Health care in refugee camps

Christine Luxemburger1,2,3, Jean Rigal1 and François Nosten1,2,3

1 Shoklo Malaria Research Unit, Mae Sod, Thailand; 2 Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand; 3 Centre for Tropical Medicine, Nuffield Department of Clinical Medicine, John Radcliffe Hospital, Oxford, UK

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Over the last 20 years, influxes of refugees and population displacements have occurred mostly in countries which have neither the resources nor the capacity to deal with them. For example, countries such as Somalia, Sudan, Ethiopia, Rwanda and République Démocratique du Congo (Zaire), that have a gross national product per inhabitant less than US $500 per annum and an infant mortality rate greater than 120 deaths per live births, have been affected by major population displacements. The economic, social and ecological costs of massive influx of refugees create an enormous burden for the host country. As a consequence, aid to refugee and displaced populations in those countries is almost always dependent on a rapid response by the international community.

Population movements into areas with poor resources have usually led to high mortality rates, up to 60 times the expected rates for the area, during the first weeks or months following displacements. Among the displaced Dinkas in El Meiram (Sudan), the death rate was so high that more than one-quarter of the population died between June and October 1988. During, or in the period immediately following, population movements, most deaths are usually due to common diseases that can be easily prevented and treated. Relief programmes must therefore be initiated promptly in order to reduce excessive mortality rates. Two phases may be distinguished, using crude mortality rate (CMR) as a marker of the situation. (i) The emergency phase, following the arrival of refugees. This is the period during which mortality rates are higher than those experienced before displacement or, by convention, when the CMR is >1/10000/d, more than 5/10000/d defining a major catastrophe (TOOLE & WALDMAN, 1990; MOREN & RIGAL, 1992; HOWARTH et al., 1997). (ii) The post emergency, or consolidation, phase, starting when mortality returns to the level of the surrounding population (CMR 0-5/10000/d in stable populations), and when basic needs have been addressed.

During the emergency phase, the priorities of intervention are to provide water and sanitation, food and nutrition, shelter and site planning. Medical activity must focus on measles immunization, control of communicable diseases and epidemics. The primary causes of morbidity and mortality among refugees and displaced populations are measles, diarrhoeal diseases, acute respiratory infections, malnutrition, and malaria (in areas of transmission). These diseases account for 51–95% of all reported deaths. Outbreaks of measles are frequent, especially in camp settings, as an important risk factor for measles transmission is overcrowding (TOOLE & STEKETEE, 1989). Measles infection rates can reach high levels, exceeding 10%, and complications (pneumonia, diarrhoea and cerebral palsy) are very common. An epidemic that occurred in the Wed Kaoi refugee camp in Sudan in 1985 resulted in 2000 measles deaths over a period of 4 months. In order to prevent measles outbreaks during the emergency phase, the World Health Organization recommends mass immunization, aiming at a coverage close to 100% in the age group from 6 months to 12 15 years. A second dose, after 9 months of age, should be administered to those who were immunized between 6 and 9 months. Diarrhoeal diseases are another major cause of morbidity and mortality. During the massive influx of Rwandan refugees in Goma in Zaire in 1994 the high death rate was associated with explosive epidemics of diarrhoeal diseases caused by Vibrio cholerae O1 and Shigella dysenteriae type 1. Such major public health emergencies must be solved by urgent appropriate sanitation measures (clean water, latrines), a good case-management system (isolation area for cholera outbreaks, oral therapy areas), a good case-finding system that needs co-ordination, and well trained medical staff. In Goma, a well co-ordinated relief programme, based on rapidly acquired health data and effective intervention, was associated with a decline in death rate from the initial 20–35 to 5–8/10000/d by the second month of the crisis (GO-MA EPIDEMIOLOGIC GROUP, 1995).

