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WHAT COMMUNITIES SHOULD DO PRE- EVENT TO SUPPORT PUBLIC HEALTH POST-EVENT ASSESSMENTS, SURVEILLANCE AND MONITORING

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The Plan

“The Emergency Management Accreditation Program (EMAP) is the voluntary assessment and accreditation process for state and local government programs responsible for coordinating prevention, mitigation, preparedness, response, and recovery activities for disasters, whether natural or human-caused. Accreditation is based on compliance with collaboratively developed national standards for emergency preparedness, the EMAP Standard, demonstrated through self-assessment, documentation, and on-site assessment by an independent team of assessors. (The EMAP Standard is based on the NFPA 1600 Standard on Disaster/Emergency Management and Business Continuity Programs, 2004)” (EMAP 2004; Liebersbach, Spiewak, and Stanley Sr. 2004)

In September 2003, the District of Columbia was among the first two jurisdictions to earn EMAP; the state of Florida also was granted accreditation.(District of Columbia 2003b) To augment its Comprehensive Emergency Management Plan or “District Response Plan,” the District promulgated 39 Community Emergency Management Plans (CEMP) for neighborhood clusters throughout the District of Columbia. Additionally the “District Response Plan” or Basic Plan assigns Department of Health as primary agency responsible for Emergency Support Function (ESF) #8, Health and Medical Services in the District of

Columbia and its Community-Based Clinics Emergency Preparedness Plan. (District of Columbia 2003a, 2004)

Under the worst-case planning assumptions in either the “District Response Plan,” (or Basic Plan) and Community Emergency Management Plans (CEMP) noted that:

“within the first few hours to the first few days (72 hours) of a disaster; when governmental services may be unable to respond to all requests for assistance and/or public telephone facilities are not available for communicating requests for aid.

The plan entails a Neighbor-to-Neighbor self-help program. It provides the primary link between citizens and the professional response personnel of the responsible government agencies.” (District of Columbia 2003a, 2004)

The Community Emergency Management Plans (CEMP) calls on the neighborhood clusters to identify and establish cluster emergency preparedness committees, Cluster Emergency Coordination Centers (CECC), and Community Emergency Response Teams (CERT). When implementing the Community Emergency Management Plan established for their cluster, it is incumbent that the Neighborhood Corps model be used and they interact with DC Citizen Corps, ESF#15.

In the event of an emergency, the Cluster Emergency Coordination Centers (CECC) shall maintain contact with the Community Outreach Coordinator or designee at the District’s Emergency Operations Center. The Community Outreach Coordinator is part of ESF #14, Media Relations and Community Outreach and using The Incident Command System (ICS)

and its forms and communications plan. (Bigley and Roberts 2001; District of Columbia 2003, 2004)

Missing from these plans or what is not articulated is how constant Public Health Post-Event Surveillance, Monitoring and Assessments will be done. Given the worst-case planning assumptions the Public Health Surveillance and Monitoring System will be disrupted as well.

Rapid Needs/Disaster Assessments

The Centers for Disease Control and Prevention (CDC)'s literature and research that have been published about disaster assessments besides adding to the knowledge base about disasters and disaster assessments provides interesting looking glass into a discipline in our interdisciplinary field. Most of the CDC teams used cluster sampling, and many did not include the type of instrument or the content used. While useful for Rapid Disaster Assessments in the early stages of an event, editorial comments by Centers for Disease Control and Prevention (CDC) noted that cluster sampling could not replace constant surveillance, monitoring and recurring comprehensive Disaster Assessments until the end of the recovery phase. A few editorial comment few are cited below (Billittier IV et al. 2003; Centers for Disease Control and Prevention (CDC). 1992, 1998, 1999, 2002; Jones et al. 2004; Kaiser et al. 2003; Kramer et al. 2002; O'Carroll et al. 1995; Waring et al. 2002)

“The findings in this report are subject to at least four limitations. First, the survey did not include persons who had not yet returned to their homes. Those who delayed returning might have had more serious psychological or physical symptoms. Second, because the survey did not include this population, the estimates for the mean time of evacuation also are underestimated. Third, no background or comparison data were available to validate the self-reported assessment of health effects, and these assessments were not verified by healthcare providers. Finally, the indicator of potential for PTSD was not diagnostic.” (Kramer et al. 2002)

“Because the needs and health effects following a disaster often vary over time, multiple community assessments might be necessary to monitor these changes and to reach different populations if evacuations have occurred. The availability of standardized assessment tools and local health professionals trained in rapid needs assessment procedures could facilitate understanding a community's post-disaster needs.”(Kramer et al. 2002)

Analysis

Public Health Surveillance and Monitoring System

An event maybe severe enough that the routine public health surveillance and monitoring system will be disrupted as a result of the event or can not provide data quickly enough to support state and local decision making. A temporary post-disaster system should be implemented. The epidemiologist supporting the local decision makers must have an early warning system that identifies when a given symptom complex or disease may be occurring in an affected area. This data will provide a basis for more intensive investigation. All reporting units to the local public health emergency operations center must report, even if the unit had not seen any disease (“zero reporting”). These reports will identify all functioning reporting units and their workload needs. Additionally this surveillance and monitoring system must have a feedback process that should daily summarize the data collected and provide comparisons of all reporting units to the average of the affected area. This system should be maintained until the routine public health surveillance and monitoring system and the affected area stabilizes.(Pan American Health Organization. 1981, 1982, 2000)

When should it be done?

