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Health promotion in disease outbreaks and health emergencies

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The book is exceptionally timely and will be of interest to many professionals, students and academics. I am not aware of any other book that covers this important topic. Glenn Laverack brings credibility and kudos having direct experience of health emergencies and seen as a leading academic thinker in health promotion.

— **Dr. James Woodall**

Reader in Health Promotion, Leeds Recltett University

Using specific examples to illustrate broader concepts, this text provides a solid introduction to health promotion in infectious disease outbreaks.

— **Ella Watson-Stryker**

Health Promotion Manager, Médecins Sans Frontières

This book is timely given the current humanitarian and development scenarios in which health promoters and development communicators must work. There is a dire need for reference materials for practitioners which expand upon theoretical/scientific concepts and principles and provide practical, straightforward guidance to professionals working in the field. The increasing amount of public health emergencies, e.g. SARS, Ebola, Zika etc. require professionals to increase their preparedness to respond in outbreak or disaster situations and this book becomes a useful tool for needed action.

— **Dr. Erma Manoncourt**

Vice-President of Membership and Co-Chair Global Working Group on the Social Determinants of Health, IUHPE, Paris, France

Another valuable and informative book by Dr Glenn Laverack, the professor who champions the value of ordinary people and communities, and places them at the centre of best health promotion practice. This is a very welcome text that complements and sometimes challenges the traditional medical, top-down, approaches to disease outbreaks. As the author says, "It is not only about being scientifically right, but also about being real." The book puts communication, education and engagement at its heart, showing how working sensitively with local people, and empowering them to become part of the solution, we can quickly and successfully limit the rapid outbreak of disease and help communities to move forward in a self-directed, sustainable way. Full of contemporary international examples, case studies and helpful short summaries of key points and terminology, this readable text is not only essential for any undergraduate or postgraduate studying health promotion, health protection or public health, it needs to be read by practitioners who are dealing with the immense challenges of international health emergencies now.

— **Dr. Sally Robinson**

Public Health Lead, Canterbury Christ Church University

HEALTH PROMOTION IN DISEASE OUTBREAKS AND HEALTH EMERGENCIES

Glenn Laverack



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Preface

Over the past 20 years, the number of international actors involved in disease outbreak and health emergency responses has dramatically increased. Typically, hundreds of non-government organisations are mobilised alongside the United Nations, government and private sector stakeholders, greatly complicating the coordination of the situation. Concerns about the ease of transmission of communicable diseases across international borders have also dramatically increased, further compounded by the complexity of connections between people that span both geographical and cultural borders.

Health promotion has a key role to play in disease outbreaks and health emergencies by offering bottom-up approaches that actively involve communities by using local expertise and networks in the delivery of the response. A unique aspect of disease outbreaks is that the timeframe of activities is a deciding factor in how many lives are saved and in such circumstances health promotion can be quickly integrated as a part of a response. Future global threats to public health may come from one disease such as a new strain of avian influenza or from a combination of person-to-person and vector-borne outbreaks. Whatever the context, health promotion will play a crucial role in rapid data collection, communication, community engagement, rumour management and conflict resolution. It will also play a strong role in the promotion of vaccination, in changing behaviours and in helping to build a dialogue to address the constraints that create an unsafe environment. In the post-outbreak period, health promotion will help survivors by increasing awareness about available facilities and by promoting the use of counselling and welfare initiatives. Health promotion will help to build social support networks and to counter stigma and isolation and to assist with rehabilitation services for people with disabilities.

Community engagement is an especially important activity to help others to address the risks that are caused by an outbreak. Communication is a crucial step in this approach to promote positive health behaviours such as hygiene promotion that prevents disease transmission. The guiding principle is to help people to make informed choices and to give them more control to take their own actions such as community-built latrines. The critical point is that disease outbreaks can

only be addressed by helping people to empower themselves rather than by simply trying to change their behaviour. The advantage of empowerment is that it can strengthen the individual, the family and the community. Empowerment increases autonomy and personal skills and gives people the control they need to achieve healthier, safer lives.

Top-down tactics have had a questionable effect, potentially worsening a disease outbreak, and contributing to a greater social and economic burden. A key concern is whether the lessons offered in previous disease outbreaks have been truly learned, or whether a top-down agenda will continue to dominate the disease outbreak responses of the future. Health promotion can make an important contribution because it recognises the value of a bottom-up approach that can help response agencies to understand a more appropriate way forward. Involving everyone, most importantly those people directly affected, is crucial to the success of any response when the next outbreak or emergency inevitably occurs.

THE PURPOSE OF THIS BOOK

The purpose of this book is to provide a practical guide to the valuable role that health promotion can play in disease outbreaks and health emergencies. This is an exciting and emerging sub-professional field within health promotion that requires a balanced set of competencies combining the latest evidence with the best practices. The book has been written in an easy-to-read style that has a cross-over appeal to the students, teachers and practitioners of health promotion, public health and other allied professions. I have used a good deal of my own personal international experience as well as consulting with many others about the most relevant content for the book. Through this book, I want to inspire the reader to think beyond the traditional role of health promotion and to understand how he or she can have a meaningful role in disease outbreaks and health emergencies.

