Primary health care and health emergencies
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Executive summary

Background

The primary health care (PHC) approach provides an essential foundation for health emergency and risk management, and for building community and country resilience. The importance of this is not only reflected locally in preparing, responding to and recovering from an emergency, as demonstrated in the Ebola virus disease outbreak in West Africa; PHC is also vital to achieve global health security and support resilient health systems as a foundation for universal health coverage. PHC has three interrelated and synergistic pillars: (a) empowered people and communities; (b) multisectoral policy and action for health; and (c) strong and integrated health services, with good-quality primary care supported by essential public health functions at the core. Through these three pillars, PHC promotes not only an effective emergency response, but also a prepared and resilient system that can prevent, withstand and recover from emergencies, while continuing to provide essential health services throughout. There are many types of emergency: these include outbreaks, natural disasters and conflicts, which are often acute but are sometimes decades long and protracted. While the underlying causes of emergencies vary, the resultant population displacement and health system destabilization have predictable health consequences.

1 Primary care: health services that are the first point of contact for people, are accessible, continuous and comprehensive, and coordinate care for individuals, families and communities. It is a key process in the health system and a subset of PHC.
Roles of primary health care in health emergencies

The PHC approach ensures the availability of integrated health services for most health needs through primary care and essential public health functions, and thus reduces non-emergency-related morbidity and mortality. In addition, primary care plays a key role in identifying and managing emergency cases, preventing disease outbreaks with effective public health measures, and performing disease surveillance. PHC also has a key role in engaging communities, which enables improved surveillance, increases trust in services, improves utilization during emergencies, and ensures that preparedness and response activities are appropriate to the local context.

Challenges of health service provision in emergencies

The ability of the health system to adequately manage the risks of emergencies and provide access to good-quality care is often affected by those very emergencies that disrupt many important elements, including physical accessibility; availability of a competent health workforce; availability of funding; supply chain management and resources; health facility infrastructure; electricity and water supply; government oversight; and effective leadership and organizational management. Health workers can be particularly vulnerable in emergency settings for a variety of reasons, including the extra workload and psychological stress they face, the fact that they are often targets in conflict situations, and the risk of exposure to harm because of the lack of proper personal protective equipment.

Opportunities for action

Health security requires strong health systems, and health systems that are PHC oriented. A renewed global commitment to the PHC movement will contribute to improving the health outcomes of people at risk of emergencies by preventing, preparing for, providing an effective response to and helping recovery from current and future emergencies. In the context of emergency preparedness, response and resilience, specific consideration should be given to training and retaining the PHC workforce (in both primary care and public health); development of appropriate health information systems; community engagement and risk communication; and provision of essential infrastructure and products, such as those for infection control. PHC, universal health coverage and health security are intricately linked agendas that require action at local, national and global levels. The global community has the opportunity to propose financial and political solutions to firmly place PHC-focused universal health coverage at the heart of global health security.
Background and context

Scope of emergencies and primary health care response

The definition of primary health care (PHC)\(^1\) includes three interrelated and synergistic pillars: (a) empowered people and communities; (b) multisectoral policy and action for health; and (c) good-quality, integrated health services based on primary care supported by essential public health functions (1). This paper highlights the relation between emergencies and PHC, and demonstrates how these three pillars are vital in order to prevent, mitigate and withstand emergencies (2).

There are many different situations that create a sudden and unplanned increase in the demand for health care. An earthquake in a high-income country is very different from a decades-long conflict in a fragile setting or a highly virulent infectious disease outbreak. Most health emergencies start abruptly. Conflict-related emergencies can often become protracted. PHC needs to respond to immediate needs in a wide variety of circumstances, which are context specific.

To better understand the many different issues, PHC in emergencies can be conceptualized along three axes, with a fourth dimension of time responding to the difference between a one-off event (such as a tsunami or nuclear explosion), or a crisis that goes on for years, as is the case for example in South Sudan or the Syrian Arab Republic. The three axes are (a) the service continuum, from immediate relief action (saving lives) to strengthening health service delivery (building a system of care); (b) the geographical continuum, from the local onset to an international emergency; and (c) the socioeconomic continuum, from low-income settings without functional systems for health care delivery to high-income settings with good-quality care provisions.

The concept of PHC and “emergency” thus delivers a three-dimensional matrix that moves along a timeline (Figure 1). Where the emergency situation sits on the three axes shapes the PHC response, and the response will change over time.

Figure 1. The concept of primary health care and emergencies: a three-dimensional matrix that considers geographical, socioeconomic, and health services continua and a time continuum axis

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\(^1\) Further definitions and a glossary of terms can be found in Annex 1.
Country examples

A health emergency can be described as a type of event or imminent threat that produces or has the potential to produce a range of health consequences, and which requires coordinated action, usually urgent and often non-routine. Health emergencies come in many forms and have different scales: they include epidemics, disasters from natural and technological hazards, and those involving violence and conflict. Each emergency has specific implications for the health system as a whole and PHC services in particular, often reducing the capacity to provide health services, the quality of the services, and the geographical accessibility and affordability of services. The effects of emergencies on public health, health services and societies will depend on a number of factors, such as the severity of the hazard, the level of exposure, the vulnerability of the population, and the capacity of the affected country and community to manage the risks before, during and after the event. To highlight the different ways PHC can respond, the following examples are outlined.

Immediate response to a disease outbreak in a low-income setting

In 2013, the first outbreak of Ebola virus disease in West Africa occurred in Meliandou, Guinea (3). The weak health system was not equipped to identify the first cases of Ebola virus disease and take measures to contain it. Lack of trust in the authorities and health workers in the affected countries made things worse (4). This fear and distrust was fuelled by rumours that the disease was being deliberately spread and that Ebola treatment centres were places where people were killed and their organs harvested (5). The enforced admission of suspected cases to Ebola treatment centres, many of whom did not come back alive, amplified the distrust (6). This dysfunctional primary care led to delays in detecting, diagnosing, reporting, treating and referring cases of Ebola virus disease, which probably increased morbidity and mortality, and prolonged the duration of the outbreak. The disengagement of the community with health services also had an impact on the use of routine primary care, with pregnant women, children, malaria cases, people living with HIV and other chronic conditions being particularly affected. In addition, access to and provision of routine health services, in an already challenged health system, became more difficult during the outbreak, resulting in poorer health outcomes (4, 6).

Protracted conflict in a low-income setting

In Yemen today, the escalating conflict is reversing a trend of gradual improvement in the health system. Many health facilities have been targeted and destroyed and in the remaining facilities access to essential drugs and treatment has been limited. Chronic insecurity creates a barrier to access for both health care workers – who have not received salaries for over a year – and their patients (7). This has influenced the provision of health services and facilitated the outbreak and spread of diseases such as cholera, measles and diphtheria, with poor health outcomes for the population (8).

Natural disaster in a high-income setting

In contrast to these two examples, the United States of America has significant resources. Having learned important lessons from the earthquake and hurricanes in California, Hawaii and Florida, the country was able to adapt and make improvements within primary care and public health. As a result, primary care teams and public health authorities were better prepared to respond effectively, particularly with regard to financing and coordination among the various agencies, during the flood disaster in the Midwest of the country (9).
Recurring natural emergencies in a middle-income setting

Cuba is prone to natural disasters such as hurricanes but has a strong PHC-oriented health system. The importance of this has been confirmed in the aftermath of emergencies as the country has seen a reduction in disaster-related diseases and conditions that occur in the post-emergency setting (10, 11).

