

HRH in Public Health Emergencies in developing countries: an overview

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This Policy Note is currently in final DRAFT and comments are welcome. Submit your feedback via email to: Lisa Thompson at lisa.thompson@unsw.edu.au or Anthony Zwi at a.zwi@unsw.edu.au

Introduction

This policy note outlines the importance of the health workforce in public health emergencies (PHEs), highlights the causes of PHEs and the subsequent impacts on the health worker and health system, and raises questions around health workforce performance in PHEs. The focus is on developing country contexts.

While it is recognised that various components of the health workforce (national government ministries, armed forces, UN agencies, development partners, trained community health volunteers and NGOs) have a role to play in a disaster or emergency response, this policy note focuses on the particular issues pertinent to the public sector workforce in a developing country context.

Importance of HRH in PHEs

In any public health emergency, the health workforce plays a central role. Health workers may be involved in prevention (where possible), preparedness and planning to respond should an emergency occur, and mitigation of the effect of any emergencies. The health workforce in times of emergencies and disasters typically comprises national public sector staff as the core workers, and, at times, additional workers from humanitarian, non-governmental and other organisations depending on the magnitude and type of the emergency. Health workers have the primary goal of saving lives and alleviating suffering.

Some of the tasks for which the national health workforce is responsible include co-ordinating medical services, communicating public health advice and warnings to participating agencies and the wider community, providing support for disaster-affected community members, taking the lead in epidemic and pandemic control, increasing the capacity of emergency departments and health care units, and maintaining the delivery of routine medical and health services to the extent possible to the un-affected communities.

What is a PHE?

Public Health Emergencies (PHEs) may result from a wide range of crises: an epidemic or pandemic, or the secondary impact or public health consequences of natural or man-made disasters.

An "emergency" can be defined as a state in which normal procedures are suspended and extraordinary measures are taken in order to avert the impact of a hazard on the community (WPRO 2005-2010). A PHE can be defined as a situation in which normal (public health) procedures are suspended and extraordinary measures are taken in order to avert the impact of a hazard on the community.

Examples of direct causes of PHEs include pandemics (e.g. SARS or swine flu) or epidemics (e.g. cholera), while indirect causes include increased health needs resulting from infrastructure damage, or heightened risk of infectious disease outbreaks due to forcibly displaced populations as a result of war or natural disaster (e.g. increased water-borne diseases due to flooding).

Impact on health workers

PHEs place extra demands on the health workforce and on health systems. The capacity of the health system and health workforce to respond effectively depends on the characteristics of the crisis or disaster, in terms of magnitude, scale, and form, characteristics of the affected systems and populations, including vulnerability of the community and effectiveness of preparedness and planning, and availability of resources.

The additional demands and challenges for health workers, as a result of a PHE, include:

- Increased workload due to raised demands for health care – this may take the form of the need to work longer hours or more shifts, or to work off-site and/or under greater pressure.
- Expansion of usual role requiring specific and additional competencies.
- Requirements to work with other sectors and other agencies in a co-ordinated fashion.
- The impact of the PHE on the health worker herself and/or her family (mortality, morbidity, infectious disease, loss of home, psycho-social pressures manifest as stress, anxiety, or depression).
- Increased pressure to address the psycho-social needs of the general population and the need to develop skills to address these.
- Disruptions within the public health system (such as those caused by infrastructure damage) which result in delays in supplies such as vaccines, and other resources required to do their job effectively.
- Disruptions to salaries and adequate compensation for work performed.
- Increase in occupational health and safety risks; often along with deteriorating security.
- Ethical dilemmas such as changes in triage arrangements (having to prioritise who to treat most urgently and who can wait to be seen later), not having the resources to treat conditions that would normally be covered, and decisions around loyalty to the job versus family and community obligations.
- Challenges in managing coordination and the wide range of relationships requiring attention.
- Working with often minimal resources under extremely difficult conditions.

Health workforce performance during PHEs - developing country context

PHEs, when they occur in developing countries, exacerbate gaps and weaknesses that already exist in the current work force and health system. A key constraint is the insufficient number of skilled health workers available to assist.

The global initiatives highlighted in Box 1 (top right) emphasise the major health workforce challenges as: health worker shortages, imbalance in skills mix, maldistribution, negative work environment, and weak knowledge base (Chen et al. 2004).

Box 1.