The 5 leading causes of morbidity and mortality listed above often remain the major health problems during the consolidation phase. Thus, the increasing knowledge of health problems and groups at risk among refugees have helped to standardize the care of relief intervention, i.e. implementation of health structures, sanitation rules and therapeutic protocols. Nevertheless, the management of health in any new refugee situation cannot rely only on the previously established rules and implementation of local epidemiological surveillance is an absolute requirement. From the first rapid assessment of the situation to the evaluation of a control programme in a long-standing refugee problem, epidemiology must be integrated with any action. Health workers, agencies, refugee leaders and local authorities are key personnel in this process, and clear explanations of the usefulness of data collection must be given. In too many cases, relief programmes are willing to act, i.e. to treat and to vaccinate, but perceive the registration of births, deaths and diseases as useless and time-consuming. The presence of trained epidemiologists at the site at all stages of the refugee problem is increasingly recognized as essential to co-ordinate data collection and interpret this information.

Population census and registration of deaths and births are important. As massized population, the daily evaluation of the daily changes in CMR is essential in the management of the emergency phase in major refugee crises. In a more stable population, infant mortality is a marker of the overall health. A proper estimation of infant or under-5 mortality requires cross-sectional surveys and prospective studies. A simple surveillance system for diseases is often the easiest epidemiological tool to implement and has the following benefits. (i) Identification of the most common diseases at the site, which sometimes differ from the 5 conditions listed above (e.g. trypanosomiasis in Sudanese refugees in Uganda); this assessment leads to specific preventive and therapeutic measures. (ii) Early detection of epidemics such as cholera and dysentery in Rwandan refugees and malaria in Thailand, or of unusual epidemics, such as pellagra in...
Malawi (Malfait et al., 1993). (iii) Identification of groups at risk; young children and pregnant women are usually considered more vulnerable than the rest of the population. (iv) Long-term surveillance of the most common diseases in the site, and thus evaluation of control programmes; this had been well demonstrated in 2 malarious areas where different control programmes were used: early detection and treatment in the Karen refugee camps (Decludt et al., 1991), and insecticide spraying in Pakistan (Rowland et al., 1994). Appropriate cross-sectional surveys complete this basic information and are undertaken according to the emerging problems: nutritional surveys, coupled with long-term immunization coverage assessments, malaria prevalence surveys, etc.

In many major refugee situations, this surveillance has been established and there is now increasing evidence that health problems facing refugee populations are changing with time and with geographical situation. This is particularly important for infectious diseases, the main causes of mortality. The emergence of new diseases and the development of drug-resistant pathogens further complicate the task of medical aid workers. This means that those responsible for planning and implementing health care programmes must adapt to each situation and evaluate their interventions. This is the key to efficacy and efficiency, in the context of a change of momentum in the humanitarian assistance, away from pure relief work and towards a more professional approach. As outlined by Howarth et al. (1997), the theme is evidence-based disaster medicine. When setting up a health care system in a refugee population, the responsible agency(ies) cannot simply rely on textbooks and guidelines established elsewhere. These references may not be adapted for the drug susceptibility of the local pathogens or to the ecology of the local vectors. This is particularly true for infectious diseases such as malaria, enteric fevers, and even respiratory infections due to pneumococci. Often refugee populations settle in areas where little information is available. But, whenever possible, all available data on the resistance pattern of the local pathogens and on the vectors should be collected. The efficacy of the treatment and prevention interventions should be evaluated prospectively. This may not be possible in the acute phase or in very unstable situations, but it should be done as soon as possible. With the Karen refugees on the Thai-Myanmar border, this approach has resulted in an adaptive response to increasing drug resistance of Plasmodium falciparum which has proved relevant to surrounding populations also (Nosten et al., 1991). This aspect of the work of medical aid agencies can be called operational research. It can be done properly only by dedicated professionals with all the support and the time needed. Nearly all the present medical experience in diseases of the developing world, among physicians and nurses of the developed world, is concentrated in the staff of the humanitarian aid agencies. But this extraordinary source of information has been very little used. Operational research could be the link between the workers in the field and the academic world. This type of research should allow the aid workers to undertake teaching activities, which would contribute to improving their career structure (Slim, 1995). Even more important, this practice of operational research would help to ensure that the best possible care will be provided to the displaced populations. This is both an ethical obligation and an integral part of the contribution of evidence-based medicine towards greater efficacy.

References