Developing an Evidence-Based Typology of Public Health Systems: A Qualitative Analysis

F. Douglas Scutchfield[1], M.D., Michelyn W. Bhandari[2], Dr.P.H., Nikki Lawhorn[1], MPP, Ashley McCarty[1], BS, Rick Ingram[1], M.Ed., Glen P. Mays[3], PhD, and Sharla Smith[3], MPH

[1]University of Kentucky, College of Public Health
[2]Eastern Kentucky University
[3]University of Arkansas Medical Sciences, Fay W. Boozman College of Public Health

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Background

- Little evidence exists concerning the structure and operation of public health delivery systems and their impact on essential public health services
- Thus, policymakers and administrators have little information on which to base decisions about allocating resources and responsibilities in public health

Background

- Complex systems of medical care delivery have been characterized by Shortell and a typology of health maintenance organizations had been described by Luft and their colleagues
- We subsequently developed a typology of the structure and composition of public health systems

Bazzoli, Shortell et al. 1999; 2004
Luft HS. 1981.

Background

- Hierarchical cluster analysis revealed seven distinct clusters of public health systems based on a composite score that represents the level of system:
  - Differentiation - scope of activities performed
  - Integration - range of organizations involved
  - Concentration - role of local health department (LHD) vs. others

Study Objective

- Use the typology as a sampling frame to identify composite themes within the context of community environment and policy development that address the availability and perceived effectiveness of public health services and the local health department's contribution to such service

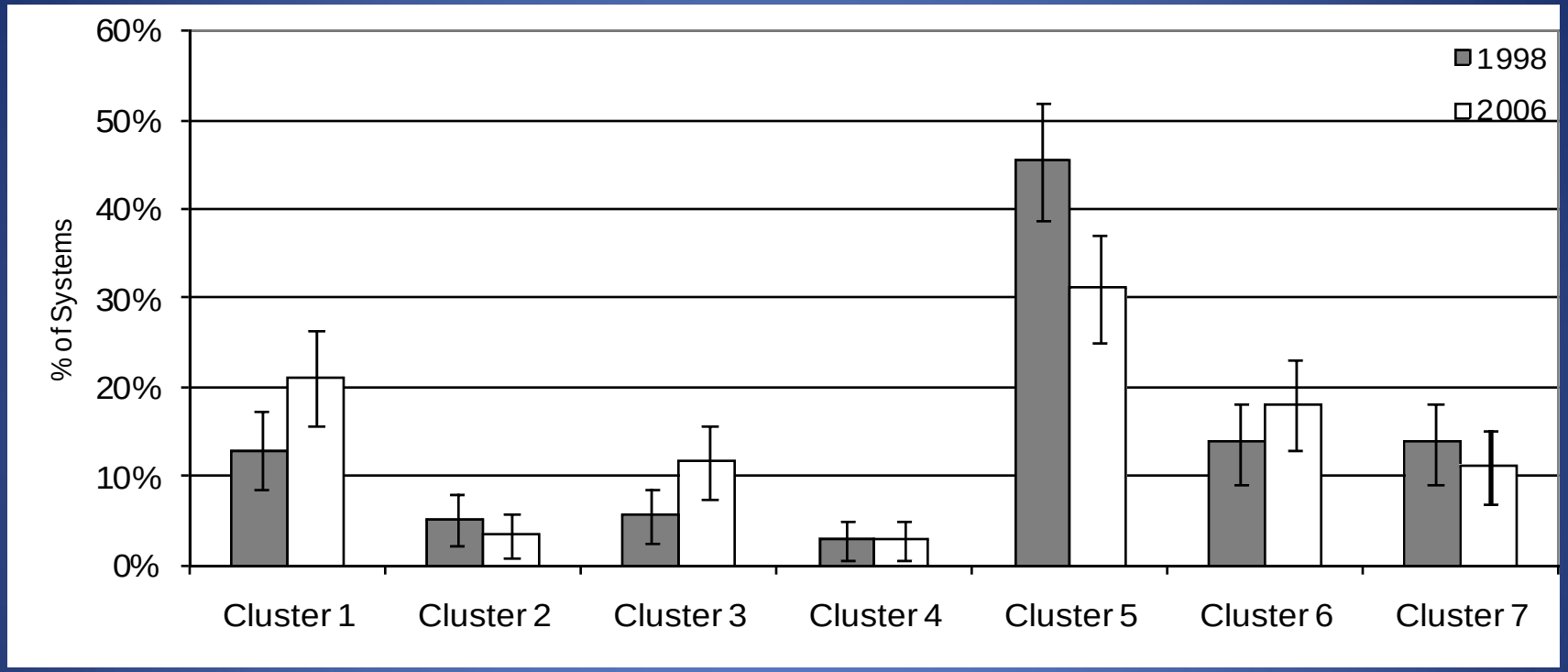
Methods: Study Sample

- Local public health directors (n=13)
- Jurisdictions selected based on classification in one of seven clusters based on a composite system typology score
  - Generally, two local public health jurisdictions from each cluster were selected—one that had a stable composite typology score between 1998 and 2006 and another that had a change in composite score between 1998 and 2006
  - Cluster 4 did not have a stable system, thus an additional health department was added