Emergencies affecting recovery and routine care

Before the earthquake in Haiti in 2010, low public sector spending and poor governance resulted in a health system unable to respond adequately to the regular demand for health care. In this context, frequent natural disasters caused not only a loss of life and physical damage to health facilities, but also placed further strain on already pressured primary care services (12). This was because they had to provide acute care to deal with the immediate emergency, and also had to respond to a secondary surge in demand for medical services following the original event (13).
Roles of primary health care in health emergencies

Emergency preparedness and prevention

PHC reduces vulnerability and builds the resilience of communities and countries to deal with day-to-day emergencies, and thus helps prevent large-scale emergencies (14). Primary prevention interventions such as community water, sanitation and hygiene (WASH) or vaccination programmes are important for reducing the risk of outbreaks (15, 16). Surveillance and preparedness (monitoring and response) are among 10 essential public health functions (17), which also include health promotion, health protection and disease prevention. These public health components of PHC create an environment that is alert, understands health risks and manages local challenges, thereby preventing emergencies.

Continuation of routine health services

Primary care plays a crucial role in ensuring the continuation of routine health services during emergencies. Trusted primary care providers are well placed to understand the health needs of their local population and, with adequate planning and resources, find mechanisms to fulfil this essential role during emergencies.

Primary care, when strong and resilient, can act as a buffer against a failure of service delivery and ensure continuity of care, particularly among vulnerable groups such as diabetes patients and children. In the United States, in the aftermath of Hurricane Katrina, diabetes educators, nurses and primary care doctors were deployed in affected areas to help with insulin adjustment and general diabetes education (18). In Pakistan, community health workers who continued working during and after the flood that devastated Sindh province in 2010 helped prevent outbreaks of infectious diseases such as diarrhoea, while ensuring that vital services such as child immunization continued uninterrupted (19).
Management of diseases related to health emergencies

Primary care has an important role in managing and treating diseases and conditions directly resulting from disasters, and is often the first point of contact for affected populations.

Haemorrhagic fevers, respiratory tract infections, foodborne and waterborne diseases and meningitis are the diseases that may arise in a public health emergency and are likely to be encountered in primary care in low-resource settings. These diseases mimic the symptoms of other conditions such as malaria, and primary care workers are therefore likely to be the first point of contact for those seeking care. The volume of service users and the likelihood of health workers being unprepared and therefore less strict in their infection control practices could potentially increase the risk of nosocomial transmission of such infections, highlighting the important need for strong infection control procedures within primary care. However, during outbreaks, similarities of symptoms may make health workers unsure of their ability to triage the cases that present to them.

Given this critical role, primary care should be fully integrated into disease outbreak or pandemic preparedness and disaster response plans. Health workers and health facilities should be equipped with the required tools and infrastructure and a well-defined plan to guide referral. This includes designation of the health facilities responsible for clinical management, as well as logistics and transportation.

Quality of services provided

The quality and safety of health services are increasingly recognized as essential to PHC and universal health coverage, expanding the earlier focus that was mainly on access and coverage. Hence, a central role of PHC in emergencies is to ensure the provision of good-quality routine and emergency services. A similar trend is seen in the overall emergency response environment, with governments, humanitarian agencies and their donors starting to pay attention to the quality of services provided to affected populations. Quality management, monitoring, assurance, and improvement in situations of fragility, conflict and violence are more complex and challenging than in stable, high-income countries. Assuring quality of care during emergencies is often hampered by a range of disaster-specific factors, such as shortages of good-quality medicine, interrupted water and electricity supplies, lack of qualified and motivated staff, poor infection prevention and control standards, damaged health care facilities and sanitation infrastructure, culturally maladapted humanitarian services, and dysfunctional referral systems. Quality monitoring and evaluation and quality improvement mechanisms have often been overlooked during emergency responses. Poor-quality services not only constitute a danger to patients, they also undermine the trust of communities in their health systems and are hence detrimental to resilience.

People-centred care and community engagement

Primary care provision before, during and after emergencies must design and implement interventions that are context specific. Empowering local communities to take control of health, and engaging them as co-developers for services and as advocates promoting and protecting health, are essential for effective emergency risk management. This also promotes ways to communicate risk, share information and learn from people who may be sources of untapped knowledge about how and why things are done in certain way.
Multisectoral action to manage health emergencies

A PHC approach promotes multisectoral action on the determinants of health (27) and on the key issues that involve all sectors, such as migration, WASH, nutrition, and maintenance of law and order. Going beyond health facilities and workers, PHC is also supported by services that are integrated and owned by community members and may involve other parties such as schools, religious institutions and cultural advisers (28). Primary care, by nature of its community orientation and coordinating function within the health system, is able to integrate a range of actors and institutions during a response. This networking capacity is essential for resilience.

Both the Hong Kong Special Administrative Region and the city of Toronto set up expert committees that were critical to designing a framework for disease outbreak management to lead, support or coordinate responses between the various public health services, primary care clinics and other sectors (29). The importance of primary care and increased health collaboration was seen in Serbia, which established a network of smaller primary health stations that were able to bring services closer to the community and complemented the usual primary care providers (30). In the Democratic Republic of the Congo, this is also seen in a thriving not-for-profit indigenous network of religious health care providers who are main partners in the management of the district health system (31).

Given the fast-increasing importance of the private sector in health service provision, its role must also be carefully considered. While the scope, quality and integration of private sector providers vary, their role in surveillance and response activities should be optimized.

Less common actors such as the military are also becoming increasingly involved in the provision of primary care during emergencies. In Pakistan, a mobile army surgical hospital was mobilized in the aftermath of the 2005 earthquake (32). It was initially meant to provide surgical care but it quickly became a facility providing mainly primary care.
Links to the humanitarian response

The number of people affected by humanitarian emergencies worldwide is unprecedented; in 2018, the United Nations Office for the Coordination of Humanitarian Affairs estimated that 134 million people were in need of humanitarian assistance (33). More than half of these (68.5 million people) have been forcibly displaced as a result of armed conflict, civil strife or human rights violations. Among these are 25.4 million refugees, 40 million internally displaced people (34) and 3.1 million asylum seekers.

War and long-term violence result in disruption of the social fabric and disintegration of the health system – including human resources, infrastructure, commodities, technologies, equipment and medicines, governance, and services. Non-violent morbidity and mortality increase because previously preventable or treatable conditions are not being addressed. This cascade of effects is more pronounced in low-income areas, resulting in widening health disparities (28). Historically in emergency situations, the causes of the high morbidity and mortality rates have been infectious disease outbreaks, exacerbation of endemic infectious diseases, and acute malnutrition. However, the greater availability of interventions for these conditions and the rise in conflicts in higher-income countries have increased the burden of disease in complex emergencies from chronic conditions such as tuberculosis, cardiovascular disease and diabetes, as well as mental health (35). Ensuring that PHC services continue to be available in regions experiencing complex emergencies is therefore vital, with primary care providing continuation of essential health services to respond to these demands during emergencies.

Nongovernmental organizations (NGOs), both local and international, have enormous diversity in background, skills and knowledge, and can assist health authorities to quickly restore service delivery or scale up capacity when needed. Humanitarian response planning and resource mobilization by the Inter-Agency Standing Committee have created a very effective funding mechanism that mobilized US$ 21.5 billion in 2017, of which US$ 1.6 billion were for health (36, 37). Humanitarian assistance is not possible without international and local NGOs.

Health system resilience is supported by humanitarian actors through broad-based health system strengthening and local PHC initiatives. This includes support for health governance, supply chains, infrastructure, health workers and information systems (38). In southern Sudan, the Multi-Donor Trust Fund was established in 2006 to support the health sector by developing health system capacity and increasing the population’s access to primary care services. The fund gave the Ministry of Health the opportunity to issue contracts to partners to address specific health priorities (39). This is a good example of the health–development–peace nexus in action, which aims to avoid the humanitarian–development divide, as fragmentation of actors, financing and governance could hinder building strong and sustainable health systems based on PHC. It is such health systems that are essential to achieving universal health coverage for the 2 billion people living in countries experiencing fragility, conflict and violence (40) and to supporting the 134 million most-affected people who need humanitarian assistance (41).
Health system recovery

When the emergency threat and possible danger for the international community have ceased, humanitarian response teams may leave the affected area, which makes the existing primary care and public health services the foundation of longer-term health system recovery. Weakened by the emergency, local health systems remain vulnerable and may lack partner and donor interest to support and invest in the long-term process of health system strengthening. However, emergencies can provide the political momentum for investment in health system strengthening and even major reform of the national health systems as a whole. In Guinea, for example, the government decided on this approach in the wake of the Ebola virus disease epidemic (42).

