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CITIZEN BASED PUBLIC HEALTH SURVEILLANCE, MONITORING AND POST-EVENT ASSESSMENTS

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C e r t i f i c a t i o n

I certify that this product is my original and individual work, that all statements and ideas of others have been appropriately referenced, and that this work was developed specifically for this course (i.e., was not developed as a work product at my employment or elsewhere). This work has not been submitted for academic credit in any other course at George Washington University or elsewhere.

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Citizen Based Public Health Surveillance, Monitoring and Post-Event Assessments

> "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.[CDC editorial note]" (Kramer et al. 2002)

Issue

When a sudden on-set emergency or disaster affects a region or the whole country, communities and neighborhoods should plan for the possibility that emergency and other civic services will be disrupted and unavailable (District of Columbia 2003a, 2003b, 2004; Doyle 2004; Siskiyou County Public Health/NorCalBT.com 2004). The event may be severe enough that the routine public health surveillance and monitoring system will be disrupted or the system will not be able to provide data quickly enough to support state and local decision-making. A temporary post-disaster system should be planned for and 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 (Pan American Health Organization. 1981, 1982, 2000; World Health Organization Regional Office for Africa. and Centers for Disease Control and Prevention. 2001).

A number of metropolitan city disaster plans call for the creation of local community or neighborhood emergency preparedness committees, Emergency Coordination Centers and Community Emergency Response Teams (CERT) using The Incident Command System (ICS) and its forms and communications plans to support the city or regional emergency plans

(Bigley and Roberts 2001; District of Columbia 2003a, 2004; McInnis 1999). These plans must enable the communities and neighborhoods to sustain themselves for at least 72 hours (District of Columbia 2003a, 2003b, 2004; Doyle 2004; Siskiyou County Public Health/NorCalBT.com 2004). These plans must also include support for the Public Health Surveillance and Monitoring System.

Routine Public Health Surveillance and Monitoring Systems

The spectrum of routine Public Health Surveillance and Monitoring Systems that exist in this nation range from the simple to the sophisticated and to somewhere in between. The simplest system may be a passive system that receives unsolicited reports of notifiable diseases listed in the National Notifiable Disease Surveillance System (NNDSS) to the district (county) offices of a state health department from health providers and veterinarians (Figure 1) (German et al. 2001; Vacalis, Bartlett, and Shapiro 1995). Depending on the state, the data collected may be inputted locally into a computer program[1] or via the internet and forwarded to the state health department headquarters (German et al. 2001; Strassburg 2003 Feb; Vacalis, Bartlett, and Shapiro 1995). The state health departments transfer the data weekly to the Centers for Disease Control and Prevention (CDC) by the National Electronic Telecommunications System for Surveillance (NETSS) (which is being replaced by the National Electronic Disease Surveillance System (NEDSS)) (Centers for Disease Control and Prevention (CDC). 2004; Vacalis, Bartlett, and Shapiro 1995). More elaborate Public Health Surveillance and Monitoring systems like the Hazardous Substances Emergency Events Surveillance System that monitor emergency departments exist, but have limited state participation (Noji 2001). Most of these systems still rely on weekly or at worst monthly reporting of data, or have implementation issues (Buehler et al. 2004; Cochrane 2003; German et al. 2001; Lazarus et al.

2002; Widdowson et al. 2003). Research in syndromic surveillance systems is promising, but they too have implementation and interoperable issues and as with the systems above, are also vulnerable in a disaster, where they may be disabled, disrupted (lack of telephone, fax or internet connections) or will respond too slowly (Centers for Disease Control and Prevention (CDC) 2003; Cochrane 2003; Noji 2001; Pan American Health Organization. 1981, 1982, 2000; Rand Corporation 2004; Stoto, Schonlau, and Mariano 2004).

The Far End Of The Spectrum.

