CHAPTER 8

Collective violence

Background

Collective violence, in its multiple forms, receives a high degree of public attention. Violent conflicts between nations and groups, state and group terrorism, rape as a weapon of war, the movements of large numbers of people displaced from their homes, gang warfare and mass hooliganism – all of these occur on a daily basis in many parts of the world. The effects of these different types of event on health in terms of deaths, physical illnesses, disabilities and mental anguish, are vast.

Medicine has long been involved with the effects of collective violence, both as a science and in practice – from military surgery to the efforts of the International Committee of the Red Cross. Public health, though, began dealing with the phenomenon only in the 1970s, following the humanitarian crisis in Biafra, Nigeria. The lessons learnt there, largely by nongovernmental organizations, were the basis for what has become a growing body of knowledge and medical interventions in the field of preventive health care.

The world is still learning how best to respond to the various forms of collective violence, but it is now clear that public health has an important part to play. As the World Health Assembly declared in 1981 (*1*), the role of health workers in promoting and preserving peace is a significant factor for achieving health for all.

This chapter focuses mainly on violent conflicts, with particular emphasis on complex emergencies related to conflicts. While crises of this type are often widely reported, many of their aspects, including the non-fatal impact on victims and the causes of and responses to the crises, frequently remain hidden, sometimes deliberately so. Forms of collective violence that do not have political objectives, such as gang violence, mass hooliganism and criminal violence associated with banditry, are not covered in this chapter.

How is collective violence defined?

Collective violence may be defined as:

> the instrumental use of violence by people who identify themselves as members of a group – whether this group is transitory or has a more permanent identity – against another group or set of individuals, in order to achieve political, economic or social objectives.

Forms of collective violence

Various forms of collective violence have been recognized, including:

- Wars, terrorism and other violent political conflicts that occur within or between states.
- State-perpetrated violence such as genocide, repression, disappearances, torture and other abuses of human rights.
- Organized violent crime such as banditry and gang warfare.

Complex emergencies

As defined by the Inter-Agency Standing Committee (*2*) – the United Nations primary mechanism for coordination of humanitarian assistance in response to complex and major emergencies – a complex emergency is:

> ''a humanitarian crisis in a country, region or society where there is total or considerable breakdown of authority resulting from internal or external conflict and which requires an international response that goes beyond the mandate or capacity of any single agency and/or the ongoing United Nations country programme.''

Although occasionally used to describe other forms of natural or man-made disasters that have a significant impact, the term is used here to describe those emergencies strongly associated with violent conflict, often with major political implications.

Leaning (*3*) identifies four characteristic outcomes of complex emergencies, all of which have profound consequences for public health:

— dislocation of populations;
— the destruction of social networks and ecosystems;
— insecurity affecting civilians and others not engaged in fighting;
— abuses of human rights.

Some analysts (*4*) use the term ''complex political emergencies'' to highlight the political nature of particular crises. Complex political emergencies typically:

— occur across national boundaries;
— have roots relating to competition for power and resources;
— are protracted in duration;
— take place within and reflect existing social, political, economic and cultural structures and divisions;
— are often characterized by ''predatory'' social domination.

Armed conflict

Although ''war'' is a term that is widely used to describe conflict – and commonly understood in its historical sense as violence between states – its legal definition is controversial. Controversy revolves around such questions as quantification (for example, how many deaths the fighting must cause in order to qualify as a war and during what period of time), whether or not hostilities have been openly declared, and its geographical boundaries (for example, whether the war is necessarily between states or internal to one state). To avoid these controversies and, in particular, to prevent loopholes in the applicability of humanitarian law, many international instruments (such as the 1949 Geneva Conventions) use the term ''armed conflict''.

The great variety of armed conflicts and the combatants involved has, however, forced observers to search for new terms to describe them. Examples include ''new wars'' to describe conflicts where the boundaries between traditional concepts of war, organized crime and large-scale violations of human rights have been blurred (*5*), and ''asymmetric warfare''. The latter term, which is closely associated with the phenomenon of modern terrorism (*6*), is used to describe a form of conflict in which an organized group – lacking conventional military strength and economic power – seeks to attack the weak points inherent in relatively affluent and open societies. The attacks take place with unconventional weapons and tactics, and with no regard to military or political codes of conduct.

Genocide

Genocide is a particularly heinous form of collective violence, especially since perpetrators of genocide intentionally target a population group with the aim of destroying it. Genocide thus has, by definition, a collective dimension.

The concept of genocide, however, is a recent one. Although it has been applied by historians and others retrospectively to events that occurred before 1939 (and it is applied in the historical sense in examples cited later in this chapter), the term was only given a legal definition after the Second World War. The horrors of the Nazi holocaust prompted international debate that led to the codification of the term in 1948 in the Convention on the Prevention and Punishment of the Crime of Genocide. This Convention came into force on 12 January 1951. Article 2 of the Convention defines genocide as ''any of the following acts committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group, as such:

— killing members of the group;
— causing serious bodily or mental harm to members of the group;
— deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part;
— imposing measures intended to prevent births within the group;
— forcibly transferring children of the group to another group''.

The crime of genocide is punishable under the Convention along with complicity in genocide, and conspiracy, direct and public incitement, and the attempt to commit genocide.

Following the 1994 conflict in Rwanda, the United Nations Security Council expressed in various resolutions its grave concerns about reports of genocide, and decided to establish an ad hoc International Criminal Tribunal for Rwanda. The Tribunal has already imposed, and confirmed on appeal, several convictions for genocide. The Trial Chamber of the International Criminal Tribunal for the former Yugoslavia, in August 2001, issued its first conviction on genocide in the context of the conflict in Bosnia and Herzegovina, with regard to the massacre of Bosnian Muslims which took place at Srebrenica in July 1995.

Data on collective violence

Sources of data

A range of research institutes collect and analyse data on the victims of international conflicts and conflicts within a single country. They include the Stockholm International Peace Research Institute (SIPRI), which has developed a detailed, standardized format for its annual reports on the impact of conflicts, and the Correlates of War project at the University of Michigan in the United States, a widely cited source on the magnitude and causes of conflicts from the 19th century to the present day.

Data specifically on torture and human rights abuses are gathered by a wide range of national human rights agencies, as well as a growing number of international nongovernmental organizations, including African Rights, Amnesty International and Human Rights Watch. In the Netherlands, the Interdisciplinary Research Programme on Root Causes of Human Rights Violations monitors deaths and other outcomes of abuses worldwide.