There are examples of how emergencies have catalysed changes in health care policy and practice. “Building back better” examples of mental health programmes and examples of a broader range of health services can be found in Canada, Indonesia and Sri Lanka, for example in improving health emergency risk management programmes (43).

Recurring emergencies impede post-emergency recovery, and more so where health systems lack resilience. Repeated natural disasters may lead to the collapse of health facilities and health care systems, disruption of surveillance and health programmes, and interruption of treatment (13).

The problems of instigating health system reform in post-conflict or post-disaster settings are often not anticipated because of inadequate preliminary assessments (30, 44). The recovery process can provide good opportunities to win political support for strengthening emergency preparedness and disaster risk management capacities. Recovery must be seen against changes in demography, population displacement, changes in health needs and opportunities to introduce different service delivery models, including a reorientation to PHC (45).

Health system resilience

Orienting health systems to PHC promotes adequate resourcing to primary care and public health services, and hence enables strategic risk assessments and increases the capacity of communities to prevent emergencies and to respond effectively. Put simply, PHC-oriented health systems are resilient (Annex 2 outlines PHC resilience built around health system components).

Resilience is defined as the “the ability of a system exposed to a shock to resist, absorb, accommodate and recover from the effects of the shock in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions” (46). A resilient health system can help to prevent emergencies and, when an emergency occurs, continue delivering health services to its users without much interruption or change in the quality of care. The United Nations Sendai Framework for Disaster Risk Reduction has resilience and essential care as one of its seven global targets: “Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030” (47).
Global coordinating mechanisms

The International Health Regulations (IHR) (2005) are the international legal framework governing global health security (48). There are also mechanisms in place for humanitarian crises, through the Inter-Agency Standing Committee, which are supported by various United Nations General Assembly resolutions (60/124), including humanitarian coordination mechanisms (World Health Assembly resolution WHA65/20). Adoption of the Sendai Framework for Disaster Risk Reduction, in which health, primary care and health systems have important roles, also reflects agreement on the future direction within the sustainable development agenda (47).

Since the 2014 Ebola virus disease outbreak in West Africa, international attention has focused on global health security. This has resulted in intensified support for monitoring and building national IHR capacities. This is also reflected in the 13th General Programme of Work 2019–2023 of the World Health Organization (WHO), which is aligned with the Sustainable Development Goals (SDGs), with a focus on SDG 3. The 13th General Programme of Work sets three targets. These are to ensure that by 2023 (a) 1 billion more people benefit from universal health coverage; (b) 1 billion more people are better protected from health emergencies; and (c) 1 billion more people enjoy better health and well-being. WHO estimates that achieving this “triple billion” target could save the lives of 29 million people. PHC-oriented health systems are essential to reach these three targets (49).

Current efforts on global health security, such as IHR (2005) monitoring and capacity-building, focus mainly on national and central-level institutions, emergency operation centres and national reference laboratories. They are less focused (and in some cases not at all focused) on PHC.
Primary health care and health emergencies: opportunities for action

Strengthening health systems by orientation to primary health care

For a health system to be capable of fulfilling the roles outlined in section 2, it should be functional and trusted by the communities it serves. It should also be resilient, with inbuilt preparedness and response capacities. To strengthen PHC-oriented health systems requires coherent approaches based on integrated systems that avoid vertical programmes and fragmentation. National preparedness and response plans need to include PHC, with planners working with district health authorities and local health care facilities, which should have preparedness and response responsibilities integrated in their terms of reference. Risk management activities within PHC should be integrated in national policies, strategies and plans and in the national benefit packages of health services.

For a PHC-oriented health system to be capable of absorbing the shock of an emergency, it must be able to “prepare for and effectively respond to crises; maintain core functions when a crisis hits; and, informed by lessons during the crisis, reorganise if conditions require it” (27). In order to do this, health system strengthening must be done in such a way as to ensure that the improvements are cohesive and appropriate to context, and take into consideration the population for whom they are designed. Some specific considerations are described below.

Health financing requirements

Flexible health financing arrangements are crucial for PHC to remain functional in emergency situations. This requires an emergency fund to be available at the national or subnational level that can be flexibly used to finance the surge in activities during an emergency. In addition, populations must have full access to services, and financial mechanisms need to be in place within PHC facilities to compensate for (temporary) cancellation of user fees.

Accelerating universal health coverage provides an important opportunity to support PHC by pursuing a combination of strategies. For low- and middle-income countries, this includes many opportunities for donor financing. In emergency settings, governments typically focus on providing equitable access to primary care interventions and tackling emergency-related health concerns (for example, infectious diseases and mental health services). Such interventions can provide a basis for expanding coverage to include other cost-effective, equitable and financially protective interventions. Examples include positive outcomes from community-based health insurance schemes in Rwanda and health equity funds implemented in Cambodia, which were supported by pooled donor funding (25). However, moving towards universal health coverage will entail redistribution of the key functions and responsibilities of the government and its partners in order to generate more coherence and efficiency in the health system (50).
People-centred care and community engagement

While preparing for emergencies, health systems should as much as possible follow the five interwoven strategies defined by WHO for health service delivery to become more people-centred and integrated. These are (a) engaging and empowering people and communities; (b) strengthening governance and accountability; (c) reorienting the model of care; (d) coordinating services within and across sectors; and (e) creating an enabling environment (1).

Each health system is situated within a context that influences every part of it, and the context itself is shaped by the people for whom the health system has been designed. Thus, it is important to address context-specific barriers to equity, such as the inability of local government to reach people, horizontal and vertical fragmentation in health programmes, cultural and gender barriers, lack of representation of marginalized groups, and radically decentralized and pluralistic health systems (51). For this reason, it is vital for government and the health sector to engage with the local community and work with it to co-design and implement interventions – otherwise, any intervention may be futile or even counterproductive. PHC can support communities to build their societal resilience.

Risk communication based on adequate health information is crucial. Nigeria was able to keep incidents of misinformation about Ebola virus low by ensuring continuous, active communication with the population. Toll-free telephone lines were opened and members of the public were encouraged to call in to report new cases or ask any questions they might have (52). Trained community mobilizers went door to door to deliver key messages on prevention, and meetings were held with religious and community leaders to inform them of the risks and preventive measures and to encourage them to help raise awareness among their communities. In addition, information about Ebola virus disease was disseminated through electronic, print and social media platforms (53).
An appropriate primary health care workforce

Importance of the primary health care workforce

Health workers are central to the success or failure of any emergency preparedness, response or recovery plan, and it is crucial that primary care and public health workers have the capacity to respond. They must be trained and equipped, available, motivated, and well remunerated, and must feel safe to play their role during emergencies. The PHC workforce must include both health workers equipped to manage cases in primary care facilities and community-based health workers who can facilitate communication and links with affected populations (54).

In Nigeria, the successful response to the Ebola virus disease outbreak in 2014 was partly due to the quick thinking of health workers. They were able to recognize the signs and symptoms of the disease in the first patient that presented, take appropriate clinical actions and, crucially, notify the local public health authorities. This led to rapid and very effective contact tracing and active case searching and control efforts, which helped contain disease transmission (52). In the United States, health workers who had been trained to look for unusual cases or clusters of infectious disease were quick to recognize the beginnings of the 1999 outbreak of West Nile viral encephalitis and notify the appropriate authorities (55).