At the far end of the spectrum lies daily reporting systems that rely on automated monitoring of ambulatory-care encounter records or emergency department encounter records from the previous day or automated laboratory-based systems for syndromic surveillance (Cochrane 2003; Lazarus et al. 2002; Widdowson et al. 2003). As an example, in the case of ambulatory-care encounter records, the encounter data come from an electronic medical record system used by a large multispecialty group practice that records all ambulatory-care encounters, including telephone contacts, regular visits, and urgent-care encounters, but not emergency room visits. The automated system was developed in a partnership between the Centers for Disease Control and Prevention, the State Department of Public Health, a large group practice, a health plan, and an academic department. The system produces next-day information about illness clusters (Figure 2), based on ambulatory-care visits and telephone calls (Lazarus et al. 2002). However, in the event of a sudden-on-set disaster that is severe enough, almost all of these systems may be disabled, disrupted (lack of telephone, fax or internet connections) or will respond too slowly with the needed data for state and local decision making (Noji 2001; Pan American Health Organization. 1981, 1982, 2000).

Missing from published plans or what is not articulated is how constant and routine Public Health Post-Event Surveillance, Monitoring and Assessments will be maintained (District of Columbia 2003a, 2003b, 2004). Given the worst-case planning assumptions, the routine Public Health Surveillance and Monitoring System will be disrupted as well (Noji 2001; Pan American Health Organization. 1981, 1982, 2000).

Post-event Rapid Needs/Disaster Assessments

The Centers for Disease Control and Prevention (CDC) literature and research editorial comments noted that most of the CDC teams have used cluster sampling while conducting Rapid Needs/Disaster Assessments and while useful in the early stages of an event there are issues (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; Noji 2001; O'Carroll et al. 1995; Waring et al. 2002). For example, Wetterhall and Noji note that two months after Hurricane Andrew in 1992 health officials conducted a cluster survey in Dade County, FL, using Epi Info[1] that permits analysis of multistage survey data that documented overcrowding was highest in Homestead, FL, among other things. Wetterhall and Noji remind us this technique has several methodological challenges without base-line data (Noji 2001). Therefore, cluster surveys can be used to manage resources during the recovery phase of a disaster, but are problematic due to population dislocation. The Centers for Disease Control and Prevention (CDC) literature and research editorial comments further noted that cluster sampling could not replace constant surveillance, monitoring and recurring comprehensive

[1] Epi Info, comprehensive database and statistics software for public health professions, epidemiologists, and researchers in allied fields. This robust freeware product is provided by CDC (available from: URL: http://www.cdc.gov/epiinfo)Strassburg, MA. 2003 Feb. *Field Epidemiology, 2nd Ed (Book Review): Emerg Infect Dis [Serial Online]*. Emerging Infectious Diseases Journal, National Center for Infectious Diseases, Centers for Disease Control and Prevention. Accessed 04/26/ 2005. Available from http://www.cdc.gov/ncidod/EID/vol9no2/02-0697.htm..

Disaster Assessments until the end of the recovery phase (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; Noji 2001; O'Carroll et al. 1995; Waring et al. 2002). With post-event rapid needs/disaster assessments, as well as routine public health surveillance and monitoring systems -- the population at risk must been known for these processes to work correctly (Agency for Toxic Substances and Disease Registry 2005; 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; Noji 2001; O'Carroll et al. 1995; Waring et al. 2002). Further, if emergency responders will not be in or get to the local communities or neighborhoods for 72 hours, it can then be assumed that the epidemiology teams will be unable to also get to the local communities or neighborhoods to conduct Rapid Needs/Disaster Assessments (Noji 2001; Pan American Health Organization. 1981, 1982, 2000) (District of Columbia 2003a, 2003b, 2004; Doyle 2004; NorCalBT.com 2004; Siskiyou County Public Health/NorCalBT.com 2004).

The "Denominator."