Problems with data collection

Most poor countries lack reliable health registration systems, making it particularly difficult to determine the proportions of deaths, disease and disability that are related to conflicts. In addition, complex emergencies invariably disrupt what surveillance and information systems there are (*7*). Some innovative techniques, though, have been developed to overcome these difficulties. In Guatemala, three separate sets of data along with data from witnesses and victims were combined to arrive at an estimate of the total deaths from the civil war. This method suggested that around 132 000 people had lost their lives. The officially recorded figure was far less, having missed some 100 000 deaths (*8*).

Casualties among armed forces are usually recorded according to prescribed military procedures and are likely to be fairly accurate. Figures relating to genocides are clearly subject to greater manipulation and are thus more difficult to confirm. Estimates for mass killings of civilians may vary by as much as a factor of 10. In the Rwandan genocide of 1994, estimated deaths varied from 500 000 to 1 000 000. In East Timor, tens of thousands of people were reported missing immediately after the conflict in 1999, and several months later it was still unclear whether or not the original estimates had been correct. Little was known for certain about the number of casualties in the conflict in the Democratic Republic of the Congo between 1998 and 2001, though recent estimates have suggested that over 2.5 million people are likely to have lost their lives (*9*).

There are many difficulties in collecting data. These include problems of assessing health and mortality among rapidly changing populations, lack of access to services from which data can be collected, and a range of biases. Parties to a conflict often try to manipulate data on casualties and resources. There are therefore likely to be biases in information and in the way in which casualties are measured. For this reason, civil society organizations have an important role to play in documenting instances of collective violence. Data on human rights abuses are also often difficult to verify as the perpetrators do their best – through abductions, disappearances and political assassinations – to hide evidence of such abuses. Several organizations, including Amnesty International, Human Rights Watch and Physicians for Human Rights, have developed comprehensive techniques to gather, assess and verify data on human rights abuses.

The extent of the problem

The World Health Organization estimates that about 310 000 people died from war-related injuries in 2000 (see Statistical annex). These deaths are categorized according to the International Classification of Disease (ICD) codes for injuries resulting from operations of war (ICD-9[1] E990–E999 or ICD-10[2] Y36). Rates of war-related deaths varied from less than 1 per 100 000 population in high-income countries to 6.2 per 100 000 in low-income and middle-income countries. Worldwide, the highest rates of war-related deaths were found in the WHO African Region (32.0 per 100 000), followed by low-income and

[1] *International classification of diseases*, ninth revision (*10*).
[2] *International statistical classification of diseases and related health problems*, tenth revision (*11*).

middle-income countries in the WHO Eastern Mediterranean Region (8.2 per 100 000) and WHO European Region (7.6 per 100 000), respectively.

Casualties of conflicts

Between the 16th and 20th centuries, the estimated totals of conflict-related deaths per century were, respectively, 1.6 million, 6.1 million, 7.0 million, 19.4 million and 109.7 million (*12, 13*). Such figures naturally conceal the circumstances in which people died. Six million people, for instance, are estimated to have lost their lives in the capture and transport of slaves over four centuries, and 10 million indigenous people in the Americas died at the hands of European colonists.

According to one estimate (*14*), some 191 million people lost their lives directly or indirectly in the 25 largest instances of collective violence in the 20th century, 60% of those deaths occurring among people not engaged in fighting. Besides the First World War and the Second World War, two of the most catastrophic events in terms of lives lost were the period of Stalinist terror and the millions of people who perished in China during the Great Leap Forward (1958–1960). Both events are still surrounded by uncertainty over the scale of human losses. Conflict-related deaths in the 25 largest events included some 39 million soldiers and 33 million civilians. Famine related to conflict or genocide in the 20th century killed a further 40 million people.

A relatively new development in armed conflicts is the increasing number of violent deaths of civilian United Nations employees and workers from nongovernmental organizations in conflict zones. In the period 1985–1998, over 380 deaths occurred among humanitarian workers (*15*), with more United Nations civilian personnel than United Nations peacekeeping troops being killed.

Torture and rape

Torture is a common practice in many conflicts (see Box 8.1). Because victims are inclined to hide the trauma they have suffered and because there are also political pressures to conceal the use of torture, it is difficult to estimate how widespread it is.

Rape as a weapon of war has also been documented in numerous conflicts. Though women form the overwhelming majority of those targeted, male rape also occurs in conflicts. Estimates of the number of women raped in Bosnia and Herzegovina during the conflict between 1992 and 1995 range from 10 000 to 60 000 (*22*). Reports of rape during violent conflicts in recent decades have also been documented from Bangladesh, Liberia, Rwanda and Uganda, amongst others (see Chapter 6). Rape is often used to terrorize and undermine communities, to force people to flee, and to break up community structures. The physical and psychological effects on the victims are far-reaching (*23, 24*).

The nature of conflicts

Since the Second World War, there have been a total of 190 armed conflicts, only a quarter of which were between states. In fact, modern-day conflicts are increasingly within rather than between states. Most of the armed conflicts since the Second World War have been shorter than 6 months in duration. Those that lasted longer often went on for many years. For example, in Viet Nam, violent conflict spanned more than two decades. Other examples include the conflicts in Afghanistan and Angola. The total number of armed conflicts in progress was less than 20 in the 1950s, over 30 in both the 1960s and 1970s, and rose to over 50 during the late 1980s. While there were fewer armed conflicts in progress after 1992, those that took place were, on average, of longer duration.

While conflicts within states are most common, conflicts between states still occur. The war between Iraq and the Islamic Republic of Iran in 1980–1988 is estimated to have left 450 000 soldiers and 50 000 civilians dead (*13*). The conflict between Eritrea and Ethiopia at the end of the 20th century was largely fought between two conventional armies, using heavy weaponry and trench warfare, and claimed tens of thousands of lives. There have also been coalitions of multinational forces engaged in conflict by means of massive air attacks – as in the Gulf War against Iraq in 1991 and in the North Atlantic Treaty Organization (NATO) campaign against the Federal Republic of Yugoslavia in 1999.

BOX 8.1

Torture

A number of international treaties have defined torture. The United Nations Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment of 1984 refers to an ''act by which severe pain or suffering, whether physical or mental, is intentionally inflicted on a person'', for a purpose such as obtaining information or a confession, punishment, intimidation or coercion, ''or for any reason based on discrimination of any kind''. The Convention is concerned with torture by public officials or others acting in an official capacity.

In preparing its 2000 report on torture (*16*), the human rights organization Amnesty International found reports of torture or ill-treatment by officials in more than 150 countries. In more than 70 countries, the practice was apparently widespread and in over 80 countries, people reportedly died as a result of torture. Most of the victims appeared to have been people suspected or convicted of criminal offences, and most of the torturers were police officers.

The prevalence of torture against criminal suspects is most likely to be underreported, as the victims are generally less able to file complaints. In some countries, a long-standing practice of torturing common criminals attracts attention only when more overt political repression has declined. In the absence of proper training and investigative mechanisms, police may resort to torture or ill-treatment to extract confessions quickly and obtain convictions.

