Chapter 4

Health in humanitarian crises

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4.1 Introduction

When the first edition of this book was published in 2003, the combined number of refugees, asylum seekers, and internally displaced persons (IDPs) worldwide was just less than 40 million. By the end of 2016, the number had increased to more than 65 million, which is the highest number since the end of World War II (UNHCR, 2017). Furthermore, some 5 million Palestinian refugees, assisted by the United Nations Relief and Works Agency (UNRWA), are to be found in Jordan, Lebanon, Syria, the West Bank, and the Gaza Strip (UNRWA, n.d.).

These populations have fled armed conflicts and long periods of deprivation in their homelands, often to be housed in large sprawling camps that have sometimes lacked the basic requirements for health, such as adequate food, clean water, and sanitation. In other cases, they have sought shelter wherever possible in local communities in the host country. In this chapter, we review the magnitude of the international refugee problem, examine the major health problems affecting refugees, and summarize the most important public health priorities in refugee assistance programmes.

There were several large mass migrations in the last decade of the twentieth century, such as the Kurdish refugees who fled Iraq for Iran or Turkey in 1991, the 1.5 million refugees or displaced persons within the republics of the former Yugoslavia in 1993, the estimated 2 million Rwandan refugees who fled into Tanzania, eastern Zaire (now the Democratic Republic of the Congo), and Burundi in 1994, and approximately 780,000 ethnic Albanians who fled the then Serbian province of Kosovo in 1999.

However, during the first decade of the new millennium, the number of refugees and IDPs remained relatively stable. This trend changed dramatically following the events of the so-called Arab Spring in 2011, especially in Syria, Iraq, and Yemen, where fierce armed conflict erupted and continues to this day. In March 2017, the number of registered Syrian refugees exceeded 5 million, the majority in Turkey, Jordan, and Lebanon (UNHCR, n.d.a). Furthermore, an estimated 6.6 million Syrians were internally displaced. Other major sources
of refugees and IDPs in 2017 were chronically conflict-affected Afghanistan, Somalia, the Democratic Republic of the Congo (DRC), and Colombia, as well as countries recently affected by conflicts, such as South Sudan, the Central African Republic, and Yemen. Under the International Refugee Convention, the Office of the United Nations High Commissioner for Refugees (UNHCR) is responsible for protection and assistance to refugees (Figure 4.1).

Before 1990, most of the world’s refugees had fled countries that ranked among the poorest in the world, such as Afghanistan, Cambodia, Mozambique, Somalia, and Ethiopia. However, during the following decade, a significant number of refugees originated in relatively more affluent countries, such as Kuwait, Iraq, the former Yugoslavia, Armenia, Georgia, Russia, and Azerbaijan. Since 2011, there have been large migrations of people from middle-income countries in the Middle East, such as Syria and Iraq. Nevertheless, the reasons for the flight of refugees remain the same: war, civil strife, and persecution. Hunger, while sometimes a primary cause of population movements, is all too frequently only a contributing factor.

In addition to those persons who meet the international definition of refugees, millions of people have fled their homes for the same reasons as refugees but remain internally displaced in their countries of origin. It has not proven easy to ascertain the number and location of the world’s IDPs. This is due not only to definitional difficulties but is also the result of institutional, political, and operational obstacles. Despite these difficulties, there was a broad consensus that the global population of IDPs has increased from somewhere in

![Figure 4.1 Trend of global displacement and proportion displaced, 1997–2016. Reproduced with permission UNHCR. Global Trends: Forced Displacement in 2016. Geneva, Switzerland: UNHCR. Copyright © 2017 UNHCR.](image-url)
the region of 20 million at the end of 2000 to more than 40 million at the end of 2016.

At the end of 2016, the largest IDP populations were in Syria, Colombia, Sudan, DRC, and Iraq. IDPs lack the protection afforded by the international conventions and protocols on refugees. Nevertheless, the Geneva Conventions and certain articles of the United Nations Charter afford some protection. Since 2005, UNHCR has been officially responsible for the provision of assistance to IDPs.

4.2 Health consequences of displacement

Prior to the recent conflicts in eastern Europe and the Middle East, the most common response to mass population movements was to establish camps or settlements; conditions in these camps have varied enormously. For example, camps for Rwandan refugees in eastern Zaire (as the DRC was then known) in 1994 contained up to 300,000 persons; they were poorly planned and laid out, with inadequate sanitation and poor access to clean water. It was difficult if not impossible to establish equitable distribution systems of food and shelter materials, and there was a high frequency of violence and other crimes. By contrast, smaller refugee camps in Burundi were more easily managed and suffered fewer health consequences related to environmental conditions.

However, since 2011, most Syrian and Iraqi refugees have been housed outside camps. For example, the majority of the 3 million Syrian refugees in Turkey live in urban areas, with around 260,000 accommodated in the 21 government-run refugee camps (UNHCR, n.d.b). In Jordan, over 655,000 Syrian men, women, and children are currently trapped in exile. Approximately 80% of them live outside camps, while more than 140,000 have found sanctuary at the camps of Za’atari and Azraq. There are no formal refugee camps in Lebanon and, as a result, more than a million registered Syrians are scattered throughout more than 2,100 urban and rural communities and locations, often sharing small basic lodgings with other refugee families in overcrowded conditions.

Syrian refugees have also fled to Europe, with many crossing the Mediterranean Sea to reach European Union (EU) member nations, mainly Greece, then travelling north. By late 2016, about 1 million Syrian refugees had requested asylum in Europe. Germany, with more than 300,000 cumulated applications, and Sweden with 100,000, are the EU’s top receiving countries (European Union, n.d.).

In low-income countries, refugees and displaced populations have commonly experienced high rates of communicable diseases and malnutrition resulting in significant excess mortality (Gayer et al., 2007). However, in middle-income
countries, the most common causes of morbidity and mortality have been non-communicable diseases (NCDs) and injuries (Strong et al., 2015). The health status of IDPs may be worse than that of refugees because access to these populations by international relief agencies is often difficult and dangerous. Also, IDPs may suffer more injuries because they are usually located closer to zones of conflict than are refugees; however, both refugees and IDPs are often victims of landmines, particularly as they cross international borders.

4.2.1 Elevated mortality

The most severe health consequences of conflict and population displacement have occurred in the acute emergency phase, during the early stage of relief efforts, and have been characterized by extremely high mortality rates. Although the quality of the international community’s disaster response efforts has steadily improved, death rates associated with forced migration have often remained high, as demonstrated by several emergencies during the 1990s (Figure 4.2). For example, the exodus of almost 1 million Rwandan refugees into the eastern Zaire town of Goma in 1994 resulted in crude mortality rates (CMR) that were more than 30 times the rates experienced prior to the conflict in Rwanda (Goma Epidemiology Group, 1995). By contrast, the CMR among Kosovar refugees in Albania in 1999 was lower than the internationally recognized threshold of ‘severe’ (1 death per 10,000 population per day; Toole and Waldman, 2012).