A major issue for Public Health Surveillance and Monitoring Systems in a region that has been struck by an emergency or disaster is population dislocation due to evacuation or forced relocation or outdated census data. This has an effect on epidemiology investigations as reported cases are compared to the population at risk of a defined geographical area, known as the "Denominator." The population at risk must been known correctly to identify an outbreak (Agency for Toxic Substances and Disease Registry 2005; 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; Noji 2001; 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. [CDC editorial note]"(Kramer et al. 2002)

In emergency and disaster response, it is important also to remember that the population density of a community is one of the determinants used when prioritizing during a major region-wide, statewide or nationwide disaster to save the greatest number of lives as possible. In addition, the local response efforts may not be able to provide immediate assistance to isolated or minimally affected neighborhoods and communities. Neighborhoods and communities must prepare to take care of their own needs for a minimum of 72 hours (District of Columbia 2003a, 2003b, 2004; Doyle 2004; NorCalBT.com 2004; Siskiyou County Public Health/NorCalBT.com 2004).

A Temporary Post-event Public Health Surveillance and Monitoring System

A temporary post-disaster system should be implemented when the routine public health surveillance and monitoring system has been disrupted because of the event or the system cannot provide data quickly enough to support state and local decision-making. This early warning system will permit the epidemiologist to identify when a given symptom complex or disease may be occurring in an affected area and adjacent areas and the population at risk. Ideally, this system must be integrated into post event emergency plans. This data will provide a basis for more intensive on-site investigation by epidemiologists (Pan American Health Organization. 1981, 1982, 2000; World Health Organization Regional Office for Africa. and Centers for Disease Control and Prevention. 2001).

The temporary post-event public health surveillance and monitoring system would be integrated into existing or planned local community or neighborhood emergency preparedness plans using local community or neighborhood resources. Local community or neighborhood Emergency Coordination Centers would forward data to the local emergency operations center and the local public health emergency operations center as rapidly as possible. Ideally, local community or neighborhood Emergency Coordination Centers should forward data within the first 12 hours after activation (Centers for Disease Control and Prevention (CDC) 2005; McInnis 1999). All reporting units to the local community or neighborhood Emergency Coordination Centers must report, even if the unit has not seen any disease ("zero reporting")[2] (Pan American Health Organization. 1981, 1982, 2000; World Health Organization Regional Office for Africa. and Centers for Disease Control and Prevention. 2001). In turn, the local community or neighborhood Emergency Coordination Centers would relay the reports to the local emergency operations center and the local public health emergency operations center. These positive reports and negative reports ("zero reports"[2]) will identify all functional reporting units and their workload needs. This system should be maintained until the routine public health surveillance and monitoring system and the affected and adjacent areas stabilize (Centers for Disease Control and Prevention (CDC) 2002; Noji 2001; Pan American Health Organization. 1981, 1982, 2000).

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[2] "Submit a zero for each immediately reportable disease even if no cases were detected during the month. This will tell the staff at the next level that a complete report has been submitted by the health facility or district." World Health Organization Regional Office for Africa. and Centers for Disease Control and Prevention. July 2001 2001. *Technical Guidelines for Integrated Disease Surveillance and Response in the African Region*. World Health Organization and Centers for Disease Control and Prevention (CDC). Accessed. Available from http://www.cdc.gov/epo/dih/Eng_IDSR_Manual_01.pdf.
Another reason for daily "zero-reporting" by all units is to test the communications systems that links the units with the emergency operations center and informs emergency managers what units are operational. Pan American Health Organization. 2000. *Natural Disasters : Protecting the Public's Health*. Pan American Health Organization, _____. 1982. *A Guide to Epidemiologic Surveillance after Natural Disaster*: Pan American Health Organization, _____. 1981. *A Guide to Emergency Health Management after Natural Disaster*: Pan American Health Organization.

Community or neighborhood emergency preparedness committees.

Pre-event state, local, community, neighborhood emergency planning must identify alternative methods and processes which will support an early warning system that identifies when a given symptom complex or disease may be occurring in an affected area, and implement them. An example of a Temporary Post-event Public Health Surveillance and Monitoring System follows. Community or neighborhood emergency preparedness committees, made up of home owner associations, condominium owner associations, business owner associations, tenant associations, Neighborhood Watch and other neighborhood grassroots groups, would conduct an inventory of the community or neighborhood, at least annually, to identify the population at risk (District of Columbia 2003a, 2003b, 2004; McInnis 1999; The National Crime Prevention Council 2002, 2004; Volunteer Center of Marin 2005).