Afghani and Bangladeshi health workers who knew how to manage diarrhoea as a result of their training were able to respond appropriately, which resulted in low mortality rates (56, 57). This was particularly noticeable in Bangladesh, where, in spite of monsoon floods in 2007, the case fatality rate from diarrhoea was only 0.2%. In Nepal, rapid response teams that are able to conduct rapid health assessments were mobilized as part of the response against the H5N1 outbreak (57).

Capacity building also requires increasing the actual number of people in the workforce through innovative training and recruitment of health workers and interventions to retain them. It is important also to find ways to redress the unfair distribution of human resources, which is common, particularly in weak health systems that have chronic health workforce crises (58).

Although the West Nile virus outbreak in the United States was relatively minor in terms of morbidity and mortality, the response and recovery still required an enormous number of personnel. The system was only able to cope because it had access to a large pool of health workers (55). In Asia, Japan, Myanmar and the Philippines were able to respond effectively and adequately to natural disasters (cylones, earthquakes) because they could call upon health workers who had been reasonably well trained and were ready to act (57, 59, 60).
Roles, responsibilities and protecting the workforce

For health workers to be able to fulfil their roles in emergencies, governments and agencies should consider incentives and guarantees for them when they are working in insecure environments. Collaboration with humanitarian agencies can facilitate effective deployment of health personnel during emergencies and different models of care, including mobile clinics.

Buhmann and colleagues identified four roles for health workers in conflict and emergency settings: military, humanitarian, development and peace (61). The main point is that health care workers may have different roles, values and approaches whilst delivering primary care. Each of them may tackle the consequences of the conflict but may also have an impact on the conflict itself. While they can be complementary, the role of a military-affiliated health worker working on a primary care project initiated by armed troops might differ considerably from that a health worker working for a development NGO. Clarification of roles and responsibilities, including communication with the population, can increase trust in the health workforce. The importance of this can be seen from the increased attacks on health care workers in conflict areas – 322 attacks in 2017 (62). Understanding these roles and the potential to mediate in violent conflict can be enhanced with the help of humanitarian and development organizations. Their experiences and understanding of postwar societies can be drawn on to design systematic investigations of the health sector as a peacebuilder (61).

The involvement of the military in emergency health situations remains controversial and raises questions about their effect on humanitarian principles, personnel and practices. Military cooperation during the 2014 Ebola virus disease outbreak was necessary but more evidence and analysis is needed for military personnel to be regularly involved in health emergencies (63). The recent resurgence of violent conflicts and protracted crises has given rise to discussion among humanitarian workers that the application of humanitarian principles entails compromises (64).
Essential package of health services

An essential package of health services is a list of clinical and public health services that a government has determined as a priority for the country. Often the essential package is incorporated in national-level policy documents such as a strategic health sector plan (65). An essential package of health services aims to concentrate scarce resources on interventions that provide the best value for money. Such a package should include preparedness and response services. Governments should identify both priority packages to be delivered in emergency settings that are flexible enough to be used in different situations and available service delivery platforms.

Investments in community-level interventions, such as the implementation of an essential package of health services, links immediate service delivery to long-term goals for fragile areas. Donor-driven initiatives must involve local actors so as to strengthen the institutional apparatus to ensure sustainable service provision (66). During the Ebola virus disease outbreak in Liberia, continued investment in the community health strategy ensured prompt access to life-saving treatment at the community level. Through this strategy, community health workers were able to promote vaccination, encourage attendance at health care facilities, distribute medication, and provide community engagement activities (22).

Quality and safety

The quality and safety of health services require close attention. Several elements have been identified to improve the quality of humanitarian health services for populations affected by armed conflict and natural disasters. First, governments and donors of humanitarian activities should place greater emphasis on strengthening the use and monitoring of quality standards and performance metrics. Second, efforts to enhance the competence of the humanitarian health workforce need to be scaled up through training and updated technical standards and competency frameworks. Third, coordination mechanisms need to ensure that actors operate according to a standard package of care and specific service quality standards. Fourth, governments need to explicitly consider crisis contexts when developing health system assessments and population surveys. And fifth, health governance of humanitarian systems requires improvement. Robust governance arrangements, ideally interagency, need to be established to develop concrete accountability and liability within the humanitarian health sector (67).
Infrastructure, equipment and supplies

Infrastructure and supplies are integral to service delivery and the development of resilient primary care, and investments must be made in this area to guarantee good-quality services. Basic infrastructure requirements include WASH facilities at the primary care level, an isolation room to facilitate quarantine, and a waste management plan and facilities, including an incinerator. Basic diagnostic equipment and facilitated referrals to the secondary care level are also necessary. A facility should have infection, prevention and control supplies to ensure patient and provider safety, including personnel protective equipment for health personnel such as gloves and goggies. Moreover, proper supply management is needed to ensure a stock of essential medicines and products, including a buffer stock that should be able to cover an increase in the use of health services.

The effective response to Ebola virus disease in Nigeria was, in part, made possible by the availability of a range of equipment. Contact tracers needed vehicles, telephones and mobile data platforms to do their work effectively (52), and a mobile laboratory established at a university teaching hospital was useful for rapid case investigation and diagnosis (53). In Uganda also, the availability of a field laboratory in a small district during the 2000 Ebola virus disease outbreak meant that specific laboratory tests could be performed and results obtained within 24–48 hours. This greatly accelerated the case management decision-making and improved the efficacy of the response (68).

Burkina Faso experienced a meningitis epidemic in 2002, when there was no effective vaccine that was also affordable for the country. A year later, the country was able to produce a better response when it had the required medication and was able to distribute it to the population (69). In Afghanistan, stockpiling of certain medical supplies is a form of emergency preparedness. Stocks of oral rehydration solutions and intravenous fluids are kept in areas that are more likely to experience epidemics of acute watery diarrhoea. Since outbreaks often occur after flooding, storing the medications where they will potentially be needed helps to prevent problems of accessibility, and allows rapid mobilization (56).
Health information systems

A resilient health information system allows the use, coverage and quality of routine health services to be monitored, including during emergencies. Functioning surveillance and early warning systems, reporting of notifiable diseases, and community-based surveillance systems can facilitate a rapid response and early containment of a health emergency. Mobile devices and digital reporting applications help such information gathering and transfer, and have become increasingly available in resource-constrained settings. Some health facility assessment tools designed for use in emergencies are available, such as the Health Resources Availability Monitoring System (HeRAMS) developed by WHO (70).

Strategic health information systems and epidemiological surveillance networks are essential for reporting on both the status of the system and impending health threats in real time, and allow predictive modelling for an emergency response. Resilient PHC systems must be able to access databases and maps of the health workforce, infrastructure and other needed information, and highlight areas of strength and vulnerability (27).

Risk assessment at the national and local levels, including in post-emergency situations, is essential to identify the important components of the health care system that need improvement for strategic preparedness and response. Rapid assessment of the 2004 tsunami in India identified an increased incidence of diarrhoeal disease due to the poor sanitation and living conditions. Prevention and management protocols for natural disasters were revised to include improved food, water supply and sanitation as essential components of future response (20).

Research methods, such as ethical participatory and action research, that are adapted to the context provide opportunities to study complex problems in post-emergency systems, and the lessons learned could be used to create new approaches (51).

Leadership by health authorities

In order to operationalize and sustain initiatives that strengthen health systems during and after health emergencies, there needs to be a common vision of PHC that is shared by the many actors involved. Local and international actors need to have aligned strategies, policies and resources linked to development and the humanitarian response (71). In the absence of central government, humanitarian and development actors should aim to work through local government and follow the accepted principles and mechanisms for health partnership coordination, such as those developed by the UHC2030 International Health Partnership and the Global Health Cluster. This includes a need for joint planning, coordinated implementation, and joint monitoring and evaluation of primary care provision, response services and essential public health functions. Building leadership and management capacity must be considered to support the management and complex governance of a range of interrelated actors and programmes.