THE ORGANIZATION OF THIS BOOK

This book is divided into three parts that comprehensively cover the role that health promoters have in disease outbreaks and health emergencies. The first part of the book, Chapters 1–5, provides a detailed overview of the role of health promotion beginning in Chapter 1 by setting the context of this new and exciting professional field. The differentiation between top-down and bottom-up approaches and an identification of the key stakeholders are discussed. Chapters 2–5 then cover key areas of health promotion practice. Chapter 2 discusses quantitative and qualitative methods to collect information quickly and effectively using rapid assessment techniques, working in a cross-cultural context and the relevance of anthropology. Chapter 3 covers communication for both behaviour change and empowerment and a variety of reliable communication approaches that can be applied in disease outbreaks. Chapter 4 discusses the distinct role of risk communication, fear-based interventions and the importance of working with volunteers and lay health workers in disease outbreaks. Chapter 5 provides

a framework for community engagement as a practical seven-step approach and a discussion of the role of community engagement in clinical trials. Community empowerment and health activism are also discussed, as these processes are often a result of community engagement and can lead to greater collective action. The second part of this book, Chapters 6–8, directly addresses the role of health promotion in different types of disease outbreaks that are transmitted either person to person or are vector borne. Chapter 6 is devoted to the Ebola virus disease, the first disease to be declared a global security threat by the United Nations, and a health emergency that can offer valuable lessons for other events in the future. Chapter 7 covers person-to-person disease transmission with a particular focus on avian influenza, cholera, polio and the Middle East respiratory syndrome outbreaks. Chapter 8 covers vector-borne transmission with a particular focus on the Zika virus, Nipah disease, chikungunya disease and yellow fever. Some diseases can be controlled through vaccines, and Chapter 8 discusses the role of health promotion in vaccination programmes. The third part of this book covers the role of health promotion in specialist areas of work in disease outbreaks and health emergencies. Chapter 9 covers the management of community rumours, community resistance, violence and protests, the management of quarantines and coordinating security issues with military personnel. Chapter 10 discusses the role of health promotion in the post-outbreak response including working with survivors to address stigma and isolation, building networks, counselling and helping people to cope with disabilities. A full reference list, index and glossary of terms are provided at the end of the book.

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I would like to acknowledge the many people with whom I have exchanged ideas and experiences. In particular, I would like to thank Gaya Gamhewage for her initial encouragement, Krystle Lai and Ella Watson-Stryker for their review of the draft manuscript and Erma Manoncourt for being my inspiration.

To my family, Elizabeth, Ben, Holly and Rebecca just because I love them.

Health promotion, disease outbreaks and health emergencies

KEY POINTS

- The goal of health promotion in disease outbreaks and health emergencies is to involve and enable people to gain more control to have healthier and safer lives.
- Health promotion can provide a range of educational and skills development activities that are essential to help people to empower themselves during a disease outbreak.
- At the heart of a successful outbreak response is who controls the way in which the disease control programme is designed and implemented.
- In a disease outbreak the situation can change rapidly and budget flexibility is essential.
- Community- and faith-based organisations are an essential partner to a holistic and effective disease outbreak response.

Over the past 20 years the number of international agencies involved in disease outbreak and health emergency responses has increased significantly. In the aftermath of the 2010 earthquake in Haiti, for example, several hundred international non-government organisations were mobilised alongside the United Nations, government, and the private sectors, greatly increasing the complexity of the situation. The growing number of such events has placed pressure on the availability of funding opportunities. At the same time, there has been a realisation that the goal of involving communities has not succeeded, yet such involvement is crucial to the success of a response (Tellier and Roche 2016). The ease of the transmission of diseases between countries is a major issue, and the response in one country cannot be separated from that of another country because

connections between people and organisations span geographic and cultural borders (Naidoo and Wills 2009). The outbreak of the Ebola virus disease, for example, was exasperated by the cross-border movement of people as well as by already fragile healthcare systems.

The goal of health promotion in disease outbreaks and health emergencies is to involve and enable people to gain more control to have healthier and safer lives.

HEALTH PROMOTION

Health promotion is a set of principles involving equity and participation and a practice that encompasses communication, capacity building and politically orientated activities. The definition provided in the Ottawa Charter for Health Promotion is still the most universally recognised as ‘a process of enabling people to increase control over, and to improve, their health’ (World Health Organization 1986). Health promotion represents a social and political process that not only embraces actions directed at strengthening the skills and knowledge of individuals, but also action directed towards changing sociocultural, environmental and economic conditions that have an impact on health.

A unique aspect of disease outbreaks and health emergencies is that the situation can change quickly and also the speed at which activities are delivered can be a deciding factor in preventing the transmission of an infection. In a disease outbreak, health promoters are practitioners who incorporate some aspect of communication and community engagement in their everyday work. These workers include medical personnel, health educators, community mobilisers, social workers, trainers and managers. Health promoters play a key role to quickly deliver approaches that government and non-government agencies alike can utilise as a part of any response. Health promotion is also a core responsibility for government services in many countries and can be quickly integrated in a disease outbreak response by providing local expertise and a basic infrastructure for the delivery of a range of communications and other activities. The role of the health promoter also includes data collection, communication, community capacity building and engagement, rumour and resistance management, stigma recognition, survivor support and provision of social support to families and communities.