Block-By-Block Inventory, pre-event

To identify the population at risk a block-by-block inventory of dwelling units would be conducted by Community Emergency Response Teams (CERT) and Neighborhood Watch block captains (The National Crime Prevention Council 2004). To insure the interoperability of the data collected, the detail data should be formatted in a manner that will follow The National Crime Prevention Council and Centers for Disease Control and Prevention (CDC) recommendations and be similar to Red Cross Disaster Assessment Guidelines (ARC 30-3049) (American National Red Cross 2003; Centers for Disease Control and Prevention (CDC) 2002; The National Crime Prevention Council 2002, 2004). The inventory data of each dwelling unit should consist of: state, county, city, community/neighborhood, date of inventory, house number, street name, geographical reference, apt./unit number, type of dwelling (single family, mobile home, apartment), the number of floors in dwelling or unit, if

there is basement, what is the occupancy type (owned, rented, or seasonal), any special medical needs, home bound or shut-in, teenagers, the number of household residents by age breakdown with a total for each dwelling unit, any comments:(special needs?) and resident's last name (American National Red Cross 2003; Centers for Disease Control and Prevention (CDC) 2002; The National Crime Prevention Council 2002, 2004). The data should be collected on a detailed street inventory worksheet (Figure 3) by the Community Emergency Response Teams (CERT) and Neighborhood Watch block captains. The age breakdown of household residents should be determined by a local epidemiologist. However, the Centers for Disease Control and Prevention (CDC) provides an example in the Local Public Health Preparedness and Response Capacity Inventory of a sentinel surveillance system for "influenza-like illness" [0-4 years (preschool), 5-24 years (school age through college), 25-64 years (adult), => 65 years (older adults)] (Centers for Disease Control and Prevention (CDC) 2002). The detailed street inventory worksheets, when completed, should be copied by the community or neighborhood emergency preparedness committees and input into a database maintained at the local community or neighborhood Emergency Coordination Center. The worksheets should then be returned to the Neighborhood Watch block captains to be used during subsequent annual inventories or post-event assessments.

Post-Event Assessment

During a post-event assessment, after an all clear or when it is safe to do so the Neighborhood Watch block captain would check all accessible dwelling units on the assigned worksheet(s) and notify the local community or neighborhood Emergency Coordination Center of their status and needs if any. If needed a Community Emergency Response Team (CERT) would be sent from the local community or neighborhood Emergency Coordination Center to

conduct the assessment. All of the Neighborhood Watch block captains or Community Emergency Response Teams (CERT) should complete the post-event assessment within the first six to twelve hours after the all clear. A summary of the results of the post-event assessments from Neighborhood Watch block captain reports and CERT Damage Assessment Forms (Figure 4) and the data from the CERT Victim Treatment Area Records (Figure 5) would be transferred to the Community Post-Disaster Public Health Surveillance Daily Report (Figure 6). This summary by local community or neighborhood Emergency Coordination Center would indicate the population in-place in dwellings. This report, along with copies from nearby health units, within the first 12 hours after activation of the local community or neighborhood Emergency Coordination Center, should forwarded to the local emergency operations center and the local public health emergency operations center (Centers for Disease Control and Prevention (CDC) 2005; McInnis 1999; United States. Federal Emergency Management Agency (FEMA) 2003). The local epidemiologist at the local public health emergency operations center would then transfer the data into the existing surveillance system (Figure 1). Subsequently, the local community or neighborhood Emergency Coordination Center would forward to the local emergency operations center and the local public health emergency operations center updates every 12 to 24 hours, as dictated by the situation.

Community Post-Disaster Public Health Surveillance Daily Report

Community Post-Disaster Public Health Surveillance Daily Report must be a simple instrument, which the epidemiologist will modify as the event evolves (Pan American Health Organization. 1981, 1982, 2000). The 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).

