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Center for Domestic and International Health Security

Enhancing Public Health Preparedness: Exercises, Exemplary Practices, and Lessons Learned

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Overview

- **Five interrelated activities whose goals are to better understand and enhance preparedness**
  - **Each uses a different approach to understanding public health emergency preparedness**
- **Builds on prior work in California**
- **Funded by DHHS**

Activities

- Continued work on developing performance measures
- Case studies
- Tools
  - Methods to test 24/7 response capabilities
  - Development of table-top exercises
  - Exercise evaluations
  - Exemplary practices

Case Studies

- Determine what public health agencies can do now that they may not have been able to do before the CDC investment
  - Relate to critical benchmarks and CDC guidance
- Identify remaining gaps and challenges
- Use naturally occurring outbreaks as ‘proxy events’
  - West Nile Virus, SARS, Monkeypox

Case Studies (2)

- **Site visits to CA, CO, IL, WI, NY, LA**
  - **Variability in health department types and organizational arrangements, geographic areas, and populations served**
  - **Include state health agency and local health departments in state capital, largest city, and rural area**
  - **Focus on outbreak characteristics and public health response**

Case Studies (3)

- **Lessons learned regarding:**
  - **Surveillance, epidemiologic investigation**
  - **Population-based disease control activities**
  - **Direct and indirect assurance of care**
  - **Communication and coordination**
  - **Planning and exercises**
  - **Workforce development**
  - **Infrastructure development**

24/7 Response Capabilities and Exercise Development

- **Develop tools to measure a public health department's ability to receive and respond to emergency case reports 24/7**
  - **'Calls' to test 24/7 'receipt'**
  - **Scripts to test 'first response'**
  - **Attention to methodology (statistical issues, vulnerable periods, unannounced testing)**
- **Exercises to test response after the first phone call–expand outward from internal processes**

Exercise Evaluation

- Develop criteria for exercise evaluation; address both design and implementation
- Identify, compile and evaluate extant public health emergency exercises
- Develop tools for use by DHHS, state, and local officials to choose and evaluate current and future exercises
- Provide menu of vetted exercises

Exemplary Practices

- Identify “practices” to serve as potential exemplars in several aspects of public health preparedness
  - CDC focus areas and HRSA hospital priority areas
- Develop website with selected “exemplary practices”
  - Resource for public health departments

Findings

- **CDC funds have helped close significant gaps in PH capabilities**
  - **Significant progress in communications, surveillance, disease investigation, and relationship building all contributed to mounting reasonably effective responses to WNV, SARS, and Monkeypox.**
  - **Infrastructure in place pre-9/11 was also instrumental**
- **Skepticism about emphasis on preparedness was moderated by outbreaks**
  - ***"SARS is the best thing that ever happened to us."***

Findings (2)

- Limited "surge capacity" for virtually all PH functions and services
  - Relatively small outbreaks studies stressed disease investigation capacity; larger outbreaks likely to be problematic
  - Needs of vulnerable and minority populations not adequately considered
- Jurisdictional arrangements are complex and may thwart standardized efforts at testing and emergency response
  - Call handling processes variable
  - Responsibility for key functions are inconsistent and unclear

Findings (3)

- Unrealistic expectations regarding CDC delayed and/or reduced the effectiveness of the response to MP, WNV
- Significant uncertainty over who does what, both within states and with CDC
  - Local-state –CDC handoffs are not well worked out
  - Need to clarify responsibilities, including for basic functions such as restocking reagents and for investigation in a crisis
  - Findings confirmed in exercises and 24/7 calls
- No formal processes for incorporating lessons learned from outbreaks or exercises
  - Continued cycles of missed opportunities
  - Much learning resides with individuals rather than ‘systems’

Findings (4)

- Unannounced testing was practical in assessing 24/7 response
  - Cell phones with local area codes
  - Placed 3-8 calls to health departments 3-18 week period
  - IRB approval
- Large variation in response to 24/7 tests
  - Processes vary by jurisdiction, date and time
  - We terminated 3/19 tests prematurely
  - All health departments had at least one warm transfer
  - Some calls did not receive *any* callbacks
  - Response time varied from < 1 minute to 17 hours (when callback was received)
  - 11/19 health departments responded to all calls within 30 minutes

Findings (5)

- **Health Departments' 24/7 systems have vulnerable periods and processes**
  - **Vulnerable periods after hours, lunch time and end of the work day**
  - **Vulnerable processes include cell phones, answering machines**
- **Other considerations**
  - **Widespread availability of a single, accurate number?**
  - **Does respondent ask appropriate questions or provide appropriate advice?**

Findings (6)

- **Exercise evaluation criteria are effective**
  - **Reproducible among raters**
  - **Appropriate scaling**
- **State officials and contractors are doing things that make exercises successful**
  - **Specifying objectives**
  - **Including relevant participants**
- **State officials receptive to idea of "consumer report"**
- **Sharing exercises is sometimes a problem**

Findings (7)

- **Examples of Exemplary Practices include:**
  - **Medical Operations Center (TX)**
  - **Increased BSL-3 capacity (NY and SD)**
  - **Connectivity with Sentinel Labs (MN)**
  - **Citywatch 24/7 Emergency Testing System (IL)**
- **Few practices tested; many in need of evaluation**

There are miles to go before we sleep…

- Remaining gaps
  - Early internal processes
  - Local-state handoffs
  - Health department/health care system interactions
  - Community involvement and trust
  - Early media/public communication
  - Ambivalence and lack of clarity about state and federal role
  - Need for continuous quality improvement
- Cuts to other public health functions are nearly universal
  - Scale and scope of unintended consequences not clear

Ongoing Activities

- Review state reports of CDC and HRSA activities
- Continue feedback on measures development
- Identify and pilot test models for quality improvement
- Identify exemplary practices at health system/health care system interface
- Assess how state-local relationships impact on preparedness
- Review federal pandemic influenza plan
- Develop tools to help states improve pandemic influenza preparedness

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