Behaviour change communication, Communication for Development (C4D) and hygiene promotion interventions help to prevent person-to-person disease transmission by targeting specific knowledge and skills, such as hand-washing with soap. In controlling vector-borne diseases, health promotion uses health education messaging so that people know how best to protect themselves and their communities. The purpose is to motivate people to change high-risk behaviours by giving them improved skills and self-confidence. The focus on individual responsibility must avoid ‘victim-blaming’, that is, making people feel

guilty about their state of health even though certain risk factors are outside of their control, such as not having access to a bed net to protect themselves against mosquitoes. The role of health education departments at the national level is to design learning materials and provide training, instruction and skills development. The guiding principle is to help people to make informed choices to modify their behaviours and to avoid risks.

Health promotion can provide a range of educational and skills development activities that are essential to help people to empower themselves during a disease outbreak.

DISEASE OUTBREAKS AND HEALTH EMERGENCIES

Endemic refers to the usual prevalence of a disease in a population within a geographic area. An outbreak refers to an increase, often sudden, in the number of cases of a disease above the endemic level in the population. An outbreak can occur within a restricted geographic area or it may extend over a much broader

BOX 1.1: The International Health Regulations

The International Health Regulations (IHR) were enforced on 15 June 2007 with the purpose and scope to 'prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade' (World Health Organization 2016f, article 2). The IHR help the international community prevent and respond to acute public health risks that have the potential to cross borders and threaten people worldwide. The IHR are an international legal instrument that is binding on 196 countries that have agreed to build their capacities to detect, assess and report public health events. The IHR are not limited to specific diseases and also apply to new and emerging public health risks to have long-lasting relevance to international responses. However, there are four communicable diseases that require notification in all circumstances: (1) any laboratory-confirmed case of a recent human infection caused by an influenza A virus with the potential to cause a pandemic; (2) a case of poliomyelitis due to wild-type poliovirus in a stool specimen collected from the suspected case or from a close contact of the suspected case; (3) a case of severe acute respiratory syndrome (SARS) from an individual with laboratory confirmation of infection with the coronavirus (CoV) who either fulfils the clinical case definition of SARS or has worked in a laboratory working with live SARS-CoV or storing clinical specimens infected with SARS-CoV; (4) any confirmed case of smallpox (World Health Organization 2016c).

area for a prolonged period. A single case of a disease not normally present in the population can also constitute an outbreak, for example, as for the poliovirus, and must be reported and investigated. A disease outbreak may result from a recent increase in the amount or virulence of the disease, a recent introduction of the disease into a setting where it has not been before, an enhanced mode of transmission so that more susceptible persons are exposed, a change in the susceptibility of the host response to the disease, and/or factors that increase host exposure or involve a new means of entry into the population (Kelsey et al. 1986).

A pandemic is an outbreak that occurs on a scale crossing international boundaries, usually affecting a large number of people (Porta 2014). The severe acute respiratory syndrome (SARS) virus, for example, killed 800 people in the Asia-Pacific region in 2002 and was contained by using rigorous sanitation procedures and barrier nursing techniques such as latex gloves, face masks and disposable gowns when in contact with infected patients (Doherty 2013). An emergency is a state that demands a response as an extraordinary measure. A 'state of emergency' is declared and lifted by those in authority and is dependent on the scale, timing, unpredictability and capabilities of existing services to respond. All emergencies have a health aspect that can be caused by natural disasters, civil emergencies, disease outbreaks and the release of hazardous materials into the environment. A health emergency specially occurs when the consequences have the potential to overwhelm the capabilities of the health system to contain the problem (Nelson et al. 2007). Disease outbreaks and health emergencies are closely connected, and this book uses the term 'disease outbreaks' to cover both contexts.

Disease prevention

Disease prevention deals with individuals and populations exhibiting identifiable risk factors, often associated with different risk behaviours (World Health Organization 1998) to prevent the occurrence of a disease and to reduce its consequences once established. Health promotion is concerned with the primary, secondary and tertiary stages of disease prevention. Primary prevention is directed towards preventing the initial onset of ill health by, for example, the detection of risk factors and appropriate health messages. Secondary prevention seeks to change unhealthy behaviour or to shorten the period of ill health and its progression (e.g. educational and motivational strategies to increase the use of hand-washing). Tertiary prevention seeks to limit the effects of a condition and enhance a person's quality of life (e.g. effective rehabilitation therapy) (Naidoo and Wills 2009).

Communicable disease, also called infectious and transmissible disease, comprises clinically evident illnesses resulting from pathogenic agents in an individual or population group and can include viruses, bacteria, fungi and protozoa. A communicable disease is transmitted from a source, such as from one person to another or from a vector to a person. Identifying the means of transmission is important in helping people to understand how to prevent the disease outbreak and focuses on controlling or eliminating the cause of transmission, the vector or high-risk behaviours. Sometimes, this identification can be done using a

physical method (e.g. a bed net to prevent being bitten by a mosquito) or a vaccine to reduce the effect of the disease (e.g. for cholera). Surveillance is particularly important because of the infectious nature and the rapid spread of communicable diseases. Information that is used for surveillance comes from various sources, including reported cases of communicable diseases, hospital admissions, laboratory reports, population surveys, reports of absence from school or work, and reported causes of death (Public Health Agency of Canada 2013).