Ideally, the instrument should be no more than one page and simple to complete, like the example, Community Post-Disaster Public Health Surveillance Daily Report (Figure 6). It should contain fields that identify the reporting unit and the time and date completed followed by a list of symptom complexes or diseases and counts for each. Additionally, since the caregivers may not be professionals and due to difficulties involved with syndromic surveillance, this instrument should be limited to morbidity and mortality and some simple indicators recommended by the Pan American Health Organization, which should be changed by the local epidemiologist as needed (Centers for Disease Control and Prevention (CDC) 2003; Cochrane 2003; Pan American Health Organization. 1981, 1982, 2000; Rand Corporation 2004; Stoto, Schonlau, and Mariano 2004). The age breakdown of those treated should also be determined by an local epidemiologist, however the Centers for Disease Control and Prevention (CDC) provides an example in the Local Public Health Preparedness and Response Capacity Inventory of a sentinel surveillance system for "influenza-like illness" [0-4 years (preschool), 5-24 years (school age through college), 25-64 years (adult), => 65 years (older adults)] (Centers for Disease Control and Prevention (CDC) 2002). For this example in the interest of the interoperability with the inventory collected, this is same the breakdown used for the Detailed Street Inventory Worksheet (Figure 3). The Report should also include significant changes in the availability of water, the sanitation system and food supply (Pan American Health Organization. 1981, 1982, 2000).

Who Should use the Temporary Post-event Public Health Surveillance and Monitoring System?

All community and neighborhood shelter aid/care stations and evacuation centers that are established, any roving medical teams that have been deployed in and adjacent to the affected

area, in addition to any routine health facilities should forward the reports to the local community or Emergency Coordination Centers (Davis et al. 2004; Pan American Health Organization. 1981, 1982, 2000). All reporting units must report, even if the unit has not seen any disease ("zero reporting"[2]) using the Community Post-Disaster Public Health Surveillance Daily Report (Figure 6) (Pan American Health Organization. 1981, 1982, 2000; World Health Organization Regional Office for Africa. and Centers for Disease Control and Prevention. 2001). In turn, the local community or neighborhood Emergency Coordination Centers should relay the reports to the local emergency operations center and the local public health emergency operations center. These positive reports and negative reports ("zero reports"[2]) will identify all functional reporting units and their workload needs. This system should be maintained until the routine public health surveillance and monitoring system and the affected area and adjacent areas stabilize (Centers for Disease Control and Prevention (CDC) 2002; Noji 2001; Pan American Health Organization. 1981, 1982, 2000).

Conclusions

The example system above has been integrated into a local Community Emergency Preparedness Plan and with the existing Public Health Surveillance and Monitoring system (Figure 1) and like a number of metropolitan city disaster plans relies on local community or neighborhood emergency preparedness committees and neighborhood grassroots groups which may not exist. While the example system relies on face-to-face contact between neighbors in the local area, communications between the local community and neighborhood Emergency Coordination Centers and the local emergency operations center and the local public health emergency operations center has not been addressed. The National Crime Prevention Council recommends that neighborhood grassroots groups consider the use of

bicycles, if it is safe to travel or the use of Citizens' band radios and ham radio networks (The National Crime Prevention Council 2004). The use of Citizens' band radios and ham radio networks would require communications plans, which is not addressed in this system.

What this system does provide the local epidemiologist is a ready source of data with a known "Denominator." This system is simple enough that even spontaneous unaffiliated volunteers, who are quickly trained at the start of each shift, can employ it (Volunteer Florida 2005).

The local Emergency Management Agency and local Public Health Agency must actively foster and promote citizen and neighborhood grassroots group involvement in disaster preparedness and provide the resources that enable this involvement.