In the twenty-first century, the highest mortality rates have been documented among IDPs in Darfur (western Sudan). Degomme and Guha-Sapir (2010)

![Figure 4.2](https://example.com/figure4.2.png)

**Figure 4.2** Mortality rates for selected refugee and internally displaced populations, 1991–2014.
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reviewed 63 retrospective mortality surveys from early 2004 to the end of 2008. The highest CMR was 4 per 10,000 per day in early 2004; the most common cause of death was injuries due to violence. The study showed significant reductions in mortality rates from early 2004 to the end of 2008, although rates were higher during deployment of fewer humanitarian aid workers. Also, the main causes of death evolved from violence to communicable diseases. The study estimated that there were just fewer than 300,000 excess deaths related to conflict and displacement during the 4 year study period.

In situations where armed conflict has been widespread within a country, such as Syria, Somalia, Yemen, and Iraq, it has been almost impossible to enumerate the number of deaths among IDPs as opposed to the general population. However, retrospective mortality surveys in Iraq and DRC demonstrated significant increases in mortality related directly and indirectly to conflict. In Iraq (2004), the survey compared pre-invasion and post-invasion mortality (all ages) and found that the risk of death was 2.5-fold higher after the invasion than in the pre-invasion period (Roberts et al., 2004). Most of the 100,000 excess deaths were reported to be due to violence. A series of large sample surveys were conducted in DRC between 2001 and 2004. The fourth survey found that the national CMR of 2 deaths per 1000 per month was 67% higher than that reported before the war (Coghlan et al., 2006). Mortality rates were highest in the chronically conflict-affected east of the country. The total death toll from the conflict (1998–2004) was estimated to be 3.9 million.

Somalia has the seventh-largest internally displaced population in the world. It is the scene of one of the world’s longest continuous humanitarian assistance operations, dating back to the late 1980s. A reliably accurate count of IDPs does not exist. However, in 2014, estimates of the displaced population were around 1.1 million, including some 370,000 in the capital Mogadishu and its outskirts. The last mortality estimate, in 2010, found that displaced children suffered mortality rates 60% higher than other Somali children (Internal Displacement Monitoring Centre, 2010). Trends in death rates over time have varied from place to place. In refugee populations, such as Cambodians in eastern Thailand (1979) and Iraqis on the Turkish border (1991) where the international response has been prompt and effective, death rates have declined to baseline levels within one month. Among refugees in Somalia (1980) and Sudan (1985), death rates were still well above baseline rates 6–9 months after the influx of refugees occurred (Toole and Waldman, 1990). In the case of 170,000 Somali refugees in Ethiopia in 1988–89, death rates increased significantly 6 months after the influx. This increase was associated with elevated malnutrition prevalence, inadequate food rations, and high incidence rates of certain communicable diseases. Although initial death rates among Rwandan refugees in eastern
Zaire were extremely high, they declined dramatically within 1–2 months (Toole and Waldman, 1990). In Darfur, Sudan, the study cited earlier found an overall decline in the CMR between 2004 and 2008 (Degomme and Guha-Sapir, 2010). However, during the period between July 2006 and September 2007, when there was heightened insecurity, an increase in IDPs, and an exodus of humanitarian workers, the CMR increased significantly.

In humanitarian crises in low-income countries, most deaths have occurred among children under 5 years of age; for example, 65% of deaths among Kurdish refugees on the Turkish border occurred in the 17% of the population less than 5 years of age (Yip and Sharp, 1993). However, in some refugee situations, such as Goma during the first month after the refugee exodus, mortality rates were comparable in all age groups because the major cause of death was cholera, which is equally lethal at any age (Goma Epidemiology Group, 1995). Among Syrian and Iraqi refugees, mortality rates have been higher in older age groups than children.

Communicable diseases and neonatal disorders remain the largest cause of excess mortality in conflict settings of low incomes and life expectancies. However, burgeoning, overcrowding-related epidemics (e.g. cholera, shigellosis, and measles) might be arising less frequently than previously because an increasing number of populations live in non-camp-like settings (Spiegel et al., 2010).

The major reported causes of death among refugees and displaced populations in low-income countries have been diarrhoeal diseases, measles, acute respiratory infections, and malaria, exacerbated by high rates of malnutrition. Other communicable diseases, such as meningitis and hepatitis E, have also contributed to mortality in some settings. In eastern European conflicts, a high proportion of mortality among civilians has been caused by injuries associated with the violence. Nevertheless, there has also been increased mortality in these conflicts due to the collapse of the public health system. Chronic conditions, such as cardiovascular diseases, cancer, and renal conditions have been inadequately treated because the health system has focused on the management of war-related injuries.

Medical services in most parts of Bosnia and Herzegovina were overwhelmed by the demands of war casualties. The major hospital in Zenica reported that the proportion of all surgical cases associated with trauma steadily increased following the beginning of the war in April 1992, reaching 78% in November of the same year (Toole et al., 1993). Preventive health services, including childhood immunization and antenatal care, ceased in many areas. The collapse of health services in Bosnia and Herzegovina had significant public health effects. For example, perinatal mortality increased in Sarajevo from 16 deaths per 1,000
live births in 1991 to 27 per 1,000 during the first 4 months of 1993 (CDCP, 1993). The rate of premature births increased from 5.3% to 12.9%, the stillbirth rate increased from 7.5 per 1,000 to 12.3 per 1,000, and the average birth weight decreased from 3,700 g to 3,000 g during the same period.

4.2.2 Malnutrition

Among refugees and IDPs, many factors might lead to high rates of nutritional deficiency disorders, including prolonged food scarcity prior to and during displacement; delays in the provision of complete rations; problems with registration and estimation of the size of an affected population; and inequitable distribution systems. In general, the prevalence of acute malnutrition, or wasting, among children less than 5 years of age in low-income countries is between 5% and 8%. However, in refugee camps, the prevalence has often been between 20% and 50%, accounting for the high case fatality rate for common infectious diseases among children in these settings (Figure 4.3). In contrast, acute malnutrition has been unusual among children in refugee and displaced populations in eastern Europe and the Middle East where food scarcity has more commonly affected the elderly.

However, severe acute malnutrition has occurred in certain cities in Syria that have been subjected to blockades by either government or rebel forces. One of the most notorious examples was the town of Madaya in 2016. Syrian government forces had laid siege to the town, in Syria’s Rural Damascus Governorate, depriving roughly 40,000 residents of food and medicine for almost a year. The

![Figure 4.3](image-url)

**Figure 4.3** Prevalence of acute malnutrition in children under 5 years of age in selected refugee and displaced populations, 1992–2017. Reproduced courtesy of the author.
town was surrounded by an estimated 12,000 landmines. Between November 2015 and May 2016, 86 people died from siege-related causes since the siege on Madaya began—65 from malnutrition and starvation, 14 from landmines, 6 from snipers, and 1 from a chronic health condition (PHR/SAMS, 2016).