In some instances of torture, the purpose is to extract information, to obtain a confession (whether true or false), to force collaboration or to ''break'' the victim as an example to others. In other cases, punishment and humiliation are the primary aim. Torture is also sometimes employed as a means of extortion. Once established, a regime of torture can perpetuate itself.

Torture has serious implications for public health, as it damages the mental and physical health of populations. The victims may stay in their own country, adapting as best they can, with or without medical and psychosocial support. If their needs are not properly attended to they risk becoming increasingly alienated or dysfunctional members of society. The same is true if they go into exile. Existing data on asylum-seekers, some of whom have undergone torture in their home country, suggest that they have significant health needs (*17, 18*).

Failure to control the use of torture encourages poor practice by the police and security forces and an increased tolerance of human rights abuses and violence. Various organizations of health professionals have taken a vigorous stand against torture, seeing its prevention as closely linked to their medical calling and to the good of public health (*19*). Nongovernmental organizations have also promoted prevention (*20*).

One particular control mechanism — the inspection system of the Council of Europe — has been recommended for use at the global level. A draft ''Optional Protocol'' to the United Nations Convention on Torture would provide for a similar such inspection system in places of detention. To date, progress in elaborating an Optional Protocol has been slow.

Initiatives to investigate and document torture have grown in recent years. The United Nations guidelines on assessing and recording medical evidence of torture, known as the ''Istanbul Protocol'', were drawn up in 1999 by forensic scientists, doctors, human rights monitors and lawyers from 15 countries and published 2 years later (*21*).

Many of the conflicts since the end of the Second World War have been in developing countries. After the collapse of communist regimes in Eastern Europe and the former Soviet Union in the late 1980s and early 1990s, there was a sharp increase, for a while, in armed conflicts taking place in Europe.

The size of the area of conflict has changed radically in the past two centuries. Until the early

19th century, warfare between states took place on a ''field of battle''. The mobilization of citizen-soldiers during the Napoleonic wars created larger, but essentially similar battlefields. With the development in the 19th century of railways and the mechanization of mass transport, mobile warfare with rapidly moving positions in large geographical areas became possible. Subsequently, the development of tanks, submarines, fighter/bombers and laser-guided missiles laid the foundations for battlefields without geographical limits. Recent conflicts, such as the one waged in 1999 by NATO against the Federal Republic of Yugoslavia, have been referred to as ''virtual wars'' (*25*), given the extent to which these conflicts are fought with missiles controlled from a distance, without the involvement of troops on the ground.

What are the risk factors for collective violence?

Good public health practice requires identifying risk factors and determinants of collective violence, and developing approaches to resolve conflicts without resorting to violence. A range of risk factors for major political conflicts has been identified. In particular, the Carnegie Commission on Preventing Deadly Conflict (*26*) has listed indicators of states at risk of collapse and internal conflict (see Table 8.1). In combination, these factors interact with one another to create conditions for violent conflict. On their own, none of them may be sufficient to lead to violence or disintegration of a state.

The risk factors for violent conflicts include:

- Political factors:
  - — a lack of democratic processes;
  - — unequal access to power.
- Economic factors:
  - — grossly unequal distribution of resources;
  - — unequal access to resources;
  - — control over key natural resources;
  - — control over drug production or trading.
- Societal and community factors:
  - — inequality between groups;
  - — the fuelling of group fanaticism along ethnic, national or religious lines;
  - — the ready availability of small arms and other weapons.
- Demographic factors:
  - — rapid demographic change.

Many of these risk factors can be identified before overt collective violence takes place.

Political and economic factors

The grossly unequal distribution of resources, particularly health and education services, and of access to these resources and to political power –

TABLE 8.1

Indicators of states at risk of collapse and internal conflict

Indicator	Signs
Inequality	• Widening social and economic inequalities – especially those between, rather than within, distinct population groups
Rapidly changing demographic characteristics	• High rates of infant mortality • Rapid changes in population structure, including large-scale movements of refugees • Excessively high population densities • High levels of unemployment, particularly among large numbers of young people • An insufficient supply of food or access to safe water • Disputes over territory or environmental resources that are claimed by distinct ethnic groups
Lack of democratic processes	• Violations of human rights • Criminal behaviour by the state • Corrupt governments
Political instability	• Rapid changes in regimes
Ethnic composition of the ruling group sharply different from that of the population at large	• Political and economic power exercised – and differentially applied – according to ethnic or religious identity • Desecration of ethnic or religious symbols
Deterioration in public services	• A significant decline in the scope and effectiveness of social safety nets designed to ensure minimum universal standards of service
Severe economic decline	• Uneven economic development • Grossly unequal gains or losses between different population groups or geographical areas resulting from large economic changes • Massive economic transfers or losses over short periods of time
Cycles of violent revenge	• A continued cycle of violence between rival groups

whether by geographical area, social class, religion, race or ethnicity – are important factors that can contribute to conflict between groups. Undemocratic leadership, especially if it is repressive and if power stems from ethnic or religious identity, is a powerful contributor to conflict. A decline in public services, usually affecting the poorest segments of society most severely, may be an early sign of a deteriorating situation.

Conflict is less likely in situations of economic growth than in contracting economies, where competition over resources is intensified.

Globalization

Trends in the global economy have accelerated the pace of global integration and economic growth for some countries, and for some groups within countries, and at the same time have contributed to the fragmentation and economic marginalization of others. Other possible risk factors for conflict that may be linked to globalization are financial (the frequently large and rapid movements of currencies around the world) and cultural (individual and collective aspirations raised by the global media that cannot realistically be met). It is still unknown whether current trends in globalization are likely to lead to more conflict and greater violence within or between states. Figure 8.1 shows potential links between trends in globalization and the occurrence of conflict (*27*).