Screening is designed to identify disease, thus enabling prevention, management and treatment to reduce mortality. Mass screening covers a whole population or a subgroup, irrespective of the risk status of the individual. High-risk or selective screening is conducted among individuals of a risk population. The selection of screening tests for an individual depends on age, sex, family history and risk factors for certain diseases. Screening can show positive for those without a disease, called a false positive, or negative for people who have the condition, called a false negative. Over-diagnosis can also make screening seem successful by finding abnormalities, even though they are sometimes harmless, and are counted as 'lives saved' rather than as healthy people with a manageable condition (Raffle and Muir Gray 2007). Health promotion plays an important preventive role in the screening process including education and counselling interventions and behaviour change to combat, for example, the spread of sexually transmitted diseases through condom use or ensuring a drug regime is completed such as to combat the transmission of tuberculosis.

Drug resistance is the reduction in the effectiveness of a treatment because of the resistance by some pathogens. The development of antibiotic resistance, for example, derives from some drugs targeting only specific bacterial proteins, and therefore any mutation in these proteins interferes with its destructive effect.

BOX 1.2: Drug resistance and tuberculosis

XDR-TB is an abbreviation for extensively drug-resistant (XDR) tuberculosis (TB) that is resistant to at least four of the core anti-TB drugs. Multidrug-resistant (MDR-TB) and XDR-TB both take substantially longer to treat than ordinary drug-susceptible TB and require the use of second-line anti-TB drugs, which are more expensive and have more side effects. Three countries carry the major burden of MDR-TB—India, China and the Russian Federation— together accounting for nearly half of all cases globally. The risk of spread of MDR-TB and XDR-TB increases where there is a high concentration of TB bacteria, such as can occur in overcrowded living conditions, hospitals or prisons. Health promoters have an important role to work with individuals, families and communities to provide information, counselling and material support to enable patients to continue taking all their drug treatment as prescribed. No doses should be missed and, above all, treatment should be taken right through to completion (National Research Council 2003).

It has been the lack of a committed strategy by governments and the pharmaceutical industries that has allowed organisms to develop resistance at a rate that has been faster than new drug development can occur. Drug resistance can sometimes be minimised by using a combination of multiple drugs, for example, in the treatment of tuberculosis (National Research Council 2003).

Super-spreaders and disease outbreaks

A 'super-spreader' is a host, such as a human, that is infected with a disease and that in turn infects disproportionately more secondary contacts than other hosts also infected with the same disease. Super-spreaders may or may not be asymptomatic. It is often assumed that infected individuals within a population have equal chances of transmitting an infection to others. The 20/80 rule in a disease outbreak applies when approximately 20% of infected individuals are responsible for 80% of transmission. Super-spreading occurs when fewer individuals account for a much higher percentage of the transmission and the majority of other individuals infect relatively few secondary contacts. For example, it has been estimated that in Freetown, Sierra Leone, as many as 61% of cases were caused by only 3% of infected people (Gallagher 2017).

It is uncertain what actually makes some people disproportionately more likely to transmit a disease than others. Super-spreading events are shaped by multiple factors including co-infection with another pathogen, immune suppression, changes in airflow dynamics, delayed and inter-hospital admission, misdiagnosis and differences in the host-pathogen relationship (Rothman et al. 2008). Predicting and identifying super-spreaders can have significant health

BOX 1.3: Super-spreading and the SARS outbreak

The first outbreak of severe acute respiratory syndrome (SARS) occurred in 2002 in Guangdong Province in southeastern China, followed by an outbreak in Hong Kong. A doctor in Guangdong who had treated SARS cases contracted the virus and was symptomatic but travelled to Hong Kong to attend a family wedding. He infected 16 other hotel guests who then travelled to Canada, Singapore, Taiwan and Vietnam, spreading SARS and starting the risk of a global outbreak. Another case during the same outbreak involved a man who was admitted to a hospital with suspected coronary heart disease, chronic renal failure and type II diabetes. He had been in contact with a patient known to have SARS, and shortly after his admission he developed a fever, a cough and a sore throat. He was transferred to another hospital for treatment, but his SARS symptoms became worse. This one person transmitted the disease to 33 other patients in 2 days and eventually died. The SARS outbreak caused 8273 cases and 775 deaths and was spread to 37 countries (Shen et al. 2004).

promotion implications for targeting messaging and the mobilisation of community self-management of cases.