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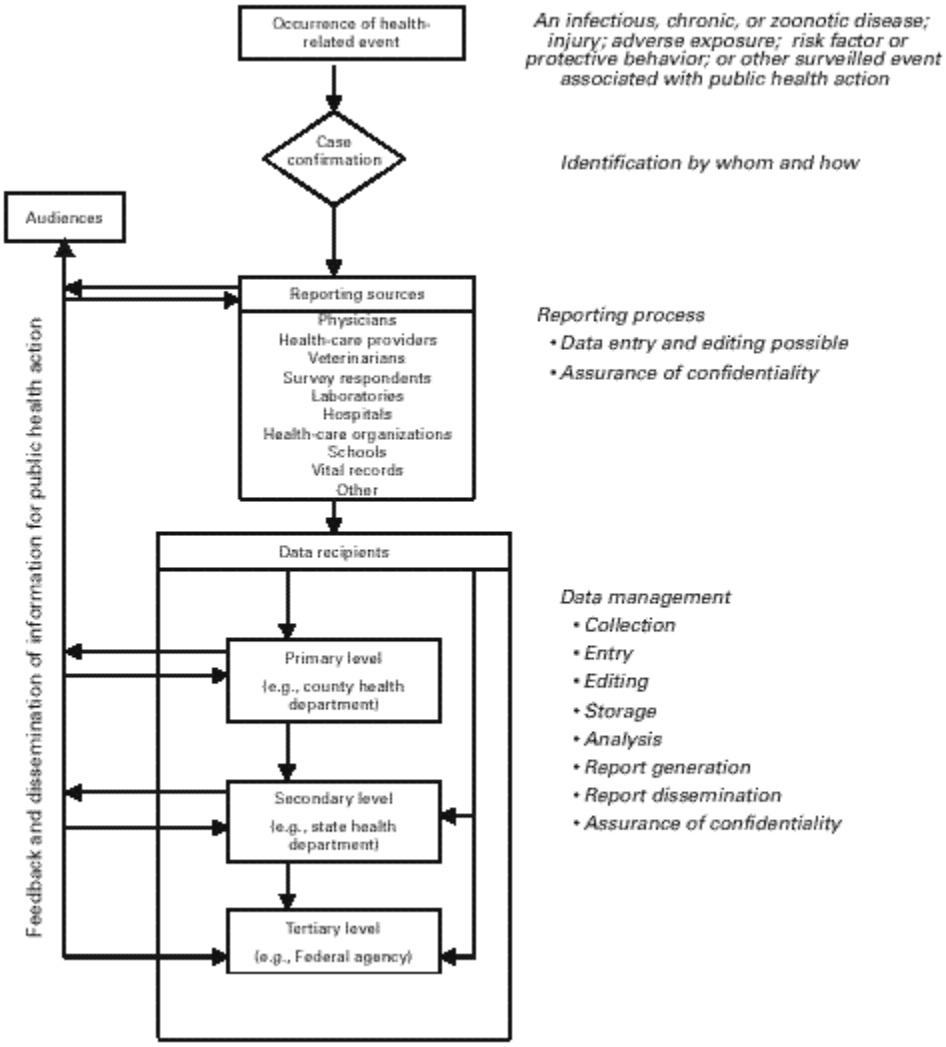

Figure 1. Simplified flow chart for a generic surveillance system:
Source adapted from Buehler et al. 2001

Syndrome	Rate/1,000 health plan members (no. of visits)[a]	Probability[b]	1999 average rates for this weekday in the same month	2000 average rates for this weekday in the same month
All combined	2.015 (328)		1.918	2.123
Upper respiratory	1.087 (177)	0.999	1.151	1.251
Lower respiratory	0.405 (66)	0.999	0.369	0.474
Upper gastrointestinal	0.166 (27)	0.999	0.094	0.110
Lower gastrointestinal	0.227 (37)	0.999	0.221	0.173
CNS/neurologic[c]	0.000 (0)		0.003	0.007
Dermatologic	0.012 (2)		0.023	0.022
Sepsis/fever	0.000 (0)		0.057	0.086
Influenza-like illness	0.117 (19)		—	—
CDC bioterrorism category A agents[d]	0.000 (0)		0	0

[a] Excludes individuals' repeated visits within 6 weeks for the same syndrome.

