Background & Introduction

- Local health departments (LHDs) are charged with providing a number of essential public health services for the communities they serve.
- LHDs also play a critical role in minimizing harm to communities due to hazardous events (Nguh, 2014).
- In the past 10-11 and post H1N1 era, preparedness for responding to and dealing with a wide range of disasters and public health emergencies is even more important for LHDs.
- Health informatics, or systematic use of information technology to improve the public health administrative practices and services, is essential for public health agencies to be effective and efficient in this post-recession era.
- It is important to understand LHDs emergency preparedness capacities and whether utilization of health informatics is associated with their level of emergency preparedness.
- This study examined the association between LHDs Health Informatics (HI) capacity and Emergency Preparedness (EP) capacity.

The purpose of the study was to identify potential HI Capacities that can possibly improve EP of LHDs.

Methods

- The study is observational with cross sectional design.
- Data for this research were drawn from the 2013 National Profile of LHDs Study, conducted by the National Association of County and City Health Officials (NACCHO).
- In addition to the core set of questions administered to all 2,532 LHDs across the country, a representative sample of LHDs received a questionnaire containing questions about EP and informatics. This nationally representative sample consisted of 625 LHDs; 505 LHDs completed the survey (81% response rate).
- Primary variables: LHDs’ level of implementation of informatics systems was categorized with the following: “No activity,” “Have investigated,” “Planning to implement,” and “Have implemented.”
- Secondary variables: LHDs’ level of implementation of informatics systems was categorized with the following: “No activity,” “Have investigated,” “Planning to implement,” and “Have implemented.”

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Results

- **Informatics Capacity**
  - Electronic health records (EHRs),
  - Health information exchange (HIE),
  - Disease reporting systems (EDRS),
  - Electronic lab reporting (ELR),

- **Emergency preparedness** activities:
  - Developed or updated written EP plans,
  - Conducted full-scale exercises/drills,
  - Conducted functional exercises/drills,
  - Conducted tabletop exercises,
  - Conducted EP training to staff,
  - Conducted EP training to staff.

- **Percent of LHDs that have implemented each Informatics areas**

- **Percent of LHDs conducting emergency preparedness activities in the past year**

- **Legal Authorities**
  - Reviewed legal authorities (p = 0.002).
  - Assessed EP staff competencies (p = 0.0002).

- **Functional Exercises**
  - Held functional exercises/drills (p = 0.0003).

- **Tabletop Exercises**
  - Conducted tabletop exercises (p = 0.0001).

- **EP Training**
  - Provided EP training to staff (p = 0.0035).

- **Exercise Participation**
  - Participated in exercises/drills (p = 0.021).

Conclusions

- The research showed a significant relationship between health informatics capacity of LHDs and their performance of emergency preparedness activities.
- LHDs might want to harness better health information systems and information technology tools to support information dissemination when responding to disasters/ emergency events.

Implications for Public Health Policy & Practice

- The attacks of September 11, 2001, and subsequent hazardous events such as H1N1 outbreak have increased the need for the public agencies to be prepared for emergency situations that require an integration of HI and EP planning in order to improve the outcomes of such disastrous events.
- Use of information systems and other HI can improve health departments’ capacity to detect risks of bio-terrorism and other hazards and such capacity is also instrumental in planning, communications, and efficient response to emergencies.

References


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