The 2015 Middle East respiratory syndrome (MERS) coronavirus (MERS-CoV) outbreak in South Korea is an example of when a single imported case, a 68-year-old male, with a recent travel history to several Middle Eastern countries, started a disease outbreak. A complex combination of factors played a role in the transmission of the disease from the single super-spreader including environmental factors such as the close proximity of other susceptible hosts and the airflow dynamics within an enclosed area. Hospitals, enclosed housing complexes and mass transportation, such as airplanes, facilitate super-spreader events as well as 'doctor shopping', that is, going to multiple hospitals to treat the same ailments which was observed with the MERS-CoV outbreak (Wong et al. 2015). In the West African Ebola outbreak, most cases had a relatively short infectious period and generated low numbers of secondary infections; however, a small number had longer infectious periods and generated more infections. This was especially pronounced in children under 15 years old and adults over 45 years old. The reasons for this super-spreading were unclear but may be attributed to behavioural factors, sometimes not even the infected cases but rather to the people around them. This may have been related to the nature of the transmission of the Ebola virus disease combined with specific cultural practices regarding the care for the young and elderly members of the family (Gallagher 2017).

Anthropological information is key to interpret complex cultural situations and how they might apply to super-spreader events in a disease outbreak. The role of health promotion is to communicate how these complex cultural situations can affect people's health and the health of others and to provide information and skills during an outbreak to help change high-risk behaviours. This is best achieved by developing a dialogue to identify, at both an individual and a community level, when high-risk situations occur and the collaborative actions that are required to resolve them.

PROGRAMME MANAGEMENT

Health promotion can be delivered as a programme, a project, an intervention or a set of specific activities. I have used the term 'programme' in this book to cover the range of different types and stages of the delivery. Programme management requires a workforce with multi-disciplinary skills including administrators; human resource personnel; and budgeting, training, procurement and reporting experts. The purpose is to ensure that the programme is delivered on time, on budget and in accordance with its aims and objectives. Consequently, there has been a reluctance to transfer responsibility to other partners who are perceived as having a different set of skills (e.g. community members), even though they are expected to cooperate with and contribute towards the programme. Managers can underestimate the assets of local partners, and this can be further confounded when the programme involves cross-cultural aspects and does not consider the resilience of cultural values and the distrust felt by people who are excluded by the programme (Leach 1994).

At the heart of a successful outbreak response is who controls the way in which the disease control programme is designed and implemented.

Top-down and bottom-up styles of management

Top-down and bottom-up styles of management are ideal types of practice that demonstrate important differences in relation to the delivery of health promotion programmes. Top-down management occurs when the programme needs are defined by the outside agent, the top structures of the system, and are delivered down to the recipients. The agency also exercises control of financial and other material resources over the programme. Top-down is a form of dominance in which control is exerted through the design, implementation and evaluation of the programme. The agency pushes down a predefined agenda, often with the best intention to improve health, and this can be problematic when it creates a 'bottom-up versus top-down tension' as communities struggle to also get their needs addressed. The approach can be used as an instrument of control through performance measurement, the achievement of targets and by providing feedback about the operational elements of the implementation. Top-down approaches commonly use standard protocols and operating procedures that do not include input from communities. Top-down responses typically make the incorrect assumption that the agency possesses the knowledge needed to halt an outbreak and that the local population does not have to be involved other than to cooperate in the delivery of the response. For example, in cross-border areas of high mobility where movement patterns were based on ancient trade routes and used for family visits across porous international borders (McConnell 2014), some agencies have tried unsuccessfully to police people rather than to collaborate with local leaders.

Bottom-up management is the reverse in which the local population identifies its own needs and communicates these to the top structures. Community engagement is closely linked to a health promotion practice that recognises the value of including local people in planning and implementation and that seeks to listen to and respond to the expressed needs of communities. The role of the management is to systematically build the capacity, knowledge and skills of the local partners to be able to be involved in the programme. One of the first steps towards achieving this goal is to have clearly defined roles and responsibilities of everyone involved in the programme. For example, during the planning stage the needs of local partners should be assessed and included in the aims of the programme. A bottom-up style of management places the focus on capacity building and participatory methods and moves practice away from conventional 'expert'-driven approaches. This means a fundamental shift between the agency and the beneficiaries of the programme, a shift where control over decisions is more equitably distributed.

In a disease outbreak or health emergency, the health promoter should not have to make a choice between a top-down and a bottom-up management approach. Both are necessary in a response. Top-down approaches are able to implement activities quickly to slow down the chain of transmission. Bottom-up approaches are essential to ensure community involvement in the delivery of the

response. However, the top-down approach can become dominant because some agencies are unwilling to relinquish control; as a consequence, this can lead to community resistance, rumours and poor cooperation.

PROGRAMME DESIGN CONSIDERATIONS

Disease outbreaks require planning across all sectors, including agriculture, education, housing, transport and health. At a national level, this would involve a whole of government approach that focuses on public communication, coordination and the efficient delivery of resources. Disease outbreak responses can be most effective when they allow the involvement of all the different stakeholders and the various financial, material and human resources that they are able to make available.

Coordination

Establishing and maintaining coordination mechanisms for an outbreak response is an important priority to ensure appropriate representation and input from all stakeholders representing agency, government and civil society groups. Political leadership at national and local levels is crucial, and the responsibility of coordinating the response should not be left to the local health authorities nor should it be dominated by a top-down approach. The United Nations, for example, did learn from its earlier mistakes during the Ebola response to better engage with communities. There was no excuse not to actively involve local people; however, bottom-up approaches were not widely implemented at the beginning of the response (Laverack and Manoncourt 2015).

