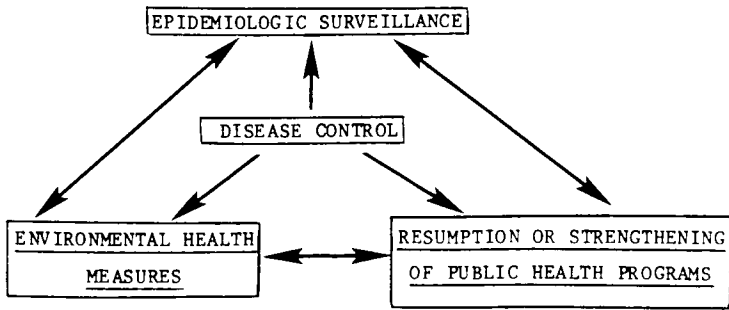


Annex A

Control of Infectious Diseases Following Natural Disasters

Based on the theoretical framework as proposed in Section I the following was used as a model for disease control following natural disasters in the experiences described in Section II.

Three elements are essential:



1. EPIDEMIOLOGIC SURVEILLANCE is the cornerstone of the program. It serves to identify outbreaks or potential disease problems early in order to orient the disaster relief activity appropriately. A recent PAHO publication deals with setting up epidemiologic surveillance systems following natural disasters.⁽³³⁾ We will not expand on this subject here. However the following points should be restated:

- The system has to be based on the local situation and take full advantage of local resources, as well as respect existing institutions or systems. A "mobile" post-disaster epidemiologic surveillance team can only be used to strengthen local resources, not replace them.
- It is difficult to establish something where nothing exists. Ideally post-disaster surveillance should only be a strengthening or an extension of existing surveillance systems. At least all surveillance units in disaster-prone countries should have some introduction or knowledge about the reality of infectious disease problems following natural disasters.

- The system should be problem-oriented, i.e. not only collect information but collect it with a specific purpose. This purpose at a minimum should be outbreak-detection.
- Whatever the system developed or the methods of information collection used, information will circulate (even if only as rumors). If the system has reached any credibility the information will channel itself through it.

2. THE MOST IMMEDIATE EFFECT OF MOST DISASTERS IS ON ENVIRONMENTAL HEALTH

Activities should be developed to maintain or repair the damaged facilities or services. Two kinds of priorities can be established,⁽¹⁾ one depending on population density and one depending on the kind of services disrupted or unavailable. The higher the population density in an area the higher priority these areas should get more so when high population density is compounded by an element of temporary settlement, such as is the case with refugee camps.

As to kind of services first priority should be given to:

- adequate quantities of safe water
- basic sanitation facilities
- disposal of excreta
- disposal of liquid and solid wastes

On a second level are:

- food protection measures
- vector control measures
- personal hygiene

These measures should of course get more attention when they are identified through surveys or epidemiologic surveillance as the most important risk factors for actual disease outbreaks or potential disease problems. For these activities also specific guides were written.^(12,67) A very recent PAHO publication deals with one aspect of environmental health, namely vector control following natural disasters.⁽⁶⁸⁾

3. THE THIRD ELEMENT IS THE IMMEDIATE RESUMPTION OR THE STRENGTHENING OF

program; anti-malaria activities or yellow fever control programs; water quality; food quality; drug quality; veterinary public health or sanitary inspection can also be considered here.

These programs are designed to protect the health of people in normal times and to prevent unnecessary disease. In times of disaster, when so many more influences are threatening their importance is ever greater. Unfortunately it is often from these programs that personnel is drawn for so called relief-programs, thereby leaving the public vulnerable. An additional problem is that many people in these programs do not feel they are fulfilling essential jobs in disaster-relief. They are supposed to continue their routine activities but many want to join special disaster forces which probably have more glamour but are less effective.

Annex B

Disease Control and Disaster-Relief

1. DISASTER-RELIEF ACTIVITIES SHOULD IN NO WAY BE EXEMPT FROM THE ATTENTION OF DISEASE CONTROL PROGRAMS

As seen earlier in our experience disaster relief accounted for most of the disease outbreaks. It also caused a considerable part of potential disease problems (such as the contaminated portable water tanks in Dominica). Epidemiologic surveillance should also focus on disaster relief activities and personnel. They should be monitored for their environmental health impact and should be subject to the routine public health program analysis or standards of the country.

2. AT THE SAME TIME FULL ADVANTAGE SHOULD BE TAKEN OF DISASTER RELIEF AND PERSONNEL TO OBTAIN LONGTERM IMPACT ON DISEASE OCCURRENCE AND CONTROL

As discussed in the first section, a disaster does not usually result in infectious disease problems. It is also possible that disasters cause some problems to disappear or never to show up. One of the main opportunities a disaster provides is in the huge inflow of resources, in manpower, money and materials. Often alternatives are available for emergency measures. They all have a similar short-term impact at about the same price. Some have a long term beneficial impact as well. This should be discounted in emergency relief.

In order for such an infectious disease control program to be effective it needs to have been prepared in advance, both politically and technically. Decision-makers, in the health field as well as in other fields, need to be familiarized with modern thinking about infectious disease problems following natural disasters and appropriate disease control programs. Technical units in the health and related ministries need to be provided with the background and skills they will need to function effectively in a disaster.

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