International initiatives that have highlighted the human resource crisis in the health sector, and particularly within developing countries, have included: high level forums convened to discuss strategies to meet the Millennium Development Goals (WHO & World Bank 2003); The Joint Learning Initiative's "Overcoming The Crises" report (Joint Learning Initiative 2004); the WHO Report: Working Together for Health (WHO 2006) and resolutions of the World Health Assemblies on health workforce development.

Additional significant factors affecting the health workforce in developing countries include: the impact of HIV/AIDS through increased workloads, exposure to communicable diseases or physical and psychological dangers, migration of health workforce ('brain drain'); and underinvestment in health human resources (Joint Learning Initiative 2004).

Human resource challenges vary greatly within and between countries and are also influenced by factors outside the health system such as the general political climate, as well as factors within the country such as conflict, economic collapse, and poor governance (Narasimhan et al. 2004).

The previously mentioned factors concern the need for adequate numbers of health workers to achieve health outcomes.

The performance of available staff greatly affects the quality and effectiveness of the work undertaken. Worker performance can be defined as a combination of availability of staff along with staff responsiveness, productivity and competence (WHO 2006). Interrelated elements such as working conditions, systems of accountability, knowledge skills and attitudes, absenteeism, motivation, and job satisfaction all have an impact on performance (Dieleman & Harnmeijer 2006).

Performance is relevant at different levels of the health system. At national level, health policy makers and planners require access to sufficient and qualified staff to contribute to improved health outcomes. Health managers at the facility level work best with a qualified and motivated team. Health workers seek opportunities that suit their personal and professional objectives and family situations; the work environment thus is a major influence on performance (Dieleman & Harnmeijer 2006).

PHEs affect the context in which health workers perform. Where personal security and OH&S risks are exacerbated or not considered at all, this may affect performance, morale, and absenteeism especially in the developing country setting.

In order for health workers to perform their roles effectively they require a functioning health system operating within broader systems of support (Narasimhan et al. 2004). WHO conceptualises a functional health system as including six building blocks: services delivery, information and evidence, medical products and technologies, health workforce, health financing, and leadership and management (WHO 2010). **Each one of these might be stressed, and at times stretched beyond the limits, in times of crises.**

Health systems in under-resourced or poorly organised settings may not be able to reliably provide sufficient good quality drugs, vaccines, information, or services related to prevention, care or treatment to those who need them, or may only be able to provide these to certain sub groups within the population (WHO 2007). Poor health information systems may lead to program planning and implementation being undertaken with insufficient understanding of the populations and groups needing and/or using the services.

Constraints to functioning health information systems include inadequate data collection systems, lack of trained personnel, and poor motivation to report – in part a result of poor use and dissemination of collected data (Azubuike & Ehiri 1999). All of these are magnified during PHEs when needs are greater.

Public health emergency preparedness

Global pandemics such as SARS and influenza have catalysed interest in strengthening public health preparedness as a means of reducing transmission and reducing mortality due to outbreaks in the developing world (Kruk 2008).

Public Health Emergency Preparedness (PHEP) is the capability of the public health and health care systems, communities and individuals to prevent, protect against, and quickly respond to and recover from health emergencies, particularly those whose scale, timing or unpredictability threaten to overwhelm routine capabilities (Nelson, C et al. 2007).

In order to respond to emergencies or disasters, public health systems require several capacities to be in place. These include: (1) preparedness and response capabilities; (2) communication services; (3) information systems; (4) epidemiology and surveillance; (5) laboratory services; (6) policy and evaluation; and (7) a trained workforce (Centre

for Public Health Practice Emory University) cited in (Moore et al. 2007).

Many public health systems in developing countries are unable to meet the routine demands on their systems in “normal” times, let alone in times of a crisis or PHE. Lessons learned in public health preparedness in developed countries, much of it in the aftermath of the heightened concerns with security after the 9/11 terrorist attack, provide some guidance regarding potential investments in preparedness for developing countries (Kruk 2008). Strengthening preparedness may include ensuring well functioning laboratories (equipped and staffed), health information and surveillance systems, human resources (addressing the workforce crises), and communication strategies to engage effectively with the public (Kruk 2008) and indeed the workforce.

The infrequency of larger scale public health emergencies has impeded the development of an evidence base of best practice, standards and performance measures through which to evaluate public health preparedness strategies (Nelson, CD et al. 2008). A further difficulty arises in arguing the importance of evaluation when responding to the emergency is itself so costly.