The United Nations Mission for Ebola Emergency Response (UNMEER) was the first UN emergency health mission, established on 19 September 2014 and closed on 31 July 2015. To establish unity of purpose among the many stakeholders in support of the nationally led efforts in the three affected countries, the UNMEER had a major role in coordinating the key programme activities:

- Case finding and contact tracing: Sufficient teams were recruited, trained and logistically supported in every district to ensure that all cases are found rapidly and that all affected communities or contacts were identified and monitored daily.
- Case management: Sufficient treatment, transit/referral and care centres were built and staffed with trained personnel to ensure all suspect, probable and confirmed cases can be safely isolated and cared for on the same day that they are identified.
- Community engagement and social mobilisation: Efforts were made to ensure that all religious, traditional and community leaders were engaged at the national and local levels, supported by a social mobilisation network to deliver messages to each household.
- Safe and dignified burials: Sufficient district and sub-district level burial teams were identified, trained and equipped to provide safe and dignified, same-day burials and remuneration for work.

The key health promotion activities of community engagement and social mobilisation were led by the United Nations Children's Fund (UNICEF) as a technical 'pillar' in the three affected countries. The pillar was led by the ministries of health and the corresponding health promotion units with support from United Nations agencies and civil society organisations. The main function of the community engagement and social mobilisation pillar was to coordinate efforts for behaviour change as well as to measure and report on key performance indicators. C4D was a key strategy (see Chapter 3) to influence and implement policies; to mobilise civil society; to actively help to empower households and communities; and to identify problems, propose solutions, and then act upon them (Gillespie et al. 2016).

Time frame

A unique aspect of disease outbreaks and health emergencies is that the time frame of activities is a deciding factor in how many lives are saved through preventing the transmission of the infection. For health promotion, the initial period is when the community and outbreak response is at its most vulnerable, and working quickly and efficiently is very important. The local community serves as the first responders, and therefore the programme must be operational quickly to build trust and to obtain community permission for medical and disease control activities. Later, systems and procedures need to be in place to limit the spread of the disease through effective communication about the risks, for example, by using local radio and community educators. A more coordinated approach is established, and agencies can focus on the quality of the response and can shift to increasing training and engagement with a broader range of stakeholders to be involved in surveillance, contact tracing and the promotion of community-led activities such as improved sanitation.

In a disease outbreak the situation can change rapidly and budget flexibility is essential.

Programme budget

The programme budget is usually itemised using 'budget headings' in regard to specific costs such as administration, training, technical services, materials, equipment and transport. The planned resources are provided over specific periods such as monthly, quarterly, six monthly or annually to cover the total programme duration. Traditionally, there is little flexibility in the programme budget, and once it has been approved it is unlikely to be modified to meet changing expectations. In a disease outbreak the situation can change rapidly and budget flexibility is essential. A percentage of funds can be used to allow unexpected and informal activities to be implemented. Alternatively, the programme management can use a percentage of the budget as a contingency for unforeseeable circumstances that arise as the programme develops.

Monitoring and evaluation

Monitoring is a periodically recurring task beginning in the planning stage of a programme and allows results, processes and experiences to be documented. The information acquired through monitoring helps to better understand the ways in which the programme has developed over time and how this development can be improved in the future. Process evaluation aims to understand how the programme has been delivered, what actually happened and how people reacted to it. A process evaluation describes the strengths and weaknesses of a programme and engages with the key partners to identify why it has or has not worked in practice (Nutbeam and Bauman 2011).

Process evaluation is sometimes not well performed or is even omitted because agencies are expected to deliver activities quickly during a disease outbreak.

Outcome evaluation aims to assess whether the programme has achieved its goals and any longer term impact and is usually set against predetermined targets or outcomes. Health targets require an estimate of current and future trends in relation to change in the distribution of an indicator and an understanding of the potential to change the distribution of the indicator in the population. Health outcomes are usually assessed using indicators that can be used to describe one or more measurable aspects of the health of an individual or population over the programme period. Health indicators include the measurement of illness or disease, or positive aspects of health such as behaviours which are related to reducing risk. Process and outcome indicators should be used together to provide a holistic evaluation of the health promotion programme (World Health Organization 1998).

HUMAN RESOURCES FOR HEALTH IN DISEASE OUTBREAKS

Human resources for health can be defined as all people engaged in actions whose primary intent is to enhance health. Human resources for health deals with the planning, development, performance, management, staff retention, research and development for the healthcare sector (World Health Organization 2006b). Health workers involved in disease outbreaks include doctors, nurses, midwives, allied health professionals, social workers, health communicators, support staff and health supply chain managers. There is a shortage of health workers such as doctors and nurses worldwide, but this shortage is most severe in regions where disease outbreaks often occur such as in West Africa (World Health Organization 2006a). There is also a mal-distribution of skilled health workers which can lead to localised shortages in remote and rural areas within countries. Policies for the recruitment and retention in rural and remote areas need to combine different

packages of interventions according to the factors influencing the health workers' decision and match their preferences and expectations influencing their employment decisions (Araujo and Maeda 2013). The future challenges for human resources in outbreak responses include staff mobilisation to address emerging health issues, new skills and relevant competencies. Special skills required by health promoters include coordinated planning, risk communication, rapid community mobilisation and self-management approaches. The tasks required must be integrated into national response systems and ongoing health training.