The civil war in Yemen has exacerbated the country’s pre-existing challenges including poverty, poor health, and a shortage of basic necessities such as water, fuel, and medications. In late 2016, UNICEF estimated that about half of children in Yemen were affected by stunting (chronic malnutrition) and about 460,000 of Yemen’s children were suffering from severe acute malnutrition (Eshaq et al., 2017).

In some settings, refugee children who were adequately nourished upon arrival in camps have developed acute malnutrition due either to inadequate food rations or to severe epidemics of diarrhoeal disease. In the Hartisheik refugee camp in eastern Ethiopia, for example, the prevalence of acute malnutrition increased from less than 10% to almost 25% during a 6 month period in late 1988 and early 1989 due to inadequate food rations (Toole and Bhatia, 1992). In early 1991, the prevalence of acute malnutrition among Kurdish refugee children aged 12–23 months increased from less than 5% to 13% during a 2 month period following a severe outbreak of diarrhoeal disease (Yip and Sharp, 1993).

In Rwandan refugee camps in eastern Zaire, the prevalence of acute malnutrition was between 18% and 23% following severe cholera and dysentery epidemics during the first month after the influx (Goma Epidemiology Group, 1995). Children with a history of dysentery within 3 days prior to the survey were three times more likely to be malnourished than those with no history of recent dysentery. Also, children in families headed by a woman were at significantly higher risk of malnutrition than those children in households headed by an adult male.

High incidence rates of several micronutrient deficiency diseases have been reported in refugee camps, especially in Africa. Frequently, famine-affected and displaced populations have already experienced low levels of dietary vitamin A intake and may therefore have very low vitamin A reserves. Furthermore, the typical rations provided in large-scale relief operations lack vitamin A, putting these populations at high risk. Also, those communicable diseases that are highly incident in refugee camps, such as measles and diarrhoea, are known to deplete vitamin A stores rapidly. Consequently, young refugee and displaced children are at high risk of developing vitamin A deficiency.

In 1990, more than 18,000 cases of pellagra, caused by food rations deficient in niacin, were reported among Mozambican refugees in Malawi. Numerous outbreaks of scurvy (vitamin C deficiency) were documented in refugee camps in Somalia, Ethiopia, and Sudan between 1982 and 1991 (Desenclos et al.,
The prevalence of scurvy was highly associated with the period of residence in camps, a reflection of the time exposed to rations lacking in vitamin C. While vitamin A deficiency remains common in young children in low- and middle-income countries and requires regular supplementation, outbreaks of pellagra and scurvy have been uncommon since the turn of the century. This is mainly because food rations provided by the World Food Programme and other aid agencies now routinely include food items containing micronutrients.

4.2.3 Communicable diseases

The specific causes of mortality, and their age and gender distribution, do not differ from those that prevail in non-refugee populations. Accordingly, acute respiratory infections, diarrhoea, measles, and malaria have been most frequently cited as proximate causes. Substandard conditions found in camps do not change the diseases that account for most of the morbidity and mortality among refugees, but they do alter epidemiological patterns in two important ways. The incidence, or attack rates, of commonly occurring and potentially fatal diseases increase, and the case fatality rates (CFR) are higher than usual, probably because of increased malnutrition.

4.2.3.1 Measles

Of the common communicable diseases affecting young children, most progress has been made in reducing the incidence of measles, at least in accessible populations. Measles had traditionally been among the most feared of communicable diseases in refugee camps. During the 1970s and 1980s, high incidence rates, particularly in populations with low levels of vaccination prior to displacement, high mortality rates, and unusually high CFRs, were typical of measles outbreaks among refugees. In an epidemic that occurred in the Wad Kowli refugee camp in eastern Sudan in 1985, more than 3,000 people out of a population of 80,000 died of this preventable condition during a 6 month period (Toole et al., 1989). In well-vaccinated populations, such as Bosnian and Kosovar refugees in the Balkans, Kurds in northern Iraq (1991), and Rwandans in Tanzania and eastern Zaire (1994), measles was a less prominent public health problem.

Nevertheless, measles remains a significant problem in populations that cannot be reached for immunization because of armed conflict, or, in the case of Somalia, because child immunization has been banned by the radical jihadist group Al Shabaab. There have been major outbreaks of measles in Somalia with thousands of cases in 2014 and 2016, continuing into 2017 (WHO, 2017a).

Prior to Syria’s civil war, some 99% of children were vaccinated against measles. Of the 1.8 million Syrian children born since the conflict, over 50% are
unvaccinated against measles. Measles has swept through Syria, including Aleppo and the northern regions, with over 7,000 confirmed cases between 2015 and 2016 and also cases in refugee camps in Jordan and Lebanon. Large outbreaks of measles have also occurred in war-torn South Sudan and Yemen (UNICEF, 2017). In South Sudan, by the end of 2016, a total of 2,294 suspected measles cases including at least 28 deaths had been reported countrywide (Relief Web, 2015).

4.2.3.2 Diarrhoea

Unlike measles, which can be easily prevented by a vaccine, diarrhoeal diseases remain one of the top three causes of mortality among refugees in low- and middle-income countries. In Somalia (1979–81), Ethiopia (1982), Sudan (1985), Malawi (1988), northern Iraq (1991), and Goma (1994), diarrhoeal diseases were responsible for between 25% and 85% of all mortality (Toole and Malkki, 1992). Although diarrhoeal disease is most often a condition of young children, cholera and dysentery, the major epidemic forms of diarrhoea, affect people of all ages. Of all disease conditions, diarrhoea is the most closely linked to poor sanitation, inadequate water quantity, contaminated water, and poor hygiene.

Cholera epidemics have frequently occurred in refugee and displaced populations. Although deaths due to non-cholera watery diarrhoea have been far more numerous, cholera, in addition to being able to cause death rapidly from dehydration, incites fear and even panic in many populations. Its ability to affect other relief activities, and to divert health personnel and supplies from other activities, may even contribute to higher death tolls due to other diseases. Outbreaks of cholera have occurred in all parts of the world; large outbreaks were recorded among refugees in India (1971), Thailand (1979), Sudan (1985), Somalia (1985), Ethiopia (1984), Malawi (1988–91), northern Iraq (1991), Goma (1994), and Rwanda (1996).

In the twenty-first century there have been some outbreaks of cholera in conflict-affected populations and in countries hosting large numbers of refugees, including Tanzania, Ethiopia, and Iraq in 2015 and South Sudan, Somalia, and Yemen in 2016. For example, in Yemen, the World Health Organization (WHO) reported that as of 13 December 2016, there had been a cumulative total of 10,148 cases of cholera including 92 associated deaths (WHO EMRO, 2017a). In the first 3 months of 2017, WHO reported a cumulative number of 17,211 cases and 388 deaths from cholera in Somalia with a CFR of 2.25% (WHO EMRO, 2017b). Cholera is widespread in South Sudan. As of May 2017, cumulatively, 7,735 cholera cases including 246 deaths (CFR 3.23%) have been reported in South Sudan involving 19
counties in 11 states since the initial case was reported on 18 June 2016 (WHO, 2017b).