Natural resources

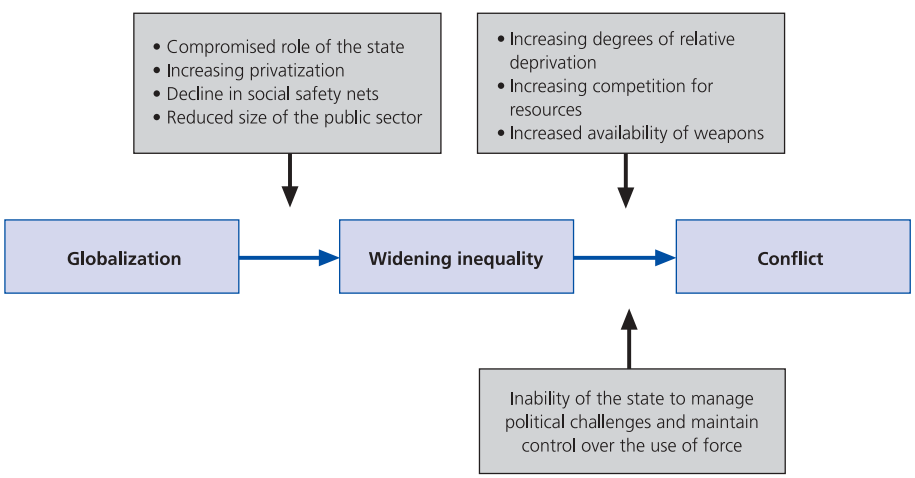
Struggles over access to key natural resources frequently play a role in fuelling and prolonging conflicts. Examples from conflicts in the past two decades are those related to diamonds in Angola, the Democratic Republic of the Congo and Sierra Leone; to oil in Angola and southern Sudan; and to timber and gems in Cambodia. In other places, including Afghanistan, Colombia and Myanmar, the desire to control the production and distribution of drugs has contributed to violent conflicts.

Societal and community factors

A particularly important risk factor associated with the occurrence of conflict is the existence of intergroup inequalities, especially if these are widening (*28*) and are seen to reflect the unequal allocation of resources within a society. Such a factor is often seen in countries where the government is dominated by one community, that wields political, military and economic power over quite distinct communities.

The ready availability of small arms or other weapons in the general population can also heighten the risk of conflict. This is particularly

FIGURE 8.1
Possible linkages between globalization, inequalities and conflict



problematic in places where there have previously been conflicts, and where programmes of demobilization, decommissioning of weapons and job creation for former soldiers are inadequate or where such measures have not been established.

Demographic factors

Rapid demographic change – including an increased population density and a greater proportion of young people – combined with the inability of a country to match the population increase with correspondingly more jobs and schools, may contribute to violent conflict, particularly where other risk factors are also present. In these conditions, large population movements may occur as desperate people seek a more sustainable life elsewhere, and this in turn may increase the risk of violence in the areas into which people move.

Technological factors

The level of weapons technology does not necessarily affect the risk of a conflict, but it does determine the scale of any conflict and the amount of destruction that will take place. Many centuries ago, the progression from the arrow to the crossbow increased the range and destructive force of projectile weapons. Much later, simple firearms were developed, followed by rifles, machine guns and submachine guns. The ability to fire more bullets, more quickly, and with greater range and accuracy, has greatly increased the potential destructive power of such weapons.

Nonetheless, even basic weapons, such as the machete, can contribute to the occurrence of massive human destruction, as was seen in the genocide in Rwanda in 1994 (*29*). In the acts of terrorism in the United States on 11 September 2001, where hijacked passenger aircraft were deliberately crashed into the World Trade Center Towers and the Pentagon, killing several thousand people, conventional weapons were not a major feature of the incidents.

The consequences of collective violence

Impact on health

The impact of conflict on health can be very great in terms of mortality, morbidity and disability (see Table 8.2).

Infant mortality

In times of conflict, infant mortality generally increases. Preventable diseases such as measles, tetanus and diphtheria may become epidemic. In

TABLE 8.2
Examples of the direct impact of conflict on health

Health impact	Causes
Increased mortality	• Deaths due to external causes, mainly related to weapons • Deaths due to infectious diseases (such as measles, poliomyelitis, tetanus and malaria) • Deaths due to noncommunicable diseases, as well as deaths otherwise avoidable through medical care (including asthma, diabetes and emergency surgery)
Increased morbidity	• Injuries from external causes, such as those from weapons, mutilation, anti-personnel landmines, burns and poisoning • Morbidity associated with other external causes, including sexual violence • Infectious diseases: — water-related (such as cholera, typhoid and dysentery due to *Shigella* spp.) — vector-borne (such as malaria and onchocerciasis) — other communicable diseases (such as tuberculosis, acute respiratory infections, HIV infection and other sexually transmitted diseases) • Reproductive health: — a greater number of stillbirths and premature births, more cases of low birth weight and more delivery complications — longer-term genetic impact of exposure to chemicals and radiation • Nutrition: — acute and chronic malnutrition and a variety of deficiency disorders • Mental health: — anxiety — depression — post-traumatic stress disorder — suicidal behaviour
Increased disability	• Physical • Psychological • Social

the mid-1980s, infant mortality in Uganda rose above 600 per 1000 in some conflict-affected areas (*30*). According to the United Nations Children's Fund, reductions in infant mortality were reported for all countries in southern Africa over the period 1960–1986, with the exception of Angola and Mozambique, both of which were subject to ongoing conflicts (*31*). Efforts to eradicate infectious diseases such as poliomyelitis are hampered by residues of the disease in conflict-affected areas.

In Zepa, Bosnia and Herzegovina – a United Nations-controlled ''safe area'' subsequently overrun by Bosnian Serb forces – perinatal and childhood mortality rates doubled after only one year of conflict. In Sarajevo, deliveries of premature babies had doubled and average birth weights fallen by 20% by 1993.

Communicable diseases

The increased risk during conflicts of communicable diseases stems generally from:

— the decline in immunization coverage;
— population movements and overcrowding in refugee camps;
— greater exposure to vectors and environmental hazards, such as polluted water;
— the reduction in public health campaigns and outreach activities;
— the lack of access to health care services.

During the fighting in Bosnia and Herzegovina in 1994, fewer than 35% of children were immunized, compared with 95% before hostilities broke out (*32, 33*). In Iraq, there were sharp declines in immunization coverage after the Gulf War of 1991 and the subsequent imposition of economic and political sanctions. However, recent evidence from El Salvador indicates that it is possible, with selective health care interventions and the provision of adequate resources, to improve certain health problems during ongoing conflicts (*34*).

In Nicaragua in 1985–1986, a measles epidemic was attributed in large part to the declining ability of the health service to immunize those at risk in conflict-affected areas (*35*). A deterioration in malaria-control activities was linked to epidemics of malaria in Ethiopia (*36*) and Mozambique (*37*), highlighting the vulnerability of disease control programmes during periods of conflict. The outbreak of Ebola haemorrhagic fever in Gulu, Uganda, in 2000, was widely believed to be connected with the return of troops from fighting in the Democratic Republic of the Congo.

In Ethiopia in the late 1980s, epidemics of typhus fever and relapsing fever – infectious diseases transmitted by infected ticks, lice or fleas – were believed to come from crowded army camps, prisons and relief camps, as well as from the sale of infected blankets and clothes to local communities by retreating soldiers (*36*). In the exodus from Rwanda in 1994, epidemics of water-related diseases, such as cholera and dysentery due to *Shigella* spp., led to the death within a month of 6–10% of the refugee population arriving in Zaire (now the Democratic Republic of the Congo) (*38*). The crude death rate of 20–35 per 10 000 population per day was 2–3 times higher than that previously reported in refugee populations.