In these settings, however, there is usually a lack of alignment of and coordination between the different actors, who often have different service delivery models, decision-making priorities, funding mechanisms, informal power structures and diverse supporting bodies. This is compounded by a lack of shared information on who is doing what and in which localities (51). To address this, health clusters and sectorwide approaches have been useful in overcoming fragmentation. Engaging with local actors has also shown positive results. In Myanmar, a local–global model of partnership between international NGOs and a local NGO (Back Pack Health Worker Team) allowed primary care provision to communities in areas that were inaccessible to international NGOs. The partnership was successful and led to an increase in the patient caseload and in vitamin A supplementation, and an improvement in maternal and child health outcomes (72).

A PHC approach not only increases trust and participation, it also promotes empowerment. Decentralization of responsibility is important, where the government, international actors, health workforce and community share accountability (28). An example of this is the successful revival of the National Tuberculosis Programme in Afghanistan. Initially, technical assistance for operations was provided by international support and partnerships. Now that the programme managers are more confident in implementing the programme, and with strong political ownership by the Ministry of Public Health, international support is being systematically phased out (73). Another example is the efficient coordination and collaboration between an Ontario public health unit and its primary care provider during the 2009 H1N1 influenza pandemic. The family health team structure offers a new capacity for timely, coordinated, and comprehensive response to public health emergencies, in partnership with public health, and provides a promising new direction for healthcare organizations. (74).
Strong and resilient primary health care on national and global agendas

Primary health care resilience

The Declaration of Astana on Primary Health Care acknowledges that a PHC approach empowers people and communities, addresses the determinants of health in a multisectoral and intersectoral way, and ensures strong primary care as the core of integrated service delivery with essential public health functions (2). These are the building blocks that should be respected and relied upon within, during and between emergencies. This implies involving and closely cooperating with communities in disaster preparation and when providing health care services during an emergency. Such collaboration enhances trust in and the legitimacy of PHC teams. However, PHC teams will only be prepared if this is an explicit element in their job description and they are given the resources to strengthen their disaster risk management capacities.

Strengthening PHC resilience in the face of emergencies is essential, and strengthens the resilience of the health system as a whole. The capacity of PHC to provide access to good-quality health services and its resilience are inseparable (75). However, conceptual frameworks on the development and governance of resilient health systems have not explicitly referred to or included the concept of good-quality PHC as a core element of health system resilience (27, 76). Further research, including empirical case studies and conceptualization, on the relation between PHC, health system strengthening, global health security, universal health coverage and resilience is needed (77).
Humanitarian–development–peace nexus

In many emergencies, humanitarian partner coordination is assured by the Global Health Cluster. It coordinates the regular public health actors with other national and international agencies representing multiple sectors during and after an emergency at local and national levels, depending on the situation. At the global level, there is monitoring of capacity within the network and intercluster collaboration with other thematic United Nations clusters (78). It is of utmost importance that at the national and local levels, governmental public health actors and PHC officers are involved in these multisectoral cluster meetings so as not to bypass the existing care and prevention networks close to people.

Conflict and forced displacement affect growing numbers of people and are often protracted. More than 80% of refugee crises last for more than 10 years; two in five last for more than 20 years (79). There must be coordination and compromise between the different health programmes to reconcile their sometimes conflicting drivers, as well as interventions to address the political boundaries that exist between development, humanitarian aid and security objectives, by both national and international actors (80). Involving existing PHC in an emergency response, even if there is an increase in activities by new actors such as international NGOs, is important in order to strengthen state legitimacy and trust in the longer term (76, 81).

The Inter-Agency Standing Committee and the United Nations Development Group, which are mandated to bring coherence to the response of international communities in humanitarian and development settings respectively, are developing new ways that align analysis, planning and programming between humanitarian, development and sometimes peace actors. Against the backdrop of an increase in protracted crises, these new mechanisms and initiatives are designed to strengthen the humanitarian–development nexus and facilitate the transition from aid dependency to sustainable development; overcome divisions and inefficiency; and reduce humanitarian needs while addressing their underlying causes and vulnerabilities.

In addition, since most of the current protracted emergencies are either caused or exacerbated by conflict, PHC can also have a role in peacebuilding. In public health terms, the nature and the intensity of any conflict, especially if armed, are fundamental determinants of health. Health workers respond to emergencies created by violent conflict and, more importantly, work to create the conditions that enable individuals, communities and societies to realize their aspirations without resorting to violence. Therefore, the health community can and should be involved in identifying and preventing circumstances that create violent conflict. PHC is a relatively non-controversial area in which opposing parties can be brought together because it has a higher goal and can transcend political differences. Some actions proposed include continued health services during humanitarian ceasefires and immunization programmes, which involve collaboration of all sides in a conflict (82).
A tailored approach to advancing primary health care

It is important to acknowledge the context, socioeconomic status of a country, type of emergency and type of actors when advancing PHC programmes and policies, as highlighted in the three-dimensional conceptualization of PHC and emergencies (Figure 1). PHC needs to be fit for purpose and adapted to local needs.

In high- and middle-income countries, it is expected that preparedness and training will become part of, and budgeted in, domestic PHC plans, thus securing health services, and will be among the actions to advance national universal health coverage agendas. Nevertheless, given current ecological challenges, such as environmental pollution, climate change, biodiversity loss, and the potential for pandemics and for refugee streams resulting from climate-driven conflict, there might be unexpected, large-scale emergencies that require international solidarity and funding. In low-income countries and fragile settings, sustained external financing will be needed to prevent emergencies, tackle deficits in health systems and PHC, and rebuild primary care and public health services in emergency settings. This is in line with the SDGs3 and the financing for development agreed in the Addis Ababa Action Agenda (83).4

An important barrier to expanding primary care and public health services in low-income countries is the limited resources available to invest in creating health worker employment. It has been estimated that 18 million additional health care workers are required to achieve the health-related SDGs, and that 12 million of these need to be employed in low- and middle-income countries (84). A costing analysis predicts that an additional US$ 274 billion needs to be spent on health each year until 2030 in 67 low- and middle-income countries in order to achieve the SDG 3 targets. The majority of these costs, 60–80%, consist of recurrent investments, for example in employment and education, to expand the workforce (85).

Past and current Ebola virus disease epidemics highlight the importance of investing in a strong, skilled and fit-for-purpose health workforce aligned with PHC principles. This must be based on shared responsibilities and appropriate finance models (see section 4.4), with a PHC workforce recognized as one of the essential global public goods that can help mitigate the health impact of emergencies. Regardless of the context, it should be the national government in close dialogue with community representatives and other important societal actors that leads and coordinates this preparedness and response agenda at the national level. In emergency situations, good governance and democratic principles might be bypassed, sometimes for good reasons. Nevertheless, in such circumstances, specific attention to strengthening and guaranteeing continuity of essential public health functions and primary care in the longer term is needed.

When urgent and targeted health actions are required (for example, for a mass immunization campaign or other essential public health functions), it is important that the factors driving an epidemic or conflict and the systemic health effects it produces are understood and are addressed in the long term in order to build sustainable services. During conflicts and other emergencies, there might be a tendency to run and finance vertical, selective interventions (such as an infant feeding centre in a refugee camp). However, sustainability must be built in from the beginning, as PHC teams must be able to continue basic functions (for example, nutritional programmes and growth monitoring) when emergency programmes stop, and other actors (such as humanitarian NGOs) have left the area (86). Subnational health systems and health care facilities, hence PHC, should be explicit parts of local, national and global health security agendas and IHR (2005) capacity-building efforts.