Methods: Procedures

- Information obtained via telephone interviews using semi-structured interview protocols comprised primarily of open-ended questions/probes
- Interview protocols were tailored to specific health departments based on findings from questions in quantitative phase and hierarchical cluster analysis
- Interview records and notes transcribed
- Content coded according to identified themes

Results



Differentiation	High	High	High	Mod	Mod	Low	Low
Concentration	Mod	Low	High	High	Low	High	Low
Integration	High	High	Low	Mod	Mod	Low	Mod

Seven Typology Cluster Names

- Typology One- Exemplar Concentrated
- Typology Two- Exemplar Distributed
- Typology Three- Autonomous
- Typology Four- Transitional
- Typology Five- Conventional
- Typology Six- Limited Concentrated
- Typology Seven- Limited Distributed

Cluster One- Exemplar Centralized

- Concentrated, highly integrated systems
- These systems perform a ***broad scope*** of public health services and rely on the local public health agency to provide ***much of the effort*** in performing these services, yet they involve a ***wide range*** of other organizations in performing services.

Cluster One- Exemplar Centralized Themes from Qualitative Study

- Community partnerships
  - Primary care providers (PCP)
  - Health organization networks
- Heavy strategic planning
  - With partners and elected officials
- Increased resources and improved utilization
  - Bioterrorism (BT) funding

Cluster Two- Exemplar Distributed

- Decentralized, highly integrated systems
- These systems perform a ***broad scope*** of public health services and involve a ***wide range*** of organizations in performing these services. The local public health agency shoulders ***less of the effort*** in performing these services than do their counterparts in Centralized systems.

Cluster Two- Exemplar Distributed Themes from Qualitative Study

- Agency leadership
  - Ability to establish partnerships
- Planning and assessment
  - Formalized communications network
  - Community health report cards
- Resource changes
  - Managed care organizations increased in commitment to community health goals
  - Local medical center engaged in community health activities
  - Local health department (LHD) activities decreased

Cluster Three- Autonomous

- Centralized, independent systems
- These systems perform a ***broad scope*** of public health services but involve a relatively ***narrow range*** of organizations in the delivery of these services. These systems rely on the local public health agency to provide ***much of the effort*** in performing public health services.

Cluster Three- Autonomous Themes from Qualitative Study

- Driven by funding
  - Increase in public health preparedness
  - Decrease of funding and responsibility for indigent care
  - Managed care moved site of indignant care from LHD to PCP
- Analysis and assessment
  - Community assessment and partnership decreased
  - Funding drove planning internally
- Use of less traditional partners (not care providers)
  - Universities
  - United Way
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Cluster Four- Transitional

- Centralized, moderately integrated systems
- These systems perform a ***moderate scope*** of public health services and involve a ***moderate range*** of organizations in the delivery of these services. These systems rely on the local public health agency to provide ***much of the effort*** in performing public health services.

Cluster Four- Transitional Themes from Qualitative Study

- Appears to be the most unstable cluster
  - Intermediary
  - Possibly moving to or from exemplar and limited
- More internal assessment and strategic planning
- System partnerships increased due to lack of funding
  - Non-traditional partners with universities

Cluster Five- Conventional

- Decentralized, moderately integrated systems
- These systems perform a ***moderate scope*** of public health services and involve a ***moderate range*** of organizations in the delivery of these services. The local public health agency shoulders ***less of the effort*** in performing these services than do their counterparts in Centralized systems.

Cluster Five- Conventional Themes from Qualitative Study

- Prototypic LHD
- Contracting out
  - Assessments
  - Lab services
- Funding is major driver of activities
  - BT money used for double duty
  - Obesity and tobacco programs

Cluster Six- Limited Concentrated

- Centralized, limited scope systems
- These systems perform a ***limited scope*** of public health services and involve a ***narrow range*** of organizations in the delivery of these services. These systems rely on the local public health agency to provide ***much of the effort*** in performing public health services.

Cluster Six- Limited Concentrated Themes from Qualitative Study

- Only interested in things driven by funding
  - Public health preparedness
  - Decreased medicaid funding with increased managed care
  - Decreased lab services
- Tend to blame others for community conditions

Cluster Seven- Limited Distributed

- Decentralized, limited scope systems
- These systems perform a ***limited scope*** of public health services and involve a ***moderate range*** of organizations in the delivery of these services. The local public health agency shoulders ***less of the effort*** in performing these services than do their counterparts in Centralized systems.

Cluster Seven- Limited Distributed Themes from Qualitative Study

- Clinical services oriented departments
  - Movement out of LHD to community health centers and other PCP
- Internal assessments
- Limited external assessment of community problems
- Partnerships
  - Traditional system partners
- Geography
  - Limited number of community partners

Limitations

- Cross sectional study design
  - Provided descriptive analysis
- Sample size
  - Both quantitative and qualitative studies are limited to generalizations by their sample size

Study Raised Measurable Hypothesis
So what now?

- Future studies need increased sample sizes
- Longitudinal data to understand context of systems that have changed or adapted over time
- New Studying Community Health Change is Studying Local Public Health Systems Change

Contact Information

For more information, please contact

- Michelyn W. Bhandari, Dr.P.H., MPH
  michelyn.bhandari@eku.edu
  859-622-1145
- Rick Ingram, M.Ed.
  rcingr2@email.uky.edu
  859-218-2020