4.2.3.3 Malaria

Out of a total of about 11 million refugees protected and assisted by UNHCR globally in 2011, 7 million (67.5%) lived in areas in which malaria is either present throughout the year or occurs seasonally (Williams et al., 2013). By 2017, this proportion had probably decreased because of the high number of refugees from non-endemic areas, such as Syria.

In endemic areas, including South East Asia, the Indian subcontinent, and most of sub-Saharan Africa, malaria is consistently among the leading causes of morbidity and mortality. It was the leading cause of mortality among Cambodian refugees in Thailand in 1978, Ethiopian refugees in Sudan in the mid-1980s, and Mozambican refugees in Malawi in the 1980s. It has been well established that populations that are displaced to areas where malaria is more highly endemic than their place of origin have higher incidence rates and higher mortality. Following the collapse of health services and mass population displacement during and following the conflict in East Timor, the incidence of malaria increased significantly. In October 1999, approximately 30% of all morbidity was attributed to malaria compared with 10% the previous year (WHO, 1999).

Anderson et al. (2011) studied refugee sites in Burundi, Chad, Cameroon, Ethiopia, Kenya, Sudan, Tanzania, Thailand, and Uganda, describing trends in malaria incidence and mortality. An average of 1.18 million refugees resided in 60 refugee sites with at least 50 cases of malaria per 1000 refugees during the study period (2008–9). The highest incidence of malaria was in refugee sites in Tanzania, where the annual incidence of malaria was 399 confirmed cases per 1,000 refugees and 728 confirmed cases per 1,000 refugee children younger than 5 years. Annual malaria mortality rates were highest in sites in Sudan (0.9 deaths per 1,000 refugees), Uganda, and Tanzania (0.7 deaths per 1,000 refugees each). Malaria was the cause of 16% of deaths in refugee children younger than 5 years of age across all study sites.

Major risk factors for malaria in refugee situations include the lack of adequate housing, poor siting of camps (especially when they are placed in marshy areas), overcrowding, proximity to livestock (which may be the primary targets of mosquito vectors), and a general lack of competently trained health personnel. Although it has not been documented systematically in emergencies, the association of malaria with low birth weight (especially in the offspring of first and second pregnancies) and with iron-deficiency anaemia may cause increases in incidence and CFR from a variety of causes, especially in children.
4.2.3.4 Other communicable diseases

4.2.3.4.1 Meningitis
Although not a consistent problem in refugee camps, the threat of Group A meningococcal meningitis is a formidable one. Overcrowding, especially during the drier seasons of the year, can be an important risk factor for this disease, which is transmitted via the respiratory route. Large outbreaks have occurred among refugees in Thailand (1980), Sudan (1989), Ethiopia (1993), Guinea (1993), and Goma (1994). In early 2005, an outbreak of the emerging W135 strain of meningococcus led to the vaccination of more than 150,000 Sudanese refugees in Chad (Médecins sans Frontières, 2005).

Outbreaks of meningitis tend to be protracted, lasting 1–2 months. Unless they are detected and controlled at an early stage, they can be directly responsible for high mortality; in addition, they can be resource-intensive and detract attention from other high-priority health programmes.

In December 2010, a new cheap and effective meningococcal A conjugate vaccine was introduced, first in Burkina Faso and selected regions of Mali and Niger, with a total of 20 million persons vaccinated followed by another 35 million persons immunized across Mali, Niger, Cameroun, Chad, and Nigeria. All 26 countries in the African meningitis belt had introduced this vaccine by 2016. High coverage of the target age group of 1–29 years is expected to eliminate meningococcal A epidemics from this region of Africa.

4.2.3.4.2 Hepatitis E
There is a high incidence of hepatitis E in Central Asia, India, China, and Nepal. It has become more common in South East Asia (e.g. Myanmar), Mexico, and East Africa. There have been numerous outbreaks in refugee camps in East Africa since 1986. A rapid diagnostic test is now available for both recent and past infection by the virus. If an epidemic of hepatitis affecting adults occurs in a low or middle-income country, it is probably due to hepatitis E infection.

Like meningitis, outbreaks of hepatitis E have not been frequent occurrences in refugee camps but have had major consequences when they occurred, especially among women. An enteric-transmitted disease, usually linked to contaminated drinking-water, hepatitis E is associated with a particularly high CFR in pregnant women. Clinical attack rates appear to be higher in adults, with children relatively spared. Large outbreaks have occurred in Somalia (1985), Ethiopia (1989), and among Somali refugees in Liboi Camp, Kenya (1991). In the latter outbreak, the overall case fatality rate was 3.7%, but among pregnant women it was 14% (Mast et al., 1994).

In 2004, a severe epidemic occurred among IDPs in Darfur, Sudan, and refugees from Darfur in Chad (Guthmann et al., 2006). In Darfur, there were 2,431
cases and 41 deaths and in Chad 1,442 cases and 46 deaths. The CFR among pregnant women was 8.2%. The investigation was aided by the use of the newly licensed rapid diagnostic test.

From 1 September 2016 until 13 January 2017, a total of 693 cases including 11 deaths of acute jaundice syndrome, diagnosed as hepatitis E, were reported in south-east Chad (WHO, 2017c). Soon after, in April 2017, an outbreak was reported among IDPs in Niger (WHO, 2017d). As of 3 May 2017, a total of 282 suspected cases including 27 deaths had been reported. All reported deaths except for one were among pregnant women (CFR 9.6%). These two outbreaks pose a threat to the entire Lake Chad basin, which hosts hundreds of thousands of refugees and IDPs in response to violence by the extremist Boko Haram group.

4.2.3.4.3 Tuberculosis
Tuberculosis (TB) is one of the most important communicable diseases to control in the post-emergency phase. Its re-emergence as a public health problem in many parts of the world is characterized by its close association with immune deficiency disorders, especially HIV infection, and with the identification of multiple drug-resistant strains. TB can be quite common in some post-emergency situations. It is highly prevalent during the emergency as well, but because of the difficulties in developing programmes to control its transmission, to diagnose and to reliably treat for adequate periods, other more acute conditions are appropriately accorded priority.

Before the large movements of refugees in the Middle East, more than 85% of refugees originated from, and remained within, countries with high burdens of TB (Connolly et al., 2007). Particularly high burdens of disease affect refugees from, and IDPs within, Nigeria, Pakistan, DRC, Ethiopia, Myanmar, Tanzania, Mozambique, Kenya, Uganda, Afghanistan, and South Sudan.

In populations displaced by conflict in the Middle East, TB has been a lesser problem. For example, TB screening of 69,000 Syrian refugees in Jordan from January to June 2014 found only 3 smear-positive cases and a total of 33 culture-confirmed cases. Of those screened 45% were children, and children under 15 years of age had significantly lower disease prevalence than the general screened population (Cookson et al., 2015).