3 SDG target 3.D: Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks.
4 “ODA providers are encouraged to consider setting a target to provide at least 0.20 per cent of ODA/GNI (official development assistance/gross national income) to least developed countries” (83).
A balanced approach to global financing

The UHC2030 International Health Partnership and the Health Systems Governance Collaborative are moving forward on the aid effectiveness agenda, at the same time recognizing the changing role of development assistance. Key factors in advancing the dual aims of global health security and universal health coverage are mutual accountability of international and domestic health actors; intersectoral governance mechanisms; and harmonization with national health sector strategic plans (87, 88).

Important considerations in financing are that governments agree on the joint financing of global public goods, and that international financing should be more flexible and less tied to specific health programmes. There should be domestic responsibility to fund basic health systems as well as accountability and agreement on principles, including on equity, social protection and guaranteeing human security.

In international financing, there may also be a role for health system strengthening so low-income countries would not have to ensure financial self-sustainability by the end of a programme cycle (in this case, services provided in an emergency), but they would agree not to reduce their existing health spending on basic health systems, including PHC. Every government should actively assess the existing mechanisms for sectorwide approaches and for pooling external funds for health, including from WHO, the Global Fund to Fight AIDS, Tuberculosis and Malaria, the GAVI Alliance, and the World Bank’s health trust funds, and consider the feasibility of broader mandates, mergers and increased global pooling with the aim of improving efficiency and equity (89). The run-up to the United Nations General Assembly in 2019 might be the appropriate time to discuss and prepare how to advance such a global “social contract” and financing approach, with the WHO 13th General Programme of Work at its core and PHC as the basis for advancing universal health coverage and global health security.
Conclusion: global momentum reaffirming primary health care

Global health security cannot exist without strong PHC-oriented health systems, and such health systems rely on solid primary care programmes and teams (90). The outcome document of the World Humanitarian Summit (91), the Sendai Framework for Disaster Risk Reduction (47), IHR (2005) (48) and the SDGs (92) all recognize the domestic and international responsibilities of governments, in collaboration with relevant actors, to develop and finance preparedness, response and rehabilitation in the context of emergency situations. The health sector is a crucial, although not exclusive, element in the complex systems that mitigate the risk and effects of emergencies.

WHO’s Director-General, Dr Tedros Adhanom Ghebreyesus, has repeatedly stated that a strong health system is a guarantee of health security: “Strong health systems and health security are two sides of the same coin” (93). The question is then how to move this agenda forward, while recognizing that a PHC approach is fundamental. In line with this, a Lancet Commission has been established to analyse the synergies between universal health coverage, health security and health promotion with the aim of overcoming fragmentation and realizing the potential for coherence in global health. The Commission will systematically examine connections between these leading agendas in global health (94).

Concerted diplomacy and leadership by WHO, WHO Member States and partners is required. The global community – at the 2018 Global Conference on Primary Health Care in Astana and the upcoming high-level meeting on universal health coverage at the United Nations General Assembly in 2019 – have an opportunity to propose financial and political solutions that will place PHC-led universal health coverage firmly at the heart of global health security and to secure renewed global commitment to PHC as a means to prepare for, respond to and overcome current and future emergencies.
References


## Annex 1. Glossary of terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tr>
<td>Cluster</td>
<td>In the context of the humanitarian reform, a cluster is a group of agencies, organizations and/or institutions interconnected by their respective mandates that work together towards common objectives. The purpose of a cluster is to foster timeliness, effectiveness and predictability while improving accountability and leadership.</td>
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<td>Complex emergency</td>
<td>A multifaceted humanitarian crisis in a country, region or society where there is a total or considerable breakdown of authority resulting from internal or external conflict and which requires a multi-sectoral, international response that goes beyond the mandate or capacity of any single agency and/or the ongoing UN country programme. Such emergencies have, in particular, a devastating effect on children and women, and call for a complex range of responses. (OCHA)</td>
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<td>Coordination</td>
<td>The systematic utilization of policy instruments to deliver humanitarian assistance in a cohesive and effective manner. Such instruments include strategic planning; gathering data and managing information; mobilizing resources and assuring accountability; orchestrating a functional division of labour in the field; negotiating and maintaining a serviceable framework with host political authorities; and providing leadership. Sensibly and sensitively employed, such instruments inject an element of discipline without unduly constraining action (Larry Minear, Study on the First Gulf Crisis, 1992). Coordination can be by command, in which strong leadership is accompanied by some sort of authority; by consensus, in which leadership is essentially a function of the capacity to orchestrate a coherent response and to mobilize the key actors around common objectives and priorities; and by default, in which case coordination, in the absence of a formal coordination entity, involves only the most rudimentary exchange of information and division of labour among the actors (Antonio Donini, UN coordination in Afghanistan, Mozambique &amp; Rwanda, 1996). There can be three levels of coordination: among organizations, among functions, and within programmes. Financing is important for coordination to be effective, and in fact governments have the obligation to establish and maintain frameworks for coordination. In practice, coordination is effective when structures are agreed first, reinforced by dynamic leadership (Marc Somers; EFCT course material on the mechanics of coordination, 2000).</td>
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<tr>
<th><strong>Crisis</strong></th>
<th>1. A situation that is perceived as difficult. Its greatest value is that it implies the possibility of an insidious process that cannot be defined in time, and that even spatially can recognize different layers/levels of intensity. A crisis may not be evident, and it demands analysis to be recognized. Conceptually, it can cover both preparedness and response (“crisis management”). 2. Time of danger or greater difficulty, decisive turning point (Oxford Pocket Dictionary, 1992).</th>
<th><a href="http://www.who.int/hac/about/definitions/en/">http://www.who.int/hac/about/definitions/en/</a></th>
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<tr>
<td><strong>Emergency</strong></td>
<td>Emergency is a term describing a state. It is a managerial term, demanding decision and follow-up in terms of extraordinary measures (Oxford Pocket Dictionary, 1992). A “state of emergency” demands to “be declared” or imposed by somebody in authority, who, at a certain moment, will also lift it. Thus, it is usually defined in time and space, it requires threshold values to be recognized, and it implies rules of engagement and an exit strategy. Conceptually, it relates best to response.</td>
<td><a href="http://www.who.int/hac/about/definitions/en/">http://www.who.int/hac/about/definitions/en/</a></td>
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<td><strong>Epidemic</strong></td>
<td>The occurrence in a community or region of cases of an illness, specific health-related behaviour, or other health-related events clearly in excess of normal expectancy. The community or region and the period in which the cases occur are specified precisely. The number of cases indicating the presence of an epidemic varies according to the agent, size, and type of population exposed, previous experience or lack of exposure to the disease, and time and place of occurrence.</td>
<td><a href="http://www.who.int/hac/about/definitions/en/">http://www.who.int/hac/about/definitions/en/</a></td>
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<tr>
<td><strong>Global Health Cluster</strong></td>
<td>Health clusters exist to relieve suffering and save lives in humanitarian emergencies, while advancing the well-being and dignity of affected populations. Currently 27 countries have an active health cluster/sector. These health clusters are working to meet the health needs of approximately 75 million people worldwide. WHO is the lead agency for the Global Health Cluster, as mandated by the Inter-Agency Standing Committee.</td>
<td><a href="http://www.who.int/health-cluster/about/cluster-system/en/">http://www.who.int/health-cluster/about/cluster-system/en/</a></td>
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<td><strong>Global public health security</strong></td>
<td>Global public health security is defined as the activities required to minimize the danger and impact of acute public health events that endanger the collective health of populations living across geographical regions and international boundaries.</td>
<td><a href="http://www.who.int/health-security/en/">http://www.who.int/health-security/en/</a></td>
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<td><strong>Health as a Bridge for Peace (HBP)</strong></td>
<td>Term coined in the 1980s by the Pan American Health Organization. It is a multidimensional and dynamic concept, based on the integration of peacebuilding concerns and strategies into health relief and health sector development in post-conflict transitions. This approach is currently being updated and revised in line with the recent sustaining peace resolution.</td>
<td><a href="http://www.who.int/hac/about/definitions/en/">http://www.who.int/hac/about/definitions/en/</a></td>
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<td>Health systems strengthening</td>
<td>1. The process of identifying and implementing the changes in policy and practice in a country's health system, so that the country can respond better to its health and health system challenges. 2. Any array of initiatives and strategies that improves one or more of the functions of the health system and that leads to better health through improvements in access, coverage, quality or efficiency.</td>
<td><a href="http://www.who.int/healthsystems/hss_glossary/en/index5.html">http://www.who.int/healthsystems/hss_glossary/en/index5.html</a></td>
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<tr>
<td>Humanitarian assistance</td>
<td>Humanitarian assistance is aid to a stricken population that complies with the basic humanitarian principles of humanity, impartiality and neutrality. Assistance can be divided into three categories based on the degree of contact with the stricken population: 1. Direct assistance is the face-to-face distribution of goods and services. 2. Indirect assistance is at least one step removed from the population and involves such activities as transporting relief goods or relief personnel. 3. Infrastructure support involves providing general services, such as road repair, airspace management and power generation, that facilitate relief but are not necessarily visible to or solely for the benefit of the stricken population.</td>
<td><a href="http://www.who.int/hac/about/definitions/en/">http://www.who.int/hac/about/definitions/en/</a></td>
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<td>Humanitarian–development–peace nexus</td>
<td>The humanitarian–development–peace nexus is a theme touched upon through a number of global platforms: The Grand Bargain, the New Way of Working, the Comprehensive Refugee Response Framework, the World Bank–United Nations peace initiative, European Union humanitarian–development nexus pilots and the International Network on Conflict and Fragility of the Organisation for Economic Co-operation and Development. The term covers any initiative by the United Nations, nongovernmental organizations, governments and donors that aims to create coherence in analysis, planning, programming, financing and coordination between humanitarian, development and peacebuilding actors or a range of thematic areas. Adapted from the learning series of the International Council of Voluntary Agencies.</td>
<td><a href="https://www.icvanetwork.org/">https://www.icvanetwork.org/</a></td>
</tr>
<tr>
<td>International Health Regulations (IHR)</td>
<td>An agreed code of conduct adopted by the World Health Assembly in May 2005 to protect against the spread of serious risks to public health and, the unnecessary or excessive use of restrictions in traffic or trade. The IHR (2005) came into force on 15 June 2007.</td>
<td><a href="http://www.who.int/hac/about/definitions/en/">http://www.who.int/hac/about/definitions/en/</a></td>
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### Disasters and natural hazards

