

Nutrition Program Research in Complex Emergencies: Opportunities and Constraints for Development of Evidence Base

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Introduction: There is a plethora of guidelines and standards for nutrition programs in emergencies from non-governmental organizations and United Nations (UN) agencies. The evidence based on these guidelines is uncertain. In 2003, an emergency nutrition network workshop identified a wide range of issues needing research for evidence-based practice in this field, from treatment of severe malnutrition to the prevention of outbreaks of nutrition deficiencies.

Methods: Commonly used guidelines, published literature, and workshops were reviewed for sources of evidence.

Results: The main sources of evidence identified for field interventions during complex emergencies are: (1) evidence from non-emergency settings, usually adapted to special conditions; (2) descriptive research from emergency settings (surveys and evaluations); (3) operational research through program innovation (seldom disseminated through publication); (4) basic and experimental research in the field (still rare); and (5) personal experience of practitioners (lacking formal testing).

The difficult working conditions in the field, prioritization of aid before research, the volatility of complex emergencies (displaced populations, limited access, rapid outbreaks, etc.), and the lack of adapted field research tools were identified as some of the constraints for the development of new evidence from emergency settings. Even when research is undertaken it is often not disseminated, due to lack of time or resources, and the lack of interest from journals, often not sensitive to practitioners' demands, specific problems, and needs of the emergency setting.

Despite constraints, the field of nutrition in emergencies produces an enormous amount of routine information through in-patient data, evaluations, surveys, and field reports. There is a current climate acknowledging that if appropriately explored, these would provide direct and indirect evidence to inform programs and orientate the development of further research.

Conclusion: Despite research in the nutrition sector, which has led to significant advances in emergency programming, and an increasing movement towards evidence-based practice, the evidence base of emergency interventions remains insufficient. There are major methodological issues that require further exploration, for example: (1) What ethical standards and procedures are to be applied when planning and undertaking research affecting human beings during an emergency?; (2) How should evidence from non-emergency settings be adapted?; and (3) What lessons can only be learned during the emergency phase of a crisis?. With prioritization of research by agencies and donors, appropriate exploitation of information from the field, together with

appropriate links between practitioners in the field, headquarters and researchers from universities such as Partners, emergency nutrition research may help create the environment and develop the tools and methodology to move forward.

Keywords: emergencies; evidence-based; interventions; nutrition; research; United Nations

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Implementing an Early Medical Response Based on High-Risk Syndrome Surveillance: Approach For Resource Limited Settings

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A key component in the implementation of adequate responses to emerging infectious diseases, including those caused by the deliberate release of pathogens, is early recognition of outbreaks. However, modern and sensitive, real-time, epidemiological surveillance systems may not be available in settings with a limited number of health workers and public health resources. Diagnostic processes are also time- and resource-demanding, and can contribute to further delay in the appropriate medical response.

A model for managing high-risk syndromes based on simple algorithms has been developed by the National Centre for Biological Defence in Statens Serum Institut, Denmark. The template is meant to be used in civilian, humanitarian, or military contexts, in which few surveillance resources are available. It proposes a common initial management of clinical cases until the diagnosis and mode of transmission is known. High-risk syndromes, and not diseases, are defined as clinical cases with epidemic potential. Bioterrorism threats, including all Centers for Disease Control and Prevention (CDC) Category-A diseases and a selection of Category-B and C diseases are included in the algorithms. The model emphasizes infection control procedures for four high-risk syndromes: (1) acute febrile respiratory disease; (2) acute gastroenteritis; (3) acute febrile exanthemas; and (4) acute progressive paralysis. Case reporting is simple and facilitates awareness of an unusual event, despite limited educational backgrounds among health workers. The algorithms include criteria for the deployment of a sampling and diagnostic team in case of unexplained disease outbreaks.

This model attempts to generate a rapid response in settings with limited resources, but it requires training of health workers, involvement of a centralized surveillance entity, and utilization of infection control measures for its implementation. In military contexts, such as international peace support operations, communicable disease surveillance must be established within a frame of civilian and military collaboration, while creating regular communication channels and defining the allocation of responsibilities