Staff deployment in disease outbreaks

The deployment of health promotion personnel into disease outbreak responses usually follows a systematic process of pre-deployment, deployment and post-deployment activities.

Pre-deployment: The health promoter receives a pre-deployment package containing key technical documents, takes part in briefings and teleconferences with in-country focal points and receives a terms of reference to outline the main tasks and deliverables. Pre-service education, training and mentorship are important short-term strategies to strengthen human resources and institutional capacity. Health promotion staff retention and performance at local and national levels can also be enhanced by improving their remuneration and working conditions, addressing the reasons for low deployment, investing in infrastructure improvement, ensuring the provision of equipment and supplies and improving supervision.

Standard tasks in the terms of reference for the health promoter in an outbreak response include the following:

- Coordinate with the government/Ministry of Health plans and strategies
- Use outbreak response standard operating procedures
- Assess communication needs and existing capacity at the country level
- Report to relevant agencies involved in health promotion in the outbreak response
- Collate or conduct knowledge, attitude and practice survey data for the target audience
- Provide technical support to other outbreak response teams

The deliverables include the following:

- Prepare a communication and community engagement strategy for the outbreak response
- Provide timely monitoring calls and reports
- Provide a final report and recommendations including a briefing with colleagues and relevant technical staff

Deployment: The health promoter will take part in regular stakeholder meetings and in briefing calls with the employing agency at the headquarters and/or

the regional, district and community levels. The health promoter will also be expected to provide periodic monitoring reports and to deliver the tasks in the terms of reference in order to achieve the required deliverables.

Post-deployment: Concluding the deployment, the health promoter will usually be expected to provide a final report and a post-deployment satisfaction survey or debriefing.

Professional competencies for health promotion

Professional competencies for health promotion in disease outbreaks include a combination of knowledge, skills and values that enable an individual to perform a set of tasks to an appropriate standard. Core competencies also provide a set of standards by which the workforce can determine what a 'professional' practice is and can be used to set parameters for staff development, recruitment and performance standards. Core competencies include communication strategies; however, for some health workers this is only a small part of their daily work, such as for a nurse who undertakes a mix of clinical practice and health education. It is the responsibility of health promoters to select which specialist competencies they feel are most relevant to their work in an outbreak context (Laverack 2007). Key competencies are given below, and although not exhaustive they provide a guide of what is required to deliver in the disease outbreak response.

BOX 1.4: Key competencies for health promotion in disease outbreaks

1. Programme design, management, implementation and evaluation: The ability to plan effective health promotion programmes, including the management of resources and personnel involving an understanding of programme cycles, budgeting and the planning and evaluation of bottom-up approaches.
2. Coordination and delivery of effective communication strategies: Communication strategies are an integral part of disease outbreak responses to increase knowledge levels and to raise awareness and involve the coordination of different stakeholders, the identification of the targeted individuals, groups and communities, and the use of communication techniques such as one-to-one communication, print materials and social media.
3. Facilitating skills: Training, for example, for skills development, usually within a workshop setting, is a key part of many programmes. Good facilitation skills are essential for health promoters and are an important part of programme delivery.
4. Community engagement and capacity-building skills: Community engagement and capacity building are central to a range of strategies to help people self-manage their own circumstances at individual,

family and community levels and to gain more control of the situation affecting their health and lives.

5. Translating findings into practical recommendations: The translation of research and other data collection findings into practical recommendations is often a missing link and can be overcome by improved competencies to interpret information and to communicate this to the appropriate programme manager.

KEY STAKEHOLDERS IN DISEASE OUTBREAKS AND HEALTH EMERGENCIES

Stakeholder identification is important because it has real benefits for the level of participation and for sustainable outcomes. Programmes that do not involve key stakeholders run the real risk of not achieving their goals. The involvement of stakeholders in the planning process is also critical to promote multi-sectoral action for disease prevention and control. Stakeholders are people and organisations that have some interest or influence in the disease outbreak and can therefore change as the situation develops over time. Stakeholders include the population that will be approached to participate, as well as others who are not physically located where the response takes place (UNAIDS 2007). The process of stakeholder identification begins with an analysis of the main individuals and organisations, within health and other sectors, whose work is related to the disease outbreak. The key stakeholders can be broadly categorised into the following sectors: community; non-government sector, including the private sector; faith-based organisations (FBOs); government services; and United Nations agencies.

Community

It is important to think beyond the customary view of a community as a place where people live, for example, a neighbourhood, because these people are often just an aggregate of non-connected people. Communities have both a social and a geographic characteristic and consist of individuals with dynamic relations that organise into groups to take action towards achieving shared goals. Within the geographic dimensions of 'community', individuals may belong to several different 'interest' groups at the same time. Interest groups exist as a legitimate means by which individuals can find a 'voice' and are able to participate to pursue their interests in the disease outbreak (Zakus and Lysack 1998). Interest groups can be organised around a variety of social activities or can address a local concern, for example, poor access to ambulance services. This group includes both members of the public within the area of the outbreak with whom engagement is essential and members of the public outside the area of the outbreak to prevent the spread of the disease.

