event in the Americas (*16*). The severity of chloroquine-resistant falciparum malaria among Kampouchean refugees is another recent example of acquisition of communicable disease through urban-rural migration. The refugees, first expelled from population centers to rural areas with low malaria indices, then migrated to the Thailand border through holoendemic areas (*17*).

Immigration of susceptibles to affected areas

The poorly briefed or underprovisioned international relief worker is the most obvious type of susceptible entering an area affected by disaster. During the Nigerian Civil War a decade ago, this was a serious enough problem that the effectiveness of some foreign medical teams was jeopardized. Failure to appreciate the risk of malaria and/or unwillingness to take chemosuppressive drugs (e.g., chloroquine) caused several cases of the disease, which included cerebral malaria and one fatality. One group, assigned to Biafra, neglected to obtain prophylactic gammaglobulin, and before it could be flown in, members of the team were incapacitated by infectious hepatitis (*18*).

Established relief agencies have long been aware of the risk of disease which susceptibles incur, but they do encounter difficulty convincing skeptical, inexperienced and unsupervised volunteers of the dimensions of the problem. Ad hoc voluntary groups are usually established in the aftermath of a particular major disaster and are also formed in donor countries with special geographic interest in the affected nation. Organizers and their medical staff of ad hoc groups should consult the more experienced agencies or one of the excellent manuals about preserving the health of travelers to the tropics (*19-20*).

Increases in Levels of Endemic Communicable Disease in Local Populations

It must be appreciated that reports of communicable diseases should be expected to increase during medical relief periods in communities with high levels of contagious diseases. If medical services were not in existence before a disaster, instituting them afterwards will certainly increase the apparent levels of disease. Even when primary health services do exist before disaster, regular disease reporting is usually very incomplete. After a disaster, reports increase because the

number of reporting units is augmented. The total population served may also be swollen by movement into the area. Clinicians used to practicing under other local conditions may be confronted with clinical syndromes with which they are unfamiliar, and try to make etiologic diagnoses without diagnostic laboratory support.

During an epidemic—defined as an unexpected number of cases of a communicable disease—it is extremely important to determine whether increases in disease are real or are only apparent. Except in encamped refugees, the precise figure of the total population at risk is rarely available for the calculation of reported case rates, which is the number of reported cases divided by total population at risk. Thus, it may be necessary to perform a rapid survey in the community to reach an approximation of how common a communicable disease is in the general population. Trends can be monitored by examining retrospective and prospective clinic reports of patients seen with the condition. However, even when evaluation is performed, it may be difficult to decide whether an increase in rates is significant enough to warrant taking emergency control measures or requesting additional medical supplies or staff.

Special Problems with Communicable Disease in Encamped Populations

Experience in both the historic and the modern eras has repeatedly shown that the threat of communication of disease is greatest among crowded encamped populations, and that the likelihood of a serious outbreak increases with time. The danger is rather independent of the natural or manmade disaster which produced the encampment (*21*). The preventive medical officer should, therefore, prefer to have affected populations return to their homes or be promptly resettled. When this is not feasible, housing the population in dispersed temporary quarters with unaffected kin, or in nearby communities, is preferable to instituting encampment. However, the relief administrator often responds to the instinctive feeling that the situation can be better managed and the needs of those most affected by the disaster more efficiently provided when they are congregated.

When it is unavoidable to institute encampment for extended periods, the risks of communicable disease can be reduced through strict supervision of meticulous attention to sanitation. Measures that should