During and in the wake of violent conflicts, there is often a greatly increased risk of transmission of HIV infection and other sexually transmitted diseases (*39*). In many armed forces, the prevalence of HIV infection has already reached high levels (*40*). In times of conflict, military forces (including sometimes also peacekeeping forces) assume the power to command sexual services from local people, either by force or payment (*41*). The transmission of HIV and other sexually transmitted diseases is further fuelled by the fact that troops have a high degree of mobility, and ultimately return to different regions after demobilization (*36, 42, 43*). Overall, refugees from conflicts and internally displaced people have an increased risk of HIV infection (*44*) because:

- They are generally more vulnerable to sexual abuse and violence.
- They are more likely to turn to prostitution – having been deprived of their normal sources of income for surviving.
- Displaced children, with little else to occupy them and possibly no one to supervise them, may become sexually active earlier than they would otherwise.

- Blood used in emergencies for transfusions may not have been screened for HIV.

Disability

Data on conflict-related disability are scant. A nationwide survey conducted in 1982 in Zimbabwe found that 13% of all physical disabilities were a direct result of the previous armed conflict. Over 30 years of armed conflict in Ethiopia led to some 1 million deaths, around half of which were among civilians (*36*). About one-third of the 300 000 soldiers returning from the front line after the end of the conflict had been injured or disabled and at least 40 000 people had lost one or more limbs in the conflict.

Landmines are a major contributor to disability. In Cambodia, 36 000 people have lost at least one limb after accidentally detonating a landmine – one in every 236 of the population (*45*). A total of 6000 people were disabled in this way in 1990 alone. Over 30 million mines were laid in Afghanistan in the 1980s.

In some conflicts, mutilation in the form of cutting off ears or lips, as practised in Mozambique during the civil war (*46*), or limbs, as more recently in Sierra Leone (*47*), has been systematically practised in order to demoralize the opposing forces.

Mental health

The impact of conflicts on mental health is influenced by a range of factors. These include (*48*):

— the psychological health of those affected, prior to the event;
— the nature of the conflict;
— the form of trauma (whether it results from living through and witnessing acts of violence or whether it is directly inflicted, as with torture and other types of repressive violence);
— the response to the trauma, by individuals and communities;
— the cultural context in which the violence occurs.

Psychological stresses related to conflicts are associated with or result from (*49*):

— displacement, whether forced or voluntary;
— loss and grief;
— social isolation;
— loss of status;
— loss of community;
— in some settings, acculturation to new environments.

Manifestations of such stress can include:

— depression and anxiety;
— psychosomatic ailments;
— suicidal behaviour;
— intra-familial conflict;
— alcohol abuse;
— antisocial behaviour.

Single and isolated refugees, as well as women who are heads of households, may be at particular risk of suffering psychological stress.

Some experts (*48, 50*) have cautioned against assuming that people do not have the ability and resilience to respond to the adverse conditions stemming from violent conflict. Others have warned of the danger (*51*) that humanitarian assistance programmes may become a substitute for political dialogue with parties to the conflict – possibly those who are its main driving force. Studies in South Africa (*52*) have found that not all those who were subject to trauma under apartheid became ''victims''. Instead, at least in some cases, individuals were able to respond strongly because they saw themselves as fighting for worthwhile and legitimate causes. The medical model which ascribes to individuals the condition of ''post-traumatic stress syndrome'' may fail to take account of the variety and complexity of human responses to stressful events (*48*). It is now becoming clearer that recovery from psychological trauma resulting from violent conflict is associated with the reconstruction of social and economic networks and cultural institutions (*50*).

Increased rates of depression, substance abuse and suicide frequently result from violent conflicts (*34*). Before its two decades of violent conflict, Sri Lanka had a much lower suicide rate overall than it does now (*53*). Similar findings have been reported from El Salvador (*34*). In both these cases, the sharp increase in suicides was at least in part a consequence of political violence.

From a mental health point of view, populations affected by violent conflict can be divided into three groups (*54*):

— those with disabling psychiatric illnesses;
— those with severe psychological reactions to trauma;
— those, forming the majority, who are able to adapt once peace and order are restored.

The first two groups are likely to benefit considerably from the provision of mental health care that takes into account cultural and socio-economic factors.

Impact on specific populations

The direct effect of conflict on the health of armed forces is usually recorded with some degree of precision; however, the effect of conflict on particular groups is often especially difficult to determine. Population size and density can vary greatly over short periods of time as people move to safe areas and to places where more resources are available. This fact complicates measurements of the impact of conflict on health.

Civilians

According to the 1949 Geneva Conventions, armed forces must apply the principles of proportionality and distinction in their choice of targets. *Proportionality* involves trying to minimize civilian casualties when pursuing military and related targets. *Distinction* means avoiding civilian targets wherever possible (*52*). Despite such attempts to regulate their impact, armed conflicts cause many deaths among civilians.

While civilian deaths may be the direct result of military operations, increased mortality rates among civilians in times of conflict are usually a reflection of the combined effects of:

— decreased access to food, leading to poor nutrition;
— increased risk of communicable diseases;
— reduced access to health services;
— reduced public health programmes;
— poor environmental conditions;
— psychosocial distress.

Refugees and internally displaced people

Refugees and internally displaced people typically experience high mortality, especially in the period immediately after their migration (*55, 56*). Reviews of the health of refugees and displaced populations have revealed massively raised mortality rates – at their worst, up to 60 times the expected rates during the acute phase of displacement (*55, 57, 58*). In Monrovia, Liberia, the death rate among civilians displaced during the conflict in 1990 was seven times greater than the pre-conflict rate (*57*).

Deaths from malnutrition, diarrhoea and infectious diseases occur especially in children, while other infectious diseases such as malaria, tuberculosis and HIV, as well as a range of noncommunicable diseases, injuries and violence typically affect adults. The prior health status of the population, their access to key determinants of health (such as food, shelter, water, sanitation and health services), the extent to which they are exposed to new diseases, and the availability of resources all have an important influence on the health of refugees during and after conflicts.

Demographic impact

One consequence of the shift in the methods of modern warfare, where entire communities are increasingly being targeted, has been the large numbers of displaced people. The total numbers of refugees fleeing across national borders rose from around 2.5 million in 1970 and 11 million in 1983 to 23 million in 1997 (*59, 60*). In the early 1990s, in addition, an estimated 30 million people were internally displaced at any one time (*60*), most of them having fled zones of conflict. Those displaced within countries probably have less access to resources and international support than refugees escaping across borders, and are also more likely to be at continuing risk of violence (*61*).