Non-government sector

'Non-government organisation' is a term used to cover all not-for-profit organisations, voluntary, community, charities and social non-government associations. Non-government organisations want to offer support during a disease outbreak and have an extensive network at the local level that can facilitate message and resource distribution. Building alliances with these partners early on and assigning clearly defined responsibilities can significantly contribute to an organised and efficient response. Business, trade and industry will want to avoid the loss of revenue and liability during an outbreak or health emergency and will want to take steps to protect the health of their employees. Private sector organisations and businesses can provide resources, equipment or relevant expertise, for example, corporate donations of personal protective equipment, cleaning supplies or medical supplies for an outbreak.

Faith-based organisations

Faith plays an important role in people's lives. People listen to their faith leaders and often come to places of worship for a source of reliable information, compassion and social support. Faith leaders also play an important role in communities where they have significant trust and respect. Communities are often more trusting of informal networks that include religious leaders and faith-based community health, social, and pastoral services. Once they became involved, faith leaders can also play a transformational role by working with communities, for example, by accompanying families to funerals and by conducting modified religious practices, to encourage people to comply with the need for safe and dignified burials (CAFOD 2015). FBOs often have a role as a secondary stakeholder not only in disseminating information but also in helping to convince communities to undertake preventive measures.

During the initial phase of an outbreak response, there can be a poor understanding by government and international agencies about the diversity of religious communities and the role of FBOs. This can delay the establishment of collaborative partnerships and the mobilisation of assets such as knowledge, trust, infrastructure and social networks. Christian Health Associations, for example, were already active in Liberia and Sierra Leone in the early stages of the Ebola outbreak and engaged with volunteers, provided medical supplies and organised the training of pastors, the texting of health messages to congregations and the care for orphans (Marshall and Smith 2015). FBOs formed the 'Social Mobilization and Respectful Burials Through Faith-Based Alliance Consortium', which played pivotal role in supervising burial teams. FBOs also supported negotiations for the access and protection of health workers from government and non-government organisations that were previously attacked by community members due to feelings of fear and resistance (Greyling et al. 2016).

FBOs have argued that the messages they use replace fear with feelings of hope and are delivered with compassion in a way that provides encouragement. They claim that the holistic way in which faith leaders are able to engage with people

BOX 1.5: World Council of Churches

The World Council of Churches has a network of 345 member churches, representing more than 560 million Christians in 110 countries. The faith-based communities play an important role in mobilising the population, providing information, addressing stigma, and providing compassionate burial ceremonies and psychosocial and pastoral counselling to survivors, family members and healthcare workers. The World Council of Churches is well established and often has the trust of the communities in which it works and can be an important partner agency in outbreak responses (World Council of Churches 2015).

from both a technical and religious perspective enables deep-seated traditional behaviour changes to occur. The role of health promotion is to assist FBOs to ensure that the messages they use are consistent and correct. This assistance is needed because there have been concerns about the self-serving motivations of some FBOs that has sometimes made government and United Nations agencies hesitant to partner with them; however, their long-term presence and community-based networks are increasingly being recognised as important to a holistic response to a disease outbreak or health emergency (Greyling et al. 2016).

Community- and faith-based organisations are an essential partner to a holistic and effective disease outbreak response.

Government services

The local, regional or national government authorities are the starting point for planning and establishing health services, for example, the Ministry of Health, hospitals, clinics, public health and health promotion services. The Ministry of Foreign Affairs is important because diseases can transcend national boundaries and ensuring cooperation, information exchange and planning between countries will increase the likelihood of success. The starting point of the outbreak response is at the national level to provide the information needs of all stakeholders: (a) those affected by or at risk of the outbreak and (b) those responding to the outbreak as they carry out their work.

To bring the different stakeholders together in a common platform, at the national level, different clusters or pillars can be established by the national government in collaboration with supporting agencies. The pillars meet on a regular basis to plan, coordinate and mediate between agencies and to facilitate the delivery of activities in a rapidly changing situation. Healthcare professionals involved in the response are concerned with ensuring that treatment and prevention protocols are followed and that resources are provided. The health promotion or health education unit, often within the Ministry of Health, plays a key role in

planning and coordinating communication activities, community mobilisation and improving participation in the outbreak response such as promoting the use of vaccination services.

United Nations agencies

The task of managing an outbreak is initially left to national governments and non-government organisations; but as the emergency continues to accelerate, and the disease poses a greater threat, an international or global response led by the United Nations may be triggered. The situation can be complex, requiring extraordinary measures to control and contain the transmission of a disease through collaboration and coordination between the international community, government and local populations. With so many organisations being deployed on the ground, the first priority is sufficient healthcare facilities such as hospital beds for patients. Once this is met, the focus shifts to other services such as surveillance, case management, safe burials, contact tracing and crucially to community engagement and social mobilisation.

United Nations agencies such as UNICEF can provide an operational cadre of 'social mobilisers' that are usually community health workers that exist in the country, for example, from government or other initiatives, and that can be employed in a disease outbreak as fieldworkers at the district and local levels. Their purpose is to assist with communication, training, stakeholder engagement, and the mobilisation and coordination of targeted interventions such as community quarantines and behaviour change communication.