In the 2005 Secretary-General report *Relief to development*, the expression “natural disasters” was purposely not used as it conveys the mistaken assumption that disasters occurring as a result of natural hazards are wholly “natural” and therefore inevitable and outside human control. Instead, it is widely recognized that such disasters are the result of the way individuals and societies relate to threats originating from natural hazards. The nature and scale of threats inherent in hazards vary. The risks and potential for disasters associated with natural hazards are largely shaped by prevailing levels of vulnerability and measures taken to prevent, mitigate and prepare for disasters. Thus, disasters are, to a great extent, determined by human action, or lack thereof. The expression “disasters associated with natural hazards” should therefore be used, in line with the Hyogo Framework for Action adopted at the World Conference on Disaster Reduction held in January 2005 in Kobe (Hyogo, Japan). Natural hazards comprise phenomena such as earthquakes; volcanic activity; landslides; tsunamis; tropical cyclones and other severe storms; tornadoes and high winds; river floods and coastal flooding; wildfires and associated haze; drought; sand/dust storms; and infestations.

http://www.who.int/hac/about/definitions/en/

A natural disaster is an act of nature of such magnitude as to create a catastrophic situation in which the day-to-day patterns of life are suddenly disrupted and people are plunged into helplessness and suffering and, as a result, need food, clothing, shelter, medical and nursing care and other necessities of life, and protection against unfavourable environmental factors and conditions.

http://www.who.int/environmental_health_emergencies/natural_events/en/

### New Way of Working

Recognizing that humanitarian and development actors, governments, nongovernmental organizations and private sector actors have been progressively working better together to meet needs for years, the New Way of Working aims to offer a concrete path to remove unnecessary barriers to such collaboration in order to enable meaningful progress. The New Way of Working can be described, in short, as working over multiple years, based on the comparative advantage of a diverse range of actors, including those outside the United Nations system, towards collective outcomes. Wherever possible, those efforts should reinforce and strengthen the capacities that already exist at national and local levels.

https://www.agendaforhumanity.org/sites/default/files/New Way of Working booklet_0.pdf

### Preparedness

1. Activities and measures taken in advance to ensure effective response to the impact of hazards, including the issuance of timely and effective early warnings and the temporary evacuation of people and property from threatened locations (ISDR). 2. Pre-disaster activities, including an overall strategy, policies, and institutional and management structures that are geared to helping at-risk communities safeguard their lives and assets by being alert to hazards and taking appropriate action in the face of an imminent threat or the actual onset of a disaster (OCHA-WFP).

http://www.who.int/hac/about/definitions/en/
| **Primary health care** | Primary health care is a whole-of-society approach that aims to maximize the health and well-being of all people over the course of their lives. Primary health care has three interrelated and synergistic components.  
1. Meeting people's health needs through comprehensive promotive, protective, preventive, curative, rehabilitative and palliative care throughout the life course, strategically prioritizing key health care services aimed at individuals and families through primary care and the population through public health functions as the central elements of integrated health services.  
2. Systematically addressing the broader determinants of health (including social, economic and environmental factors, as well as individual characteristics and behaviour) through evidence-informed policies and actions across all sectors.  
3. Empowering individuals, families and communities to optimize their health as advocates of policies that promote and protect health and well-being, as co-developers of health and social services, and as self-carers and caregivers. |

https://www.who.int/docs/default-source/primary-health/vision.pdf

| **Public health emergency** | A public health emergency (the condition that requires the governor to declare a state of public health emergency) is defined as “an occurrence or imminent threat of an illness or health condition, caused by bioterrorism, epidemic or pandemic disease, or (a) novel and highly fatal infectious agent or biological toxin, that poses a substantial risk of a significant number of human fatalities or incidents or permanent or long-term disability” (WHO/DCD, 2001). The declaration of a state of public health emergency permits the governor to suspend state regulations and change the functions of state agencies. |

http://www.who.int/hac/about/definitions/en/

| **Protracted crises** | For the purposes of the paper, protracted conflict and refugee crises are defined as situations caused by conflict where government systems, essential services and markets are unable to absorb or adapt to the impact of crises, leaving a significant proportion of the population acutely vulnerable to death, disease and disruption of livelihoods and at risk of forced displacement over a period of more than three years. This definition builds on *Beyond the continuum: the changing role of aid policy in protracted crises*, Overseas Development Institute, 2004. |


| **Recovery** | 1. Decisions and actions taken after a disaster with a view to restoring or improving the pre-disaster living conditions of the stricken community, while encouraging and facilitating necessary adjustments to reduce disaster risk (ISDR). 2. Longer-term effort to (a) reconstruct and restore the disaster-stricken area, e.g. through repairing or replacing homes, businesses, public works, and other structures; (b) deal with the disruption that the disaster has caused in community life and meet the recovery-related needs of victims; and (c) mitigate future hazards (K. Tierney, Disaster preparedness and response: research findings and guidance from the social science literature, University of Delaware Disaster Research Center, Preliminary Paper 193, 1993). |

http://www.who.int/hac/about/definitions/en/
| Relief and emergency humanitarian assistance | Relief operations are intended to respond to the immediate need to save lives, limit extraordinary suffering, prevent further injury to the population or damage to the society. Normally, these are operations of short duration. However, in complex emergencies when states are unstable or have failed, and the society has lost its ability to respond, protracted humanitarian emergencies requiring a sustained international presence can exist. | http://www.who.int/hac/about/definitions/en/ |
| Resilience | The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions. | http://www.unisdr.org/we/inform/terminology#letter-e |
| Sustaining peace agenda | Based on the twin General Assembly and Security Council “peacebuilding resolutions” (A/RES/70/262 and S/RES/2282), this agenda calls for sustaining peace “at all stages of conflict and in all its dimensions” and stresses the imperative to prevent “the outbreak, escalation, continuation and recurrence of conflict”, in response to worrying trends such as the increase in violent conflict worldwide and unparalleled levels of forced displacement. | http://www.un.org/en/ga/search/view_doc.asp?symbol=a/72/707 |
| Universal health coverage | Universal health coverage means that all people and communities can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship. | http://www.who.int/health_financing/universal_coverage_definition/en/ |
Annex 2. Building primary health care resilience using health system components

Table A2.1 outlines some lessons found in the literature that can help build primary health care (PHC) preparedness and response capacities to manage public health emergencies, structured around the components of health systems.