Table 8.3 shows the movements of refugees and internally displaced populations during the 1990s (*62*). In Africa, the Americas and Europe during this period there were far more internally displaced people than refugees, while in Asia and the Middle East the reverse was true.

TABLE 8.3
Internally displaced people and refugees (in millions), by continent and year

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Internally displaced people (IDP)									
Africa	13.5	14.2	17.4	16.9	15.7	10.2	8.5	7.6	8.8
Americas	1.1	1.2	1.3	1.4	1.4	1.3	1.2	1.6	1.8
East Asia and the Pacific	0.3	0.7	0.7	0.6	0.6	0.6	1.1	0.8	0.5
South Asia	3.1	2.7	1.8	0.9	1.8	1.6	2.4	2.2	2.1
Europe	1.0	1.8	1.6	2.8	5.2	5.1	4.7	3.7	3.3
Middle East	1.3	1.4	0.8	2.0	1.7	1.7	1.5	1.5	1.6
Refugees									
Africa	5.4	5.3	5.7	5.8	5.9	5.2	3.6	2.9	2.7
Americas	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4
East Asia and the Pacific	0.7	0.8	0.5	0.8	0.7	0.6	0.6	0.7	0.7
South Asia	6.3	6.9	4.7	3.9	3.3	2.8	3.2	3.0	2.9
Europe	0	0.1	2.5	1.9	1.8	1.8	1.9	1.3	1.3
Middle East	3.5	2.8	2.8	3.0	3.8	4.0	4.4	4.3	4.4
IDP:refugee ratio									
Africa	2.5	2.7	3.0	2.9	2.7	2.0	2.4	2.6	3.2
Americas	7.5	10.1	13.5	14.0	11.7	18.3	17.4	27.0	4.9
East Asia and the Pacific	0.5	0.8	1.4	0.8	0.9	0.9	1.6	1.1	0.8
South Asia	0.5	0.4	0.4	0.2	0.5	0.6	0.8	0.8	0.7
Europe		14.7	0.6	1.4	2.9	2.8	2.5	2.8	2.5
Middle East	0.4	0.5	0.3	0.7	0.4	0.4	0.3	0.3	0.4

Source: reference *62*.

The forced resettlement of populations, something practised by several governments for stated reasons of security, ideology or development, can also have a severe impact on health. Between 1985 and 1988, some 5.7 million people, 15% of the total rural population, were moved from the northern and eastern provinces to villages in the south-west under an enforced government programme in Ethiopia (*63*). During the regime of Pol Pot in Cambodia (1975–1979), hundreds of thousands of urban people were forcibly displaced to rural areas.

Socioeconomic impact

The economic impact of conflict can be profound (*64, 65*). Public expenditure on sectors including health and education is likely to be sharply reduced, as the state faces difficulty in collecting taxes and bringing in other sources of income – for instance, from tourism – and as it increases military spending. In Ethiopia, military expenditure increased from 11.2% of the government budget in 1973–1974 to 36.5% in 1990–1991, while at the same time the share of the health budget declined sharply, falling from 6.1% to 3.2% (*36*).

Conflicts also significantly affect human resources and productivity. At the household level, the available sources of income are also likely to be greatly curtailed. Further disruption to people's livelihood may be caused by the manipulation of prices or the supply of essential goods, and by other forms of profiteering.

There has been some attempt to measure the opportunity costs of development foregone as a result of conflict. Countries that are in conflict have made systematically less progress in extending life expectancy and reducing infant mortality and crude death rates, when compared with other countries in the same region and of similar socioeconomic status (*66*). Analyses such as these, though, may be confounded by the simultaneous influence of the AIDS pandemic, which can itself be considerably exacerbated by conflict and instability (*42, 43*).

Food and agriculture

Food production and distribution are often specifically targeted during periods of conflict (*67*). In the conflict in Ethiopia between government forces and Eritrean and Tigrayan separatist forces in the period 1974–1991, farmers were forcibly prevented from planting and harvesting their crops and soldiers looted seeds and livestock. In Tigray and Eritrea, the combatants conscripted farmers, mined the land, confiscated food and slaughtered cattle (*36*). The loss of livestock deprives farmers of an asset needed to put land into production and therefore has an adverse effect both in the immediate and in the long term.

Infrastructure

Important infrastructure may be damaged during periods of conflict. In the case of water and sanitation infrastructure, the damage caused can have a direct and severe effect on health. In the conflicts in southern Sudan and Uganda in the early and mid-1980s, village hand pumps were deliberately destroyed by government troops operating in areas controlled by rebel forces and by guerrillas in areas under government control (*30*). During the military operations against Iraq in 1991, water supplies, sewage disposal and other sanitation services were drastically affected by intense bombing (*68*).

Health care services

The impact of conflict on health care services is wide ranging (see Table 8.4). Before the Gulf War of 1991, health services in Iraq reached 90% of the population and the vast majority of children under the age of 5 years were routinely immunized. During the conflict, many hospitals and clinics were severely damaged and had to close, while those still operating

TABLE 8.4
The impact of conflict on health care services

Object of impact	Manifestation of impact
Access to services	• Reduced security (through factors such as landmines and curfews) • Reduced geographical access (for example, through poor transport) • Reduced economic access (for example, because of increased charges for health services) • Reduced social access (for example, because service providers fear being identified as participants in the conflict)
Service infrastructure	• Destruction of clinics • Disrupted referral systems • Damage to vehicles and equipment • Poor logistics and communication
Human resources	• Injury, disappearance and death of health care workers • Displacement and exile of people • Low morale • Difficulty in retaining health care workers in the public sector, particularly in insecure areas • Disrupted training and supervision
Equipment and supplies	• Lack of drugs • Lack of maintenance • Poor access to new technologies • Inability to maintain cold chain for vaccines
Health care activity	• Shift from primary to tertiary care • Increased urbanization of health care provision • Reduction in peripheral and community-based activities • Contraction in outreach, preventive and health promotion activities • Disrupted surveillance and health information systems • Compromised vector control and public health programmes (including partner notification and case-finding) • Programmes focusing more on a single disease (such as malaria) or a single intervention (such as immunization) • Reliance on a greater range of organizations to provide project-based services
Formulation of health policy	• Weakened national capacity • Inability to control and coordinate nongovernmental organization and donor activities • Less information upon which to base decisions • Less engagement in policy debates locally and internationally • Weakened community structures and reduced participation
Relief activities	• Limited access to certain areas • Increased cost of delivering services • Increased pressure on host communities, systems and services • A greater focus on single problems and programmes with less integration across services • Greater insecurity for relief personnel • Weakened coordination and communication between agencies

had to serve much larger catchment areas. Widespread damage to water supplies, electricity and sewage disposal further reduced the ability of what remained of the health services to operate (*68*). In the violent conflict in East Timor in 1999 following the referendum for independence, militia forces destroyed virtually all the health care services. Only the main hospital in the principal town, Dili, was left standing.

