td>.539</td>
<td>.586</td>
<td>.607</td>
<td>.573</td>
<td>.579</td>
<td>.564</td>
<td>.572</td>
<td>.457</td>
<td>.463</td>
<td>.524</td>
<td>.552</td>
<td>.032</td>
<td>.443</td>
<td>.598</td>
</tr>
</tbody>
</table>
## Individual Item Correlations for Structured QI Activities

(Construct 4: Helpful Collaborative Processes)

<table>
<thead>
<tr>
<th>ITEM</th>
<th>4.45</th>
<th>4.46</th>
<th>4.47</th>
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<th>4.49</th>
<th>4.50</th>
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<td>4.45 receive feedback on progress from leadership QI meetings.</td>
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<td>.443</td>
<td>.598</td>
<td>1.00</td>
</tr>
</tbody>
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Conclusions

• Health Districts are a basic infrastructure for local public health to deliver Essential Public Health Services in Georgia.

• Districts will need to have a major role in building local health department accreditation efforts in Georgia.

• Private and public sector support for building local public health infrastructure may need to recognize potential for multi-jurisdictional entities as key elements for building local infrastructure capacity.
Conclusions

• Qualitative responses indicate that Georgia’s local public health systems have not systematically implemented Quality Improvement initiatives.

• Participatory approach of PBRNs has potential to facilitate local grass-roots agency support for QI and accreditation.
Conclusions

• PBRNs have the potential to advance the science of QI within public health, particularly related to:
  – Assessment of Organizational QI Culture (BIG QI)
  – Role of multi-jurisdictional entities in advancing QI and accreditation
Contact Information

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Senior Research Scientist, Duval County Health Department, IPHIR
Senior Research Scientist, UFL-Jax, Center for Health Equity and Quality Research

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Nandi Marshall, MPH, CHES, DrPH(c) – nmarshall@georgiasouthern.edu