[b] Probability of at least this many episodes occurring at least once per year, when the data are adjusted for month, day of week, holidays, secular trend, and variability among census tracts

[c] CNS, central nervous system; CDC, Centers for Disease Control and Prevention.

[d] Anthrax, botulism, plague, smallpox, tularemia, and hemorrhagic fever.

Figure 2. Daily public health surveillance report of office visits with diagnoses corresponding to infection syndromes: summary report for Monday, March 4, 2002, Massachusetts. Source adapted from Lazarus et al. 2002

Detailed Street Inventory Worksheet							Neighborhood Watch Block Captain						
State:		County:			City:				Community/ Neighborhood:				Date:
Street Name:							Geographical Reference:						
House #	Apt./ Unit #	Type (circle)	# of floors in dwelling or unit	Is there a basement? Y/N	Occupancy type: Own? Rent? Seasonal? (circle)	Special medical needs? Y/N	Home bound/ shut-in? Y/N	Teenagers? Y/N	Number of household residents?				
									0-4 years (preschool)	5-24 years (school age through college)	25-64 years (adult)	=> 65 years (older adults)	Total
		S M A			O R S								
Comments: (Special needs?)						Resident's Last Name:				Date and time checked after event.			
		S M A			O R S								
Comments: (Special needs?)						Resident's Last Name:				Date and time checked after event			
		S M A			O R S								
Comments: (Special needs?)						Resident's Last Name:				Date and time checked after event			
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		S M A			O R S								
Comments: (Special needs?)						Resident's Last Name:				Date and time checked after event			
		S M A			O R S								
Comments: (Special needs?)						Resident's Last Name:				Date and time checked after event			
Sheet completed by:				Reviewed by:		Database Updated:		Totals					

Figure 3. Detailed Street Inventory Worksheet

Damage Assessment

Date:	Person Reporting:	Page #:
Time Received:	Person Receiving:	

		Building	Oil	Gas Leak	HSC Load	Electric	Chemical	Damage*	Collapsed	Injured	Trapped	Dead	Access	Hot/Closed	Assigned Completed	
Time	Location/Address	Fires		Hazards				Structures		People			Roads		/X	

FOR USE BY EVERYONE www.cert-la.com 10/06/01

Summary of all hazards in area - fill out this form on your way to Command Post and give it to Incident Command.
(* for structure damage: h=heavy, m=moderate, l=light)
Incident Command: Choose an incident, put a slash in the assignment completed column, copy the address/location to the incident name section on Incident Briefing, and give Incident Briefing and Assignment Status to incident team leader. Copy address/location to Post-Incident Status and enter start time. When incident is complete, put a backslash in the assignment completed column and the incident end time on the Post-Incident Status form.

Figure 4

Victim Treatment Area Record

Date:	Person Reporting:				Page #:
Time In:	Name or Description	Triage Tag	Condition	Moved To:	Time Out:

FOR MEDICAL TREATMENT AREA 10/06/01

Discovered victim is given an triage tag (Black=Deceased, red=Immediate, yellow=Delayed, green=Minor, black=DEAD).
Triage color represents data, yellow=Delayed, green=Minor, black=DEAD.

Figure 5

Community Post-Disaster Public Health Surveillance Daily Report						
Date	/ /	Location Name and Address				
From:	() Hospital	Name of contact completing report				
	() Outpatient department	Name of site or team				
	() Health center	Address				
	() Clinic	City and State				
	() Evacuation center	Telephone No.				
	() Others (Specify)	Neighborhood		Cluster		
_____ Number of new cases with		0-4 years (preschool)	5-24 years (school age through college)	25-64 years (adult)	=> 65 years (older adults)	Total
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)						
Total						
Comments:						
To be completed by all reporting point						
No. of persons accommodated today						
Report significant changes in water/sanitation/food supply						
Source: Adapted from (Centers for Disease Control and Prevention (CDC). 2002a; Pan American Health Organization. 2000)						

Figure 6. Community Post-Disaster Public Health Surveillance Daily Report