



The Development of a Local Public Health Preparedness Survey: Results of the Pilot Study

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Background

Local public health departments (LPHDs) occupy pivotal positions within their communities' emergency preparedness system; however, measuring their abilities to perform and coordinate preparedness and response capacities have been problematic. When viewed through the classic "structure-process-outcome" framework several conceptual differences for measuring public health emergency preparedness (PHEP) exist including a lack of widely accepted standards for preparedness and a weak evidence-base linking structures and processes to outcomes. As a result, a number of survey instruments have been created to collect self-reported measures of preparedness among local and state public health agencies, but relatively few have been subjected to formal validity and reliability testing. Formal validity and reliability testing can involve significant amounts of time and money.

Instrument Development (P-CAP)

This instrument was developed using selected items from existing instruments to help achieve a balance among structural and process measures and among different domains of activity within the preparedness and response continuum. An external panel process was used to select items from each instrument using a modified four-cycle Delphi method. The consensus set of items were organized into a web-based, self-administered instrument for pilot testing with a diverse set of local public health agencies.

Existing instruments:

- 1) The Public Health Preparedness and Response Capacity Inventory developed by CDC. The instrument contains 79 questions and approximately 700 sub-questions that measure capacity in six preparedness domains, including planning and assessment, laboratory capacity, general communications and information technology, risk communication and dissemination, and education and training.
- 2) The National Public Health Performance Standards Program, Local Instrument (version 2.0) developed through a partnership between CDC and other national public health organizations. This instrument contains 27 items in its performance standard devoted to emergency preparedness, investigation and response.
- 3) The CDC's Public Health Preparedness Cooperative Agreement Performance Measures. The current reporting period guidance includes a set of six items related to detection and reporting, communication and control, and after-action improvement.

Cognitive interviews

Cognitive interviews were conducted with 11 local public health agencies in three states (Missouri, Kentucky, and Tennessee) with a total of 28 individual participants including health directors (6), epidemiologists (4), emergency preparedness coordinators (12) and others (6) involved in local emergency preparedness.

Outline of Cognitive Interview Questionnaire:

- I. Process
 - A. Preparation
 - B. Completion
- II. Instrument Structure
- III. Instrument Content

- IV. Inter-rater Reliability
 - A. Questions/areas of disagreement
- V. Conclusions and Recommendations
 - A. Reporting of results

Psychometric testing

Results:

- 10% items had good within-agency **reliability**
- **Factor analysis** identifies 4 underlying dimensions (32 items)
(investigation, planning and protocols, response powers and exercises, workforce/training)
- **Dimension composite measures**
have good reliability

Preliminary Results

According to the results approximately 43% of the individuals completing the survey were emergency preparedness coordinators, 21% were health directors, and 14% were epidemiologist. The average time for completing the survey was 28 minutes.

Interesting themes:

- 1) Emergency preparedness is a team effort.
 - A. Health directors – broad knowledge of emergency preparedness
 - B. Epidemiologist – specific knowledge of emergency preparedness
 - C. EP coordinators – combine broad and specific knowledge of emergency preparedness
- 2) They want to do the right thing but they do not always know what is right.
- 3) Want to see how they compare to like LPHDs.

P-CAP

The P-CAP was fielded in North Carolina in the spring and summer of 2010. Approximately 97% of the 85 LPHDs responded. Currently, the P-CAP is being fielded with a national comparison group with an approximate 70% response rate.

P-CAP domains:

- 1) Surveillance & Investigation
- 2) Plans and Protocols
- 3) Workforce & Volunteers
- 4) Communications & Info Dissemination
- 5) Incident Command
- 6) Legal Infrastructure & Preparedness
- 7) Emergency Experiences & Exercises
- 8) Quality Improvement Activities