

Epidemiological Surveillance: A Growing Role in Humanitarian Emergencies

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Summary

Epidemiology is acquiring an important role in a multi-sector approach to humanitarian aid.

It is an extremely valuable instrument in order to collect and analyse data that can be difficult to obtain particularly after natural or man made disasters, and this information can be essential both in promoting accountability and as the basis for re-assessment and constant improvement of the activities carried out on the field.

Information sharing among partners involved in international aid projects, in respect of confidentiality issues, is focal in the development of a network of trust and cooperation among relief agencies, local authorities and other partners such as Universities.

This paper describes the role of this discipline in the partnership model developed in Sri Lanka among the Sri-lankan health authorities, the Italian Red Cross and the University of Rome on the wake of the 2004 tsunami.

Introduction

According to the definition proposed by F. M Burkle Jr in 2001 a "*disaster*" defines a series of catastrophic events that overwhelm the capacity of response of a community, which result in a threat to both public health and the environment [1].

This is the usual context in which relief workers operate and where partnerships between the local authorities and international agencies are most

needed in order to favour coordination avoiding the overlaps and waste of resources that have been witnessed in the past.

Moreover the multi-sector approach to humanitarian aid that is developing today takes into account different activities such as health assistance, epidemiological surveillance, training, psychological support, familiarity with laws/regulations and logistics that require the interaction of different professionals and increased coordination among groups within the same organization and among several organizations that need to work often shoulder to shoulder in major disaster settings.

The acquisition and sharing of information however is complicated not only in the first phase of a disaster, where understandably efforts tend to be rather improvised and poorly coordinated among different actors, but also in the post and late emergency phases.

Post and late emergency phases in particular require that specific attention is dedicated to the surveillance and early detection of communicable diseases in populations that have suffered displacement or significant change in their living environment and that following a disaster live in poor hygienic conditions, in overcrowded settings and/or with scarce access to medical assistance.

Early identification and, through repeated risk assessment, specific prevention are often the only tools available in order to avoid the development and spread of epidemics that could prove far more difficult to manage due to the concomitant critic situation.

Among various existing definitions of epidemiology one of them describes it as the field of medical science that *deals with the study of the causes, distribution, and control of disease in populations* [2].

Although this is certainly not a new tool in medical research it's application in the field of humanitarian work is rather recent. However it's importance is growing both because of the technical advantages it can provide in improving and adjusting the humanitarian activities to the needs of the affected population and because through data and observed trends analysis evidence of good practice and of good management of the project can be provided thus increasing the overall accountability of the programmes.

Materials and methods

Partnership Model

The partnership that is described in this paper involved middle (Sri Lanka District health authorities) and high income countries (the Italian Red Cross - ItRC- in collaboration with the infectious disease physicians of the University of Rome "Sapienza") with a unilateral donor (the ItRC).

The setting in which this partnership developed is the post-emergency phase of the tsunami that hit south east Asia and the eastern coasts of Africa on the 26th of December 2004 causing an estimated 280 000 victims [3].

Sri Lanka was the second most severely hit country after Indonesia.

The Island was hit by the wave at 9am local time in its eastern, north-eastern, southern and south western coasts.

The effect was a partial or total destruction of all the buildings that lay within 2 km from the coast line in 13 of the 25 districts of the country. The estimated number of casualties was 31 141 with more that 23 000 wounded [4, 5].

People were evacuated generating a population of 547 727 internally displaced people (IDPs) [6].

According to WHO the risk for communicable disease spread in the island was present for all the categories examined (cholera, thyphoid, shigellosis, hepatitis A and E, dengue fever, malaria, scrub typhus, leptospirosis, Acute lower tract respiratory infections, measles, meningitis and tuberculosis) [7].

Policy Overview and Relevant Issues

The policy innovation consisted in the introduction of a programme of systematic communicable diseases epidemiological surveillance within a health assistance project in the Eastern Province of Sri Lanka.

This area, wracked by the 2004 tsunami as well as politically unstable since 1983, presented a highly mobile and numerous IDP population.

Since the beginning of the programme, passing from a late-emergency phase to a post-emergency phase, there has been a priority shift to development and a slow replacement of IDP camps by villages even if the persisting political instability did not allow the population to settle definitively.

Results

In the period between the 25th of March and the 31st of August 2005 on 7554 medical consultations, 3022 had an outcome diagnosis of an infectious disease, that accounted for 40% of the total.