4.2.3.4.4 Poliomyelitis
The world is very close to eradicating polio. In 2016, just 37 cases were reported in three countries—Afghanistan, Nigeria, and Pakistan—all in conflict-affected areas. When armed conflicts lead to a cessation of vaccination activities, it does not take long until population immunity to the poliovirus declines to dangerous levels. This was demonstrated in 2013 when the first polio case since 2007 was
reported in Somalia after several years when Al Shabaab militants forbade child vaccination in the zones that they controlled. As a result, 194 cases of polio were reported in Somalia, as well as cases in neighbouring Ethiopia and Kenya.

In Syria, polio vaccination coverage declined from 83–99% pre-conflict to 52–68% in 2014. After eradication in 1999, polio re-emerged in Syria in October 2013 with 35 confirmed cases in 2013 and one case in 2014 (WHO EMRO, 2014). Two cases have been reported in Syrian refugees in Iraq. Mass vaccination campaigns in Syria, Iraq, Jordan, Turkey, and Lebanon brought the outbreak to an end.

4.2.3.4.5 Sexually transmitted infections
HIV and other sexually transmitted infections (STIs) are major problems among persons displaced from areas where there is a high prevalence of these conditions. Factors that increase the vulnerability to HIV infection among conflict-affected populations include a breakdown in social structure, sexual violence against women, and a lack of health infrastructure and education. However, in many cases, refugees have improved access to health care and little contact with host communities outside camps.

Some studies have found that conflict constrains the spread of HIV because of reduced mobility and travel to high-prevalence urban areas, citing low HIV prevalence in rural areas of Angola and Sierra Leone during civil wars (Spiegel, 2004). The most important influence on the HIV prevalence in conflict-affected and displaced populations is the HIV prevalence prior to the conflict or prior to displacement.

During the initial emergency phase, efforts to control HIV should focus on blood safety, universal precautions in clinical settings, the provision of condoms, and the dissemination of relevant information on prevention. As soon as possible, a treatment programme using antiretroviral drugs should be established.

Other communicable diseases that have occurred in emergency or post-emergency settings have had a relatively minor impact in the individual setting in which they occur. However, they command an important allocation of resources and may be important contributors to morbidity and mortality. Yellow fever, typhoid fever, relapsing fever, Japanese B encephalitis, dengue haemorrhagic fever, typhus, and leptospirosis are all real threats. Cutaneous leishmaniasis outbreaks have occurred not only in Syria since the conflict began but also in Turkey, Jordan, and Lebanon (Ozara et al., 2016). Nevertheless, morbidity and mortality has been shown time and again to be due to the same conditions that are responsible for the bulk of the disease burden in low-income countries in non-emergency settings.
4.2.4 Injuries

Injuries are widespread in all populations and are responsible for significant mortality, morbidity, and disability. Conflicts typically lead to substantial morbidity and mortality among civilians, caused by a wide range of weapons. As noted earlier in section 4.2.1, civilian death rates have been very high in some conflicts. Estimates in 2016 suggested that 470,000 direct or indirect deaths had occurred due to the Syrian conflict, which began in 2011, and 11.5% of the population had been killed or injured, with 1.9 million people wounded (SCPR, 2016). Around 10% of deaths occurred among IDPs. The CMR in Syria increased from 4.4 per 1,000 in 2010 to 10.9 per 1,000 in 2014, accounting directly and indirectly for the death of about 1.4% of the total population (SCPR, 2016).

Injuries, aside from those that are directly conflict-related, are typically neglected in preference for an emphasis on communicable diseases. This is unfortunate given the widespread occurrence of intentional (homicide, war, suicide) and unintentional (falls, traffic injuries, drowning, poisoning) injuries in many populations affected by conflict. In situations where injuries are shown to be major causes of morbidity and mortality, they should be addressed as vigorously as communicable diseases and malnutrition.

In the late twentieth century, much attention focused on landmine injuries, an area in which notable international successes have been achieved. Evidence of the harmful effects of antipersonnel landmines and their concentration in the world’s poorest countries such as Angola, Ethiopia, Cambodia, and Afghanistan, resulted in the Ottawa process which led in 1997 to a ban on the production and distribution of antipersonnel mines. Despite this ban, landmines continue to be used in some civil conflicts, such as in Syria.

4.2.5 Non-communicable diseases

Other than malnutrition, NCDs had not been the focus of much attention in conflict-affected and refugee populations until the conflicts in Iraq and Syria in the early twenty-first century. A systematic review in 2014 found that, overall, the prevalence of NCDs was high among urban refugees in the Middle East, ranging from 9% to 50%, compared to the prevalence among urban refugees in Asia and Africa, where the prevalence was between 1% and 30% (Amara and Aljunid, 2014). Before the conflict, 77% of deaths in Syria were due to NCDs. The prevalence of diabetes in Syria was 8.9% (adults aged 20–79) prior to the conflict, comparable to New Zealand, and the prevalence of hypertension was 28% (Amara and Aljunid, 2014). More than half of the public hospitals in Syria are either only partially functional or completely out of service, thus constraining the treatment of NCDs. Moreover, local production of medicines has
declined by 70%, associated with an increasing cost of NCD medicines. During screening before resettlement in a third country, the prevalence of hypertension among Iraqi refugees was 33%.

4.2.6 **Women’s health**

Over the past two decades, increasing attention has been given to sexual and reproductive health in humanitarian crises. While there is no doubt that the provision of food, water, sanitation, and shelter is the highest priority during a humanitarian emergency, steps should be taken early to ensure that other critical health needs of women, men, and adolescents are met as quickly as possible. Women are a particularly vulnerable subset of the population because the gender-based discrimination that is all too common in stable societies is frequently exacerbated in times of societal stress and meagre resources.

The Guttmacher Institute reviewed maternal deaths that occurred in 2008–10 in 25 refugee camps in 10 countries (Hynes et al., 2012). Reports were available on 108 deaths, including 68 in Kenya. In every country but Bangladesh, maternal mortality ratios were lower among refugees than among the host population. The proportion of women who had had four or more antenatal care visits was lower among refugee women who had died (33%) than among the general refugee population (79%). Seventy-eight per cent of the maternal deaths followed delivery or abortion, and 56% of those deaths occurred within 24 hours. Delays in seeking and receiving care were more prevalent than delays in reaching care. In Kenya, delays in seeking or accepting care and provider failure to recognize the severity of the woman’s condition were the most common avoidable contributing factors.

Refugees and IDPs are highly vulnerable to sexual violence during conflict and subsequent displacement. The findings of a systematic review in 2014 suggest that approximately one in five refugee or displaced women in complex humanitarian settings had experienced sexual violence (Vu et al., 2014). The effects of gender-based violence (GBV) in conflict and post-conflict areas are numerous and severe. STI are a lasting consequence of GBV and are a major health concern for women in conflict areas. Physical harms such as injury to reproductive organs, traumatic fistulas, and infertility often accompany brutal or repeated rapes. Attempts at abortion following an unwanted pregnancy from rape may also have severe medical complications.