Table A2.1 Components of health systems for PHC resilience

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<thead>
<tr>
<th>Components</th>
<th>Scale</th>
<th>Source</th>
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<tr>
<td><strong>Governance</strong></td>
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<tr>
<td>The capacity of domestic institutions should be strengthened so they can lead the transition from short-term humanitarian response to long-term reconstruction and development – including capacity transfer to local partners.</td>
<td>Global to national</td>
<td>(1–3)</td>
</tr>
<tr>
<td>Resources, initiatives and policies need to be aligned to enable synergy between all local and international actors (private and public) involved in the development and humanitarian response, which links to national standards and goals.</td>
<td>Global to national</td>
<td>(4–6)</td>
</tr>
<tr>
<td>Context-specific preparedness plans and pathways should be developed, which detail standard operating procedures during emergencies and identify clear lines of command and priorities.</td>
<td>National</td>
<td>(7, 8)</td>
</tr>
<tr>
<td>Ensuring sustained baseline PHC standards and activities improves the response during emergencies.</td>
<td>National</td>
<td>(8, 9)</td>
</tr>
<tr>
<td><strong>Health services</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investments in health systems help to build a community’s resilience by providing training, equipment and essential medicines to community-based providers for basic health services.</td>
<td>National</td>
<td>(10)</td>
</tr>
<tr>
<td>Programmes to improve service delivery systems and outcomes have the potential to help reduce a country’s fragility during emergencies. This offers an entry point for broader governance reforms in political, social, economic, and security areas, thus positively contributing to restoring legitimacy to governments.</td>
<td>National</td>
<td>(11)</td>
</tr>
<tr>
<td>If early emergency medical response is not available, then the disaster response for health should focus predominantly on supporting community needs and PHC capacities.</td>
<td>National</td>
<td>(12)</td>
</tr>
</tbody>
</table>
### Components

<table>
<thead>
<tr>
<th>Any medical treatment of a displaced population that is superior to the health care level available for the residents of the host country should be avoided in order not to jeopardize local acceptance of humanitarian assistance in regions with very severe health problems.</th>
<th>National to subnational</th>
<th>(9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipating increased primary care visits could better prepare health systems to effectively manage the patient load and improve access to primary care services for all members of the affected population.</td>
<td>Subnational</td>
<td>(13)</td>
</tr>
<tr>
<td>Health care quality must be rigorously monitored and addressed to improve health outcomes. In certain remote areas, context-specific indicators should be incorporated when creating health programmes and budgets.</td>
<td>Subnational</td>
<td>(14)</td>
</tr>
</tbody>
</table>

### Health information

<table>
<thead>
<tr>
<th>The quality of research in PHC and emergencies needs to be improved. This includes clarifying terminology, encouraging paper authorship from low-income countries, developing and validating PHC-specific disaster indicators and encouraging organizations working in PHC disaster activities to publish data. Research methods, such as participatory and action research, that are adapted to the context are opportunities for this.</th>
<th>Global to national</th>
<th>(3, 12, 15, 16)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk assessment is essential in post-emergency situations and rapid implementation of control measures through re-establishment and improvement of PHC delivery should be prioritized. Identifying vulnerabilities and documenting strengths of the health care system are crucial to the strategic development of preparedness and relief.</td>
<td>National</td>
<td>(12, 17)</td>
</tr>
<tr>
<td>An active and collaborative laboratory surveillance system would integrate front-line laboratories into the public health system to assist detection and control of infectious diseases in the future.</td>
<td>National</td>
<td>(18)</td>
</tr>
</tbody>
</table>

### Health workforce

<table>
<thead>
<tr>
<th>Capacity development of health workers at various levels of health care is an important step towards effective implementation of the emergency response and recovery. This includes capacities in emergency preparedness, case management, team approach, emotional response and other public health services.</th>
<th>National to subnational</th>
<th>(5, 6, 9, 18–20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community health workers and front-line staff play an essential role in the response and recovery process, promoting vaccination, encouraging attendance at health care facilities, distributing medication and providing community-based PHC services.</td>
<td>Subnational</td>
<td>(3, 10)</td>
</tr>
<tr>
<td>Policies should be developed to increase the number of health workers who are adequately distributed and trained.</td>
<td>National</td>
<td>(21)</td>
</tr>
</tbody>
</table>
### Components

<table>
<thead>
<tr>
<th><strong>Components</strong></th>
<th><strong>Scale</strong></th>
<th><strong>Source</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Infrastructure, medical supplies and devices</strong></td>
<td>Subnational</td>
<td>(14, 22)</td>
</tr>
<tr>
<td>Mobile health clinics and paid community health workers are helpful in overcoming barriers to care as result of distance, weather and transportation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health financing and its management are crucial to ensure availability of medical products, fund payments to staff and purchase of necessary equipment. The International Health Regulations need to be properly adopted and country leaders should ensure in-country coordination, collaboration with others and flexible trade agreements.</td>
<td>Global to national</td>
<td>(23)</td>
</tr>
<tr>
<td><strong>Health financing</strong></td>
<td>National</td>
<td>(8)</td>
</tr>
<tr>
<td>In health systems that are rebuilding and rapidly changing in a post-conflict setting, it may be more difficult for user fees to produce beneficial effects than is sometimes seen in other developing country settings.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Each facility should maintain contingency funds for emergency response as well as local vendor agreements to ensure stock supplies during emergencies.</td>
<td>Subnational</td>
<td>(24)</td>
</tr>
<tr>
<td>Some governments in crisis-affected settings may be reliant on donor support just to maintain current coverage for health expenditure. In such cases, donors have played a crucial role in financing health care provision through pooled funds that utilize community-based health insurance and removal of user fees.</td>
<td>National</td>
<td>(2)</td>
</tr>
<tr>
<td><strong>Cross-cutting elements</strong></td>
<td>Subnational</td>
<td>(3, 20, 23, 25, 26)</td>
</tr>
<tr>
<td>Involvement of community volunteers and leaders is important to engage communities with cultural, religious or ideological differences. They could share their experiences and help control future emergencies (e.g. community volunteers, traditional health teams, disaster/outbreak survivors, volunteer refugees).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profiling and role mapping of both local and international actors can help steer the approach and service implementation by adjusting roles where required. Capacity-building should pay closer attention to intangible and invisible dimensions, including the nature of the state–society relation.</td>
<td>Global to national</td>
<td>(1, 11, 27)</td>
</tr>
<tr>
<td>To ensure long-term sustainability of primary health services, international support should withdraw in a phased manner, coupled with a sequential increase in resources allocated to local actors. It is important to ensure that the emergency mindset does not distort programming.</td>
<td>Global to national</td>
<td>(5, 27)</td>
</tr>
</tbody>
</table>
References: Annex 2