During and in the wake of conflicts the supply of medicines is usually disrupted, causing increases in medically preventable conditions, including potentially fatal ones, such as asthma, diabetes and a range of infectious diseases. Apart from medicines, medical personnel, diagnostic equipment, electricity and water may all be lacking, seriously affecting the quality of health care available.

Human resources in the health care services are also usually seriously affected by violent conflicts. In some instances, such as in Mozambique and Nicaragua, medical personnel have been specifically targeted. Qualified personnel often retreat to safer urban areas or may leave their profession altogether. In Uganda between 1972 and 1985, half of the doctors and 80% of the pharmacists left the country for their security. In Mozambique, only 15% of the 550 doctors present during the last years of Portuguese colonial rule were still there at the end of the war of independence in 1975(*69*).

What can be done to prevent collective violence?

Reducing the potential for violent conflicts

Among the policies needed to reduce the potential for violent conflicts in the world, of whatever type, are (*70*):

- Reducing poverty, both in absolute and relative terms, and ensuring that development assistance is targeted so as to make the greatest possible impact on poverty.
- Making decision-making more accountable.
- Reducing inequality between groups in society.
- Reducing access to biological, chemical, nuclear and other weapons.

Promoting compliance with international agreements

An important element in preventing violent conflict and other forms of collective violence is ensuring the promotion and application of internationally agreed treaties, including those relating to human rights.

National governments can help prevent conflicts by upholding the spirit of the United Nations Charter, which calls for the prevention of aggression and the promotion of international peace and security. At a more detailed level, this involves adhering to international legal instruments, including the 1949 Geneva Conventions and their 1977 Protocols.

Laws pertaining to human rights, especially those that stem from the International Covenant on Civil and Political Rights, place limits on the way governments exercise their authority over persons under their jurisdiction, and unconditionally prohibit, among other acts, torture and genocide. The establishment of the International Criminal Court will ensure a permanent mechanism for dealing with war crimes and crimes against humanity. It may also provide disincentives against violence directed at civilian populations.

Efforts to produce treaties and agreements covering collective violence, with disincentives against and sanctions for abuse, tend to be more effective concerning violence between states and generally have far less power within national borders, which is the area where conflicts are increasingly occurring.

The potential benefits of globalization

Globalization is producing new ways for raising public awareness and knowledge about violent conflicts, their causes and their consequences. The new technologies that are appearing provide new means not only to exchange ideas but also pressure decision-makers to increase the accountability and transparency of governance and reduce social inequalities and injustices.

An increasing number of international organizations – including Amnesty International, Human Rights Watch, the International Campaign to Ban

Landmines and Physicians for Human Rights – are monitoring conflicts and urging preventive or corrective actions. Individuals and groups affected by conflict can now – through these organizations and in other ways – make use of the new technologies to relate their experiences and concerns to a wide public.

The role of the health sector

Investing in health development also contributes to the prevention of violent conflict. A strong emphasis on social services can help maintain social cohesion and stability.

Early manifestations of situations that can lead to conflicts can often be detected in the health sector. Health care workers have an important role to play in drawing attention to these signs and in calling for appropriate social and health interventions to reduce the risks of conflict (see Box 8.2).

In terms of reducing inequalities between social groups and unequal access to resources – both important risk factors for violence – the health sector is well placed to detect inequalities in health status and access to health care. Identifying these inequalities early on and promoting corrective measures are important preventive actions against potential conflicts, especially so where the gaps between social groups are growing. Monitoring the distribution and trends in diseases associated with poverty, in medically preventable or treatable conditions, and in inequalities in survival, are all essential for detecting largely unrecognized, but important and possibly widening, disparities in society.

The health sector can also perform a major service by publicizing the social and economic impacts of violent conflicts and their effects on health.

Responses to violent conflicts

Service provision during conflicts

Common problems confronting humanitarian operations during periods of conflict include (*71*):

- how best to upgrade health care services for the host population in parallel with providing services for refugees;
- how to provide good-quality services, humanely and efficiently;
- how to involve communities in determining priorities and the way in which services are provided;
- how to create sustainable mechanisms through which experience from the field is used in formulating policy.

Refugees fleeing their country across borders lose their usual sources of health care. They are then dependent on whatever is available in the host country or can be provided in additional services by international agencies and nongovernmental organizations. The services of the host government may be overwhelmed if large numbers of refugees suddenly move into an area and seek to use local health services. This can be a source of antagonism between the refugees and population of the host country, that may spill over into new violence. Such antagonism may be aggravated if refugees are offered services, including health services, more easily or cheaply than are available to the local population, or if the host country does not receive resources from outside to cope with its greatly increased burden. When ethnic Albanians from Kosovo fled into Albania and The former Yugoslav Republic of Macedonia during the conflict in 1999, the World Health Organization and other agencies tried to help the existing health and welfare systems of these host countries to deal with the added load, rather than simply allowing a parallel system to be imported through the aid agencies.

When planning responses during crises, governments and agencies need to:

- assess at a very early stage who is particularly vulnerable and what their needs are;
- strictly coordinate activities between the various players;
- work towards increasing global, national and local capabilities so as to deliver effective health services during the various stages of the emergency.

The World Health Organization has developed surveillance mechanisms to help identify and respond, earlier rather than later, to conflicts. Its Health Intelligence Network for Advanced Contingency Planning provides rapid access to up-to-date information on particular countries and their

BOX 8.2

Health as a bridge for peace

The concept that health can further regional conciliation and collaboration was enshrined in 1902 in the founding principles of the Pan American Health Organization, the oldest international health organization in the world. For the past two decades, the Pan American Health Organization/WHO Regional Office for the Americas has been instrumental in applying this concept.

In 1984, PAHO/WHO, in partnership with national health ministries and other institutions, launched a strategic initiative in war-torn areas of Central America. The aim was to improve the health of the peoples of Central America, while building cooperation between and within countries of the region. Under the overall theme of ''Health as a bridge for peace, solidarity and understanding'', the plan consisted of a range of programmes.

In the first phase, up to 1990, there were seven priorities for collaboration:

— strengthening health services;
— developing human resources;
— essential drugs;
— food and nutrition;
— major tropical diseases;
— child survival;
— water supply and sanitation.

Within a few years, over 250 projects in these priority areas had been developed, stimulating collaboration among nations and groupings in Central America otherwise in dispute with one another. In El Salvador, for example, despite the difficulty of working in the midst of political violence, ''days of tranquillity'' were negotiated and fighting was suspended so that children could be immunized. This arrangement lasted from 1985 until the end of the conflict in 1992, allowing some 300 000 children to be immunized annually. The incidence of measles, tetanus and poliomyelitis dropped dramatically, that of poliomyelitis falling to zero.