The widespread sexual violence associated with armed conflict in eastern DRC has led it to be named the ‘rape capital of the world’. A 2014 survey conducted in North Kivu Province showed that 22% of women were victims of sexual violence within the conflict (European Parliament, 2014). In addition,
50% of women had experienced sexual violence in a domestic context, evidence of the spread of what some call a ‘rape epidemic’.

Uncontrolled violence and its aftermath are characterized by some specific features that impact negatively on reproductive health. These include the breakdown of family networks and the consequent loss of protection and safety, as well as channels of information to adolescents and women of reproductive age.

Loss of revenue within the family can result in a restricted ability to make appropriate reproductive health choices and may predispose women and adolescents to risk through, for example, engagement in commercial sex work. Increased sole responsibility, as manifested by an increase in the proportion of female-headed households, also changes the way women spend their time and money as they seek increased security and well-being for their families. Finally, as with all members of the affected population, women tend to pay more attention to securing health services for life-saving interventions than for non-emergency reproductive health services.

A minimum initial package of essential reproductive health services, described later in this chapter, has been developed and is recommended by the major relevant international agencies. Interventions beyond this essential package require major investments of time and personnel that should not be diverted from the principal task of reducing excessive preventable mortality as rapidly as possible. In all cases, special care must be taken to ensure that female heads of household are given equitable quantities of food and non-food commodities for themselves and their families.

4.2.7 Mental health

War and political violence have direct and indirect mental health consequences for victims, relatives, neighbours, and communities. Anxiety, uncertainty, and fear about the future, and about whether family members and homesteads remain alive and intact, are a substantial cause of distress for affected individuals and communities. Among those who are forced to flee either as refugees or as IDPs, the lack of knowledge about relatives and property left behind cause stress and distress. Despite ongoing challenges of maintaining lives and livelihoods, life as a refugee, especially in a camp situation, may be monotonous and conducive to stress, anxiety, and depression.

In emergencies, not everyone has or develops significant psychological problems. Many people show resilience; that is, the ability to cope relatively well in situations of adversity. There are numerous interacting social, psychological, and biological factors that influence whether people develop psychological problems or exhibit resilience in the face of adversity.
Depending on the emergency context, particular groups of people are at increased risk of experiencing social and/or psychological problems. Although many key forms of support should be available to the emergency-affected population in general, good programming specifically includes the provision of relevant supports to the people at greatest risk, who need to be identified for each specific crisis.

All subgroups of a population can potentially be at risk, depending on the nature of the crisis. The following are groups of people who frequently have been shown to be at increased risk of various problems in diverse emergencies (IASC, 2007):

◆ Women (e.g. pregnant women, mothers, single mothers, widows and, in some cultures, unmarried adult women and teenage girls)
◆ Men (e.g. ex-combatants, idle men who have lost the means to take care of their families, young men at risk of detention, abduction or being targets of violence)
◆ Children (from newborn infants to young people 18 years of age), such as separated or unaccompanied children (including orphans), children recruited or used by armed forces or groups, trafficked children, children in conflict with the law, children engaged in dangerous labour, children who live or work on the streets and undernourished and/or under-stimulated children
◆ Elderly people (especially when they have lost family members who were caregivers)
◆ People who have been exposed to extremely stressful events/trauma (e.g. people who have lost close family members or their entire livelihoods, rape and torture survivors, witnesses of atrocities, etc.)
◆ People in the community with pre-existing, severe physical, neurological or mental disabilities or disorders
◆ People in institutions (orphans, elderly people, people with neurological/mental disabilities or disorders)
◆ People experiencing severe social stigma (e.g. ‘untouchables’, commercial sex workers, people with severe mental disorders, survivors of sexual violence).

4.3 Public health priorities

4.3.1 Primary prevention

Primary prevention is the basic strategy of public health. The provision of adequate food, shelter, potable water, sanitation, and immunization has proved
problematic in low-income countries disrupted by war or overwhelmed by the influx of large numbers of refugees. Moreover, the flood of Syrian refugees into urban areas of neighbouring countries has resulted in a strain on local infrastructure and social services.

Primary prevention in such circumstances, therefore, means stopping the violence that is the cause of refugee flows. More effective diplomatic and political mechanisms need to be developed that might resolve conflicts early in their evolution prior to the stage when health services collapse, populations migrate, food shortages occur, and significant adverse public health outcomes emerge. Although these initiatives are beyond the direct control of health practitioners, every opportunity should be taken to advocate for political solutions to the problems that are the root cause of population migration and humanitarian crises.

4.3.2 Secondary prevention

Secondary prevention is the domain of relief workers and agencies. It involves prevention of excess indirect mortality and morbidity once a population migration has taken place. Upon arrival at their destination, refugees—most of whom tend to be women and children—may suffer severe anxiety or depression, compounded by the loss of dignity associated with complete dependence on the generosity of others for their survival. If refugee camps are located near borders or close to areas of continuing armed conflict, the desire for security is an overriding concern. Therefore, the first priority of any relief operation is to ensure adequate protection, and camps should be placed sufficiently distant from borders to reassure refugees that they are safe.

To diminish the sense of helplessness and dependency, refugees should be given an active role in the planning and implementation of relief programmes. Nevertheless, giving total control of the distribution of relief items to so-called refugee ‘leaders’ may be dangerous. For example, leaders of the former Hutu-controlled Rwandan government took control of the distribution system in Zairian refugee camps in July 1994, resulting in relief supplies being diverted to young male members of the former Rwandan Army.

In 2015, over 60% of the world’s refugees and 80% of IDPs lived in urban environments. As noted earlier, the majority of Syrian refugees in Turkey and Jordan live outside camps, and there are no camps for the million or so Syrians in Lebanon. Humanitarian agencies are having to adapt their tactics rapidly to identify refugee communities in urban areas and work with them. Previous ‘supply-based’ systems of providing food, water, and shelter do not work in cities that are characterized by dense populations, complex economies, and reliance on networked infrastructure for basic services.
4.3.2.1 Basic needs

In the absence of conflict resolution, those communities that are solely dependent on external aid for their survival must be provided with the basic minimum resources necessary to maintain health and well-being. The provision of adequate food, clean water, shelter, sanitation, and warmth will prevent the most severe public health consequences of complex emergencies. Public health priorities include a rapid needs assessment, the establishment of a health information system, measles vaccination, the control of diarrhoeal and other communicable diseases, maternal and child health services, and nutritional rehabilitation. Critical to the success of the response is coordination of the many agencies involved in the relief effort.

Since 1998, the expected outcomes of humanitarian relief programmes have been standardized globally as a result of the Sphere Project. The Sphere handbook, *The Humanitarian Charter and Minimum Standards in Disaster Response*, is now in its third edition (Sphere Project, 2011) and a fourth edition will be published in late 2018.

4.3.2.2 Information for action

The purposes of early rapid assessments are multiple. They can provide important information regarding the evolution of the refugee emergency, identify groups and areas at greatest risk, evaluate the existing local response capacity, determine the magnitude of external resources required, and indicate which health programmes will be required in the short and medium term (Depoortere and Brown, 2006). After the response to an initial rapid assessment has been instituted, the development and implementation of ongoing health information systems immediately becomes a high-priority activity.