Academic support, documentation and analysis, including of case-studies during crises and reflections on performance in their aftermath, could greatly assist the build-up of evidence and experience. In earlier work we demonstrated the value of real-time analysis of health sector and health worker performance during a period of political instability and crisis in Timor-Leste (Zwi, Martins, Grove et al. 2007). This policy note seeks to encourage others to document and analyse and evaluate experience and feed this into the evidence base as to what works, how, and in what circumstances.

Health workforce performance during times of PHE, especially in developing country contexts, requires innovation. We adapt the health workforce performance framework (Dieleman & Harnmeijer 2006) as a useful way of conceptualising health workforce performance strategies during times of PHE. The framework suggests that workforce performance can be improved by increasing availability, increasing responsiveness and improving competence of health workers. The section below applies each of these factors to a PHE context.

i) Increasing availability

A variety of mechanisms may be utilised to enhance availability. A key feature is the need to ensure surge capacity during times of acutely increased need. Additional resources may be deployed from within the country using local resources through current staff taking on additional or new roles and/or deploying additional support through, for

example, volunteer groups like the Red Cross. In addition, deploying available extra resources as may be available through the military or other locally available cadres. In some settings, diaspora workers wishing to assist their country in a time of crisis, such as Sri Lankans following the 2004 tsunami, may return to assist. In Timor-Leste during the 2005/6 political instability and crisis, a Cuban Medical Brigade which was already present in the country was mobilised to support the maintenance of health services during a period in which many public sector workers were displaced and scared (Zwi, Martins, Grove, et al. 2007). Other modifications to services delivery include reassessing priority roles and closing some non-essential services, transferring staff to areas of higher need, and enabling staff to get reassigned to new work centres if they themselves are displaced.

ii) Increasing responsiveness

Lessons from research in developed countries may be of value. A systematic review (Chaffee 2009) assessed the willingness of health care personnel to work in disasters and found that this was related to the type of disaster, concerns about personal safety, including availability of personal protective equipment, and worries regarding family and pets.

Strategies to support the workforce in times of PHE need to consider the real and perceived needs of health workers, including risks to their own and their families' health.

iii) Improving competence

"Competencies" describe the required knowledge, skills and abilities needed to effectively perform in the workplace (Gonczi 1994). The disaster response community have highlighted the need for effective training, informed by evidence, for health care staff at all levels, as well as the development of standards to guide training in multidisciplinary responses to major events (Hsu et al. 2006).

A systematic review on competencies and other educational and training guidance for professionals in the disaster health system (Subbarao et al. 2008) found that most published competencies are limited to a particular practice setting, a specific discipline or a workplace. In addition they identified a failure to make the competencies relevant to all health professionals regardless of their previous disaster experience. They highlight a particular lack in developing competencies for health leaders, a serious gap given the centrality of effective leadership in times of crisis.

Studies in the USA have proposed competencies for health professionals for various stages of the disaster cycle. Review of the literature, along with a Delphi process to develop consensus among experts, enabled the

identification of competencies required by public health nurses (PHNs) for preparedness, response and recovery required in surge events (Polivka et al. 2008).

Preparedness competencies included personal preparedness, understanding disaster preparedness terms, concepts, and roles, knowledge of the health department's disaster plan, accessible communication equipment suitable for disasters, and clear understanding of the role of the PHN in a surge event.

Response phase competencies included the ability to conduct a rapid needs assessment, to investigate outbreaks and maintain surveillance, to undertake public health triage, communicate risk and technical skills such as those required for mass dispensing.

Recovery competencies included ability to participate in debriefing processes, to contribute to disaster planning, and to coordinate efforts to address the psychosocial and public health impact of the event(s).

Suggested competencies for hospital health care workers, on which to base disaster management training, included recognition of potential critical events; ability to implement initial actions and apply the principles of critical event management, demonstrating critical event safety principles, understanding the institutional emergency operations plan. Such workers should also be able to demonstrate effective critical event communications, understanding the incident command system and role within it; and demonstrate the knowledge and skills required to fulfil a valuable role during a critical event (Hsu et al. 2006).

Policy implications for HRH in PHEs

The health workforce during times of PHEs face unique challenges which impact on their ability to perform their roles.

Health workers should be trained, in non-disaster periods, to be prepared for crises and PHEs.

The health workforce needs to be supported by, and integrated into, a well functioning health system. A health system that functions well routinely is key to the ability to function well in crises.

Whilst lessons can be learned from the responses to PHEs in developed countries, further documentation and research on strategies and innovations in developing country contexts, would be of value.

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