Pre-event, as part of a State, local, community, cluster, neighborhood emergency plans alternative methods and processes must be identified and implemented that will support be an early warning system that identifies when a given symptom complex or disease may be

occurring in an affected area. A base-line instrument, which will modified by the epidemiologist supporting the local decision makers as the event evolves, should be established. The base-line instrument should not be labor-intensive to implement, as data may require to be re-keyed a number of times in the worst-case.(Davis et al. 2004)

A base-line instrument

Ideally, the base line instrument should be no more then one page and simple to complete. It should contain fields to identify the reporting unit and the time and date completed followed by a list of symptom complexes or diseases and counts being reported for each.

Community Post-Disaster Public Health Surveillance Daily Report					
Date From: <input type="checkbox"/> Hospital <input type="checkbox"/> Outpatient department <input type="checkbox"/> Health center <input type="checkbox"/> Clinic <input type="checkbox"/> Evacuation center <input type="checkbox"/> Others (Specify)	Location Name and Address <div style="border-bottom: 1px solid black; margin-bottom: 5px;">Name</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">Address</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">City and State</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">Telephone No.</div> <div style="display: flex; justify-content: space-between;"> <div style="border-bottom: 1px solid black; width: 60%;">Neighborhood</div> <div style="border-bottom: 1px solid black; width: 35%;">Cluster</div> </div>				
Number of new cases with 1. Fever (100°F or 38°C) 2. Fever and cough 3. Diarrhea with blood 4. Fever and diarrhea 5. Vomiting and/or diarrhea 6. Fever and rash 7. Dog/Animal bite 8. Snake bite 9. Burns 10. Trauma 11. Jaundice and diarrhea 12. Deaths 13. Other (Specify)	5 yrs and under	over 5 yrs but under 15 yrs	15 yrs and over, but under 55 yrs	55 yrs and over	Total
Total Comments:					
Completed all reporting point No. of persons accommodated today Report significant changes in water/sanitation/food supply Source: Adapted from (Pan American Health Organization. 2000)					

Who should be reporting?

The reporting units to the local public health emergency operations center should be all community, neighborhood, cluster and shelter aid/care stations and evacuation centers established, any roving medical teams that have been deployed in and adjacent to the affected area, in addition to any routine health facilities. (Davis et al. 2004; Pan American Health Organization. 1981, 1982, 2000)

Conclusions

The “District Response Plan” or Basic Plan, Emergency Support Functions and Community Emergency Preparedness Plans are relying on an infrastructure that has not been implemented and tested in many neighborhoods. Additionally if emergency responders will not be in or get to the neighborhoods, it makes sense that epidemiology Rapid Needs/Disaster Assessment team will be unable to also. Therefore, a Public Health Surveillance and Monitoring System must be integrated into these Neighbor-to-Neighbor self-help programs.

" Notes and Other References "

The old Federal Response Plan (FRP) mandated “As soon as possible, actual on-site ground surveys will be performed. Sources may include a Federal-State Preliminary Damage Assessment (PDA) and information from Federal, State, and local government agencies, among others, to establish “ground truth” for the following EEI as needed:

- Boundaries of the disaster area
- Social, economic, and political impacts
- Jurisdictional boundaries
- Status of transportation systems and critical transportation facilities
- Status of communications systems
- Access points to the disaster area
- Status of operating facilities
- Hazard-specific information
- Weather data affecting operations Seismic or other geophysical information
- Status of critical facilities and distribution systems
- Status of remote sensing and reconnaissance activities

- Status of key personnel
- Status of [Emergency Support Function] ESF activation
- Status of disaster or emergency declaration
- Major issues and activities of ESFs
- Resource shortfalls and status of critical resources
- Overall priorities for response
- Status of upcoming activities
- Donations
- Historical and demographic information
- Status of energy systems
- Estimates of potential impacts based on predictive modeling (as applicable)
- Status (statistics) on recovery programs (human services, infrastructure, SBA)
- Status and analysis of initial assessments (needs assessments and damage assessments, including PDAs)
- Status of efforts under other Federal emergency operations plans”

The FRP define EEI as “essential elements of information (EEI)”

(United States. Federal Emergency Management Agency (FEMA). 2003)

11 of the 12 Emergency Support Functions (ESFs) with staff from 27 Federal agencies and State and local jurisdictions conduct disaster assessments and report to the Information and Planning Emergency Support Functions (ESF # 5).(United States. Federal Emergency Management Agency (FEMA). 2003)

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