4.3.2.3 Food and nutrition

In general, the goal of a refugee feeding programme is to provide adequate quantities of nutrients through the general household distribution of food rations. General food rations should contain at least 2,100 kilocalories of energy per person per day as well as the other essential nutrients (WHO, 2000). Rations should take into consideration the demographic composition of the population, the climate, the specific needs of vulnerable groups, and access by the population to alternative sources of food and income. These rations should be provided to households, and the equity of distribution needs to be carefully monitored. Experience has shown that women are fairer than men in distributing each food item in the correct quantity.

Given that more than 60% of refugees live in urban areas, UNHCR and other implementing agencies have had to adapt their practices to ensure food and
nutrition security. Food assistance remains one of the main food security tools for urban displaced populations. Where markets are well established, it is particularly important to choose the most appropriate form of food assistance (cash or vouchers). Coupons and e-vouchers may require more from implementing agencies. Vouchers must be printed; traders identified, contracted, and managed; price collusion controlled; quality monitored; and invoices provided for goods purchased. Given the additional workload, choosing vouchers over cash needs to be justified.

Longer-term interventions, implemented in close collaboration with livelihood programmes to promote refugee self-reliance, are another dimension of a food security response in urban areas. Further, because urban-based refugees coexist with host populations, food security interventions must consider the needs of both groups. Wherever possible, the needs of refugees in urban settings should be met by integrating them into national food security programmes, and early collaboration with the government, the municipalities, relevant UN agencies, partners, and donors is crucial.

4.3.2.4 Management of malnutrition

There may be population subgroups who either are already acutely malnourished or at high risk of becoming malnourished. These groups may require targeted feeding, or what is termed ‘selective feeding’, including food supplements for vulnerable groups and therapeutic feeding for the severely malnourished.

The approach to supplementary and therapeutic feeding has changed dramatically since the first edition of this book. Following a number of randomized controlled trials that provided the evidence base, supplementary and therapeutic food is now given to malnourished children in the form of ready-to-use therapeutic foods (RUTF). These soft foods are a homogenous mix of lipid-rich foods, enhanced with micronutrients, with a nutritional profile similar to the WHO-recommended therapeutic milk formula used for in-patient therapeutic feeding programmes (UNICEF, 2013). Typical primary ingredients for RUTF include peanuts, oil, sugar, milk powder, and vitamin and mineral supplements. The development of RUTFs has enabled community-based nutrition rehabilitation. The only indications for in-patient therapeutic feeding are severe anorexia and medical complications, such as hypothermia, hypoglycemia, dehydration, and sepsis (WHO, 2013).

4.4 Health services

In camp settings, health services should be organized to ensure that the major causes of morbidity and mortality are addressed through fixed facilities and outreach programmes. An essential drug list and standardized treatment
protocols are necessary elements of a curative programme. Camp medical services need to ensure that women and children have preferential access and specific programmes need to provide an integrated package of growth monitoring, immunization, antenatal and postnatal care, the treatment of common ailments, and health promotion.

The health system should follow the principles of primary health care. For example, refugee community health workers (CHWs) are likely to understand the cultural, behavioural, and environmental influences on health status; contribute to a growing potential for self-care within the community; share the health service provision workload; build capacity and skills which will potentially be available after repatriation; and enhance the dignity of both the community and the health-care providers themselves. CHWs who are relatively unskilled and trained within the community may be the mainstay of service provision. However, it is important to recognize that the presence of trained health workers within the affected community, whether they are traditional birth attendants, nurses, doctors, or others, represents an extremely valuable resource whose role should be facilitated in whatever services are developed with expatriate agency support.

Given that more than 50% of refugees live in urban settings, the camp structure of health services is not appropriate. UNHCR's aim in urban settings is for refugees to access quality health services at a level similar to that of nationals (UNHCR, 2011). UNHCR's major role in urban settings is to advocate for and facilitate quality health services to be available to and accessed by refugees. UNHCR may directly or via a partner agency support government services in areas where large numbers of refugees live with staff, infrastructure, drugs, and supplies. Assistance may be selective, in which case vulnerable and target groups may have their services paid for or are assisted with cash or improved livelihoods. Different financing mechanisms have been used including cash assistance (which may be delivered via automated teller machines, vouchers, or mobile phone transfers), government or not-for-profit insurance schemes, or other innovative financing schemes that may be available to nationals.

Given its scale, the influx of Syrian refugees into Jordan, Lebanon, and Turkey has presented an immense burden to their national health systems. For the refugees, out-of-pocket expenses have been a common problem and a reason for not accessing health services. A survey in Jordan in 2014 found that among 1043 families who sought care or treatment for a sick adult household member, 35% reported paying for a consultation, regardless of whether or not they paid for medications (Doocy et al., 2016). A total of 819 families reported receiving medications, of which 473 (58%) reported paying for the medications, regardless of whether or not they paid for a consultation. The 2015 UNHCR Health
Access Survey found that 86.6% of households that needed care within the month preceding the survey sought care and that, despite subsidies, the cost was the primary barrier to receiving needed services which were reported by 36% of non-care-seekers.

The situation in Lebanon is even more challenging for Syrian refugees because the health system is dominated by the private sector and very few generic medications are available, making the cost of treatment high. Those refugees registered with UNHCR and between the ages of 5 and 60 years can get access to health care in the centres managed by NGOs for a fee of approximately US$ 2–3 per consultation (Blanchet et al., 2016). Individuals also have to pay for X-rays and other diagnostic tests that are required for referral to hospital for further treatment, or for medicines, where these are needed.

Primary health-care services for urban refugees, especially Syrians and Iraqis, need to integrate the prevention and management of NCDs.

4.4.1 Communicable disease control

Concern for the potential impact of communicable diseases has dominated the public health response in many refugee settings and has frequently been warranted. Although many of the technical interventions and public health programmes used in emergencies draw heavily from their counterparts in stable settings, a few important differences should be considered. Most important among them include addressing the needs of the local, non-displaced, population; maintaining respect for national health policies when dealing with refugees; and promoting substantial community involvement as early as is feasible.

Because of the devastating impact of measles in many refugee emergencies, it has become almost universally accepted that mass measles vaccination, regardless of vaccination history or place of provenance, should be instituted as early during an emergency as possible. Leading reference publications accord measles immunization the highest priority of all interventions and recommend that it be undertaken immediately after an initial rapid assessment regardless of the circumstances (CDCP, 1992; Médecins sans Frontières, 1997; Sphere Project, 2011). As soon as it is feasible, the other vaccines in the national routine immunization schedule should be given to all children under 5 years and, in the case of a meningococcal vaccine, up to the age of 29 years.

All health personnel should be sensitized to the potential impact of diarrhoea and should be skilled in most aspects of prevention and of treatment. The key to prevention lies in providing adequate sanitation facilities, and at least the minimum recommended quantity of water of acceptable quality (Sphere Project, 2011). The mainstay of diarrhoea case management is oral rehydration therapy.
Rehydration facilities should be available in all health facilities, including health posts and outreach sites within the community. A key component of the programme is preparedness planning for the control of cholera and dysentery outbreaks.

