Local context, structure, & organization of local public health departments: What impacts capacity to perform essential services?

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Practice Gap

The Massachusetts Practice Based Research Network is a collaboration between public health practitioners and academics utilize participatory research and evaluation methods to improve local public health services in the state.

The findings from the study presented highlight factors associated with capacity to perform Essential Public Health Services in small local public health departments.
Objectives

- To highlight contextual and organizational factors associated with capacity to perform Essential Public Health Services in small jurisdictions
- To identify some of the benefits and challenges of using survey research in small jurisdictions to gather public health services and systems data
Expected Outcome

- Participants will have an increased awareness of factors associated with capacity to perform Essential Public Health Services in small jurisdictions, and how these factors compare to research conducted in larger jurisdictions.
Overview of Presentation

- Local context of public health service delivery in Massachusetts
- Overview of first major study undertaken by the MA Practice Based Research Network
- Description of findings associated with capacity to perform Essential Public Health Services
- Discussion
Organization of local public health

- Massachusetts has 351 Boards of Health
  - Each responsible for providing state mandated public health services

![Pie chart showing population size distribution.](chart.png)

- **0-5,000**: 31%
- **5,001-10,000**: 23%
- **10,001-20,000**: 20%
- **20,001-50,000**: 19%
- **50,000+**: 7%
Central Research Question

How do the following influence the delivery of evidence-based public health services in Massachusetts:

→ local context
→ organization of local public health service delivery
→ capacity to meet core function-related performance standards
Methods

- **Survey interview** conducted with 351 local public health directors/board of health chairs
  - Telephone & Self-Administered
- 45-60 minutes to complete
- Survey responses reviewed by Project Manager for quality and completeness
- Data entered into Access database
- Analysis performed using SAS (v 9.2)
Methods

Areas Covered on Survey:

- Municipal data (pop. size, race/ethnicity, poverty, tax rate, municipal budget)
- Governance (municipal and board of health)
- Public health services delivered
- Public health workforce (type, # FTEs, affiliation with LHD, qualifications of leadership)
- Funding for local public health services
- Food safety practices
- Communicable disease control practices
- Capacity to meet performance standards
  - Main outcome of the data presented here
Capacity to perform 10 Essential Public Health Services (EPHS)

Primary Outcome Measure

- Capacity to provide 10 Essential Public Health Services
- 25 item screening tool based on standards of NACCHO’s Operational Definition of Functional Local Public Health Department and Turnock-Miller 20
- Each item on screening tool worth 4 points, for a total of 100 possible points
Study Sample: 247 municipalities
70% response rate
Capacity to perform 10 Essential Public Health Services (EPHS)

Findings:

- Mean score: 43.5 (SD 16.8)
- Mean score in lowest quartile: 22.6 (SD 6.0)
- Mean score in highest quartile: 65.5 (SD 9.6)
Factors Associated with Capacity to Perform 10 EPHS

Bivariate Analysis:

- Population size over 26,000 (P=.02)
- BOH serving urban areas (P=.003)
- BOH serving high poverty areas (P<.0001)
- Higher annual municipal budget (P<.0001)
- Municipalities with elected BOH (P=.01)
- Elected municipal leaders’ understanding of local public health responsibilities (P<.0001)
- Municipalities with full-time health director (P=.003)
- Greater number of full and part time staff (P=.04)
Factors Associated with Capacity to Perform 10 EPHS

Multivariate Analysis:

- Strongest predictor of capacity was local elected officials’ understanding of public health responsibilities (OR 3.9, 95%CI=1.8,8.9)

- Full-time public health director (OR=2.5, 95%CI=0.97,6.4)

- Municipalities with higher poverty rates (OR=1.1, 95%CI=1.0,1.2)
Discussion

- Many findings align with those found in studies of larger local public health departments
  - Population size
  - Local health departments in urban areas
  - Poverty rate of jurisdiction served
  - Annual municipal budget
  - Staffing – presence of health director and # of staff
Discussion

- Findings also highlight:
  - Importance of strong intra-municipal relationships between BOH/LHD and elected municipal officials
  - Local health departments have long road ahead to meet accreditation standards
    - Capacity greatest when there is a mandate to perform service
    - Vast majority of health departments in Massachusetts will need a new organizational structure to meet accreditation standards
Contact information

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