The most common diseases among this group were respiratory tract infections (34%), skin infections (16%) and hepato-biliary and GI tract infections (14%). In these groups type of infection and village of the patient were noted. Skin infections were studied with attention not so much for their clinical implications but because increase in the incidence of diseases such as scabies were interpreted as indicators of poor hygiene levels in the IDP camps.

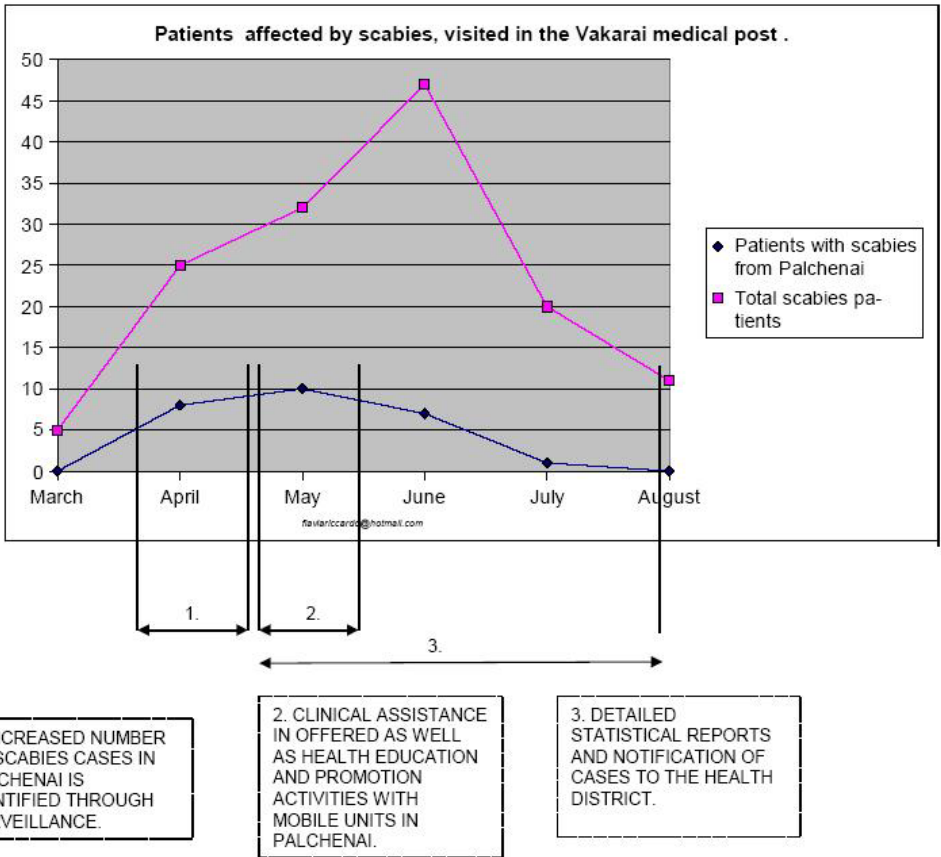
During this time period two clusters of scabies and acute hepatitis were identified and interventions made on both local and district levels (figure 1).

ItRC medical teams were deployed in the affected IDP camps acting on treatment/isolation of cases and prevention campaigns; cases were notified according to local laws, coordination meetings were held at district level with health authorities and NGOs and “community health” trainings were organised for local volunteers in IDP camps.

Interventions promoted by health authorities included potable water control at distribution points.

No epidemics followed the containment interventions on the two clusters identified and data collected between August 2005 and March 2006 did not show further epidemic clusters.

Achievement of cooperation and coordination with all organisations present



in the assigned area, value attribution to existing public health plans and capacity building in epidemiological surveillance applied to public health were some of the major outcomes of the partnership.

Conclusions

The added value of the partnership can be found locally since a connection was made between clinical assistance and public health programmes in areas from which information was not available in official statistics. This allowed rapid containment strategies avoiding the spread of communicable diseases in poor hygiene settings.

However a greater scope of significance can be found in the coordination achieved with the divisional health authorities and NGOs that increased accountability and strengthened the relationship with the host country.

The ItRC is the only currently accepted humanitarian organisation offering health assistance in the area.

Comprehensive knowledge, respect of existing systems (eg. notification) in the host country, consequent adaptation and the choice of capacity building strategies are applicable with good results in humanitarian emergency management and are essential in the information sharing and coordination processes of multilateral partnerships.

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