In malaria-endemic areas, malaria prevention and case management is an urgent priority. Insecticide-impregnated nets should be distributed to all households, with the priority being children under 5 years of age and pregnant women. Resources for case management should be procured as soon as possible, including rapid diagnostic tests and artemisinin combination therapy.

Given the high prevalence of HIV infection in many countries with large refugee populations, early attention should be given to HIV prevention (see section 4.4.3).

Diagnosis and treatment programmes for TB should be established as soon as the major causes of mortality have been addressed. There needs to be a dedicated TB coordinator and a guaranteed pipeline of drugs for what is a 6 month course of treatment.

### 4.4.2 Women and children’s health

Health services oriented to the specific needs of children and women are essential in reducing morbidity and mortality within a population to a minimum level. Women’s and children’s health (WCH) care should begin within the community, at the household level, and not depend entirely on established health facilities. For children, routine growth monitoring is an essential function of WCH services. A WCH programme will also ensure that all children are vaccinated on schedule and are receiving regular supplements of vitamin A. Curative care, when required, can be offered at the household by trained CHWs or the child can be referred to health facilities.

All women should be vaccinated with tetanus toxoid to prevent neonatal tetanus in their newborn. Antenatal services need to be established, and iron and folic acid should be distributed (and their ingestion monitored, if possible) to all pregnant women. Malaria chemoprophylaxis, if appropriate, should also be undertaken. In the postnatal period, counselling services should be offered to address a variety of issues, from family planning to childcare, especially about breastfeeding.

### 4.4.3 Reproductive health care

Reproductive health care is among the crucial elements that give refugees the basic human welfare and dignity that is their right (UNHCR/WHO/UNFPA, 1999). The response to reproductive health problems during emergencies
consists of a constellation of assessment, services, and regular monitoring that addresses the implementation of the following programmes:

- a minimum initial service package (MISP)
- safe motherhood
- prevention and treatment of sexual violence and GBV
- prevention and care for STIs, including HIV and AIDS
- family planning
- prevention of female genital mutilation
- reproductive health needs of adolescents.

The components of MISP have been defined as follows:

1. Forced migration is frequently accompanied by sexual violence. To prevent unwanted pregnancies resulting from rape, emergency postcoital contraception supplies should be available to women who request them.

2. Universal precautions to prevent the transmission of HIV must be respected from the very outset of an emergency. Although chaotic conditions are frequently prevalent and although health services are implemented under very stressful conditions, the threat of HIV infection can and must be minimized.

3. To prevent unwanted pregnancies and to minimize the transmission of STIs, including AIDS, an adequate supply of condoms should be available on request to all members of the target population.

4. In a population of 2,500 with a crude birth rate of about 3%, there will be 5–8 births per month. To deal with these deliveries, simple supplies must be made available. Simple delivery kits and midwife kits are both readily available from UNICEF and other suppliers of health supplies.

5. The last element of the MISP is planning for the provision of comprehensive reproductive health services as rapidly as is feasible. To do this, reproductive health indicators should be included in health information systems to allow for the collection of baseline data on maternal, infant, and child mortality, the prevalence of STIs, and population contraceptive prevalence rates.

4.4.4 Mental health

Armed conflicts and natural disasters cause significant psychological and social suffering to affected populations. The psychological and social impacts of emergencies may be acute in the short term, but they can also undermine the long-term mental health and psychosocial well-being of the affected population. These impacts may threaten peace, human rights, and development. One of the priorities in emergencies is thus to protect and improve people’s mental
health and psychosocial well-being. Achieving this priority requires coordinated action among all government and non-governmental humanitarian actors.

To plan an appropriate emergency response, it is important to know the nature of local resources, whether they are helpful or harmful, and the extent to which affected people can access them. Indeed, some local practices—ranging from particular traditional cultural practices to care in many existing custodial institutions—may be harmful and may violate human rights principles.

The evidence base for effective and feasible mental health interventions in humanitarian crisis settings has expanded significantly over the past two decades. This has resulted in the development of comprehensive inter-agency guidelines on mental and psychosocial health in emergencies (IASC, 2007).

The guidelines propose a pyramid of interventions with four levels:

1. Basic services and security. The well-being of all people should be protected through the (re)establishment of security, adequate governance, and services that address basic physical needs (food, shelter, water, basic health care, control of communicable diseases).

2. Community and family support. This second layer represents the emergency response for a smaller number of people who can maintain their mental health and psychosocial well-being if they receive help in accessing key community and family supports.

3. Focused, non-specialized supports. This third layer represents the supports necessary for the still smaller number of people who additionally require more focused individual, family, or group interventions by trained and supervised workers (but who may not have had years of training in specialized care).

4. Specialized services. The top layer of the pyramid represents the additional support required for the small percentage of the population whose suffering, despite the supports already mentioned, is intolerable and who may have significant difficulties in basic daily functioning. This assistance should include psychological or psychiatric supports for people with severe mental disorders whenever their needs exceed the capacities of existing primary/general health services.

4.5 Conclusions

The scale of global humanitarian needs has greatly increased since the first edition of this book. The number of refugees, asylum seekers, and IDPs worldwide has more than doubled. While the major causes of morbidity and mortality
among those populations in low-income countries remain communicable diseases and malnutrition, the massive exodus of refugees from middle-income countries like Syria and Iraq has led to a greater emphasis on NCDs. More than half the world’s refugees now reside outside camps in urban areas, necessitating adaptations of traditional camp-based relief services.

Significant progress has been made during the past two decades towards the provision of effective, focused, needs-based humanitarian assistance to conflict-affected populations. Greater emphasis is now placed on the impact, including health outcomes, of international aid. The quantity of aid delivered is no longer considered a valid indicator of effectiveness; its relevance, quality, coverage, and equitable distribution are now accepted as more pertinent. There have been some significant technical achievements; for example, community-based nutritional rehabilitation with RUTF. New, evidence-based guidelines on reproductive health and mental health have provided more tools to humanitarian workers.

Many NGOs are engaged in providing humanitarian assistance to refugees and displaced persons; they include national Red Cross and Red Crescent societies, international secular and religious agencies, and local churches and community-based organizations in the affected country. The level of technical skills, experience, management, and logistics capacity of NGOs varies enormously. To promote coordination and best practice among NGOs, some initiatives have been taken. These include the Code of Conduct for the International Red Cross and Red Crescent Movement and NGOs in Disaster Response and the Sphere Project’s handbook.

As public health in refugee settings has developed as a specialized technical field, some relief agencies, especially NGOs, have developed technical manuals, field guidelines, and targeted training courses. Nevertheless, these initiatives will not be effective unless the international community adopts a more consistent approach to the early prevention and mitigation of conflict-related emergencies. The failure of the international community to stop the vicious conflict in Syria is a sobering reminder.

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