Collaboration also took place in malaria control, cross-border distribution of medicines and vaccines, and training. Regional and subregional health information networks were established and a rapid-response system for natural disasters was set up. These efforts created a precedent for wider dialogue within the region, until the eventual peace accords.

During the second phase of the initiative, from 1990 to 1995, health sectors across Central America supported efforts for development and democracy. Following the peace settlements, PAHO/WHO helped in demobilization, rehabilitation and social reintegration of those most affected by the conflict — including indigenous and border populations. Health continued to be a driving factor for democratic consolidation in the third phase between 1995 and 2000.

Between 1991 and 1997, similar programmes were set up in Angola, Bosnia and Herzegovina, Croatia, Haiti and Mozambique. In each programme, representatives from the WHO regional offices worked in partnership with the government, local nongovernmental organizations and other United Nations agencies. All these programmes were instrumental in reconstructing the health sector following the end of the conflicts. In Angola and Mozambique, the World Health Organization participated in the demobilization process, promoted the reintegration into the national system of health services formerly outside the control of the central government, and retrained health workers from these regions. In Bosnia and Herzegovina and in Croatia, the World Health Organization facilitated exchanges between different ethnic groups and enabled regular contacts and collaboration between health professionals from all communities.

BOX 8.2 (continued)

All the experiences of this period were consolidated by the World Health Organization in 1997 under a global programme, ''Health as a Bridge for Peace''. Since then, new programmes have been set up in the Caucasus Region, Bosnia and Herzegovina, Indonesia, Sri Lanka and The former Yugoslav Republic of Macedonia. In Indonesia, for instance, the World Health Organization has organized teams of health professionals to operate in areas of actual or potential conflict. One such group, comprising both Muslim and Christian professionals, is working in the islands of Maluku province, an area of acute religious conflict in recent years.

Through the ''Health as a Bridge for Peace'' programme, health workers around the world are being organized to contribute to peace, to bring about stability and reconstruction as conflicts end, and to help conciliation in divided and strife-torn communities.

health indices, as well as guidance on best practices and data on disease surveillance.

In emergencies, humanitarian organizations try in the first instance to prevent loss of life and subsequently to re-establish an environment where health promotion is possible. Many relief organizations see their primary role as saving lives that have been placed at risk as a result of atypical events, without necessarily being concerned whether their activities can be replicated or sustained over the longer term. Those agencies that adopt a specifically development-related perspective, on the other hand, attempt early on to take into account issues such as efficiency, sustainability, equality and local ownership – all of which will produce greater benefits in the longer term. This approach stresses creating local capacity and maintaining low costs. Extending the short-term responses to try to set up longer-term systems is, however, difficult.

Organizations need to work closely together if they are to maximize the use of their resources, keep to a minimum any duplication of activities, and enhance the efficiency of operations. The Code of Conduct for Humanitarian Organizations, as put forward by the International Federation of Red Cross and Red Crescent Societies (*62*), states a number of key principles that many humanitarian organizations see as forming a basis for their work. Such a code is voluntary, though, and there are no effective measures for enforcing its principles or evaluating whether they are being effectively implemented.

Ethical considerations of aid provision

There are ethical problems relating to interventions in emergency situations and particularly how to distribute aid. In some cases, such as the crisis in Somalia in the early 1990s, aid agencies have hired armed guards in order to be able to carry out their operations, an action which is regarded as ethically questionable. As regards the distribution of aid, there is frequently an expectation that a proportion will be diverted to the warring parties. Aid agencies have generally taken the view that some degree of ''leakage'' of resources is acceptable, provided that most still reach their intended destination. In some places, though, the proportion of food and other aid being siphoned off has been so great that the agencies have chosen to withdraw their services.

Other ethical concerns centre around the fact that working with warring factions indirectly confers a degree of legitimacy on them and on their activities. Questions arise concerning whether aid agencies should be silent about observed abuses or speak out, and whether they should carry on providing services in the light of continued abuses. Anderson (*72*), among others, discusses the broader issues of how emergency aid can help promote peace – or alternatively, prolong conflicts.

Community involvement

During periods of conflict, local community structures and activities may be seriously disrupted. People may fear actively debating such issues as social policy or campaigning on behalf of marginalized or vulnerable groups. This is likely to be even

more the case under undemocratic political regimes and where state violence is being threatened against perceived opponents of the regime.

In some cases, though, there may be a positive outcome in terms of the community response, where the development of social structures, including health services, is actually made easier. This type of response would appear to be more common in conflicts based on ideology – such as those in the latter part of the 20th century in Mozambique, Nicaragua and Viet Nam. In the conflict in Ethiopia between 1974 and 1991, community-based political movements in Eritrea and Tigray were heavily involved in creating participatory local structures for decision-making and in developing health promotion strategies (*73*).

Re-establishing services after conflicts

There has been considerable discussion on how best to re-establish services as countries emerge from major periods of conflict (*74–76*). When inaccessible areas open up in the aftermath of complex emergencies, they release a backlog of public health needs that have long previously been unattended to, typically flagged by epidemics of measles. In addition, ceasefire arrangements, even if precarious, need to include special health support for demobilizing soldiers, plans for demining, and arrangements for refugees and internally displaced people to return. All these demands are likely to occur at a time when the infrastructure of the local health system is seriously weakened and when other economic resources are depleted.

More precise information is needed on interventions in various places, the conditions under which they take place, and their effects and limitations. One problem in collecting data on conflicts is defining a notional end-point. Usually, the boundary between the end of a conflict and the beginning of the post-conflict period is far from clear cut, as significant levels of insecurity and instability often persist for a considerable time.

Table 8.5 outlines some of the typical approaches to rebuilding health care systems in the aftermath of conflicts. In the past, there has been considerable emphasis on physical reconstruction and on disease control programmes, but relatively little consideration of coordinating donor responses or setting up effective policy frameworks.

Documentation, research and dissemination of information

Surveillance and documentation are core areas for public health activities relating to conflicts. While it is the case, as mentioned above, that data on collective violence are often unsatisfactory and imprecise, too rigid a concern with precision of data is not usually warranted in this field. It is essential, however, that data are valid.

Providing valid data to policy-makers is an equally important component of public health action. The United Nations, international agencies, nongovernmental organizations and health professionals all have key roles to perform in this area. The International Committee of the Red Cross (ICRC), for instance, through its extensive research and campaigning work, played a significant part in promoting the Ottawa process which led to the adoption of the anti-personnel Mine Ban Treaty that entered into force on 1 March 1999. As one ICRC staff member involved in this effort