

saster which lack a preexisting mechanism of surveillance, and in response to chronic disasters such as famine and warfare and where there are refugee camps. The remainder of this chapter is concerned with the mechanics of setting up such a supplemental surveillance system of limited duration in the aftermath of disaster.

### **Diseases to Include in the Surveillance**

Special difficulties are posed by disaster. The situation usually necessitates limiting the number of diseases under surveillance, becoming more flexible in regard to diagnostic criteria in laboratory work, and relying on the symptom complexes reported. The epidemiologist must consider increased risks of epidemics of certain disease(s); service oriented relief workers' limited tolerance of "paper-work" and bureaucratic requisites; the surveillance unit's inability to process and evaluate large amounts of information; impaired communication with reporting units; a reduced capacity to respond to certain communicable disease problems because of logistical difficulties and/or problems concerning resources; and the destruction of, or reduced access to, laboratory diagnostic services.

Sound and practical clinical criteria will be needed for diagnosis of particularly important communicable diseases, in order to reduce mistaken diagnoses and make comparison between reporting units possible. The constellation of fever, conjunctivitis, cough and subsequent development of skin rash, has been used, for example, to diagnose measles in dark-skinned populations subject to famine (36). There is a line-listing of communicable diseases of public health importance, derived from experience in previous relief efforts and/or epidemic investigation of representative definitions of a case in Annex 3.

Selection of communicable diseases for surveillance and clinical criteria for case reporting should both be developed after consultation with the national epidemiologist and the health relief coordinator of an affected country. Under some circumstances, the decision to institute a symptom or symptom complex reporting system for common conditions may be taken, rather than attempting etiologic diagnoses. Use of case definitions and symptom complexes must be standardized throughout the relief effort. Relief agencies should incorporate them in predisaster training of those who may be health volunteer workers after disaster. Health providers should at the very least be drilled concerning diagnostic criteria before they report for duty after disaster.

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The most common symptoms used in postdisaster surveillance include fever, fever-diarrhea and fever-cough. If fever-diarrhea is accepted as a reporting category, the need is not, however, eliminated for the epidemiologist to give clinicians the working definition of fever and diarrhea. This prevents including minor illnesses and normal variants in case reporting.

Disaster surveillance often includes that of noncommunicable conditions, thus assisting relief administration and monitoring the late emergence of effects of the disaster. Burns and trauma are examples of the former and animal bites and protein malnutrition, or kwashiorkor, of the latter. It is often desirable to report selected conditions among younger age groups, such as the newborn (0-30 days), infant (newborn-walking), preschool, school age (5-14), and postpubertal (over 15 years of age) groups, because infants and children are the most susceptible (non-immune) of the local population to endemic communicable diseases.

Figure 2 is a representative report form for daily disease surveillance, used after disaster in the Caribbean. The form is presented as a model and elsewhere should be modified to accord with local conditions, but it does demonstrate simplicity of design, adoption of clinical criteria, symptom complex reporting, inclusion of noncommunicable problems, and of age-specific notifications essential to postdisaster surveillance.

### **The Collection, Interpretation and Utilization of Data**

Participation of field health units in the surveillance system must be as complete as possible after a disaster. It is critical to motivate reporting units. The participation of predisaster units should be continued when possible, with emphasis in reporting placed upon the diseases or symptom complexes targeted for surveillance. Public health nurses and inspectors have proven to be valuable reporting sources in the Caribbean. Health teams mobilized for the relief effort should be adequately briefed about the importance of surveillance, and should be given the case definitions to be used and be amply provided supplies of reporting forms. Briefing is ideally undertaken by the epidemiologist before the teams depart for the field. In practice, however, and usually for the investigation of rumors of epidemics, the surveillance system is often initiated once the teams are already in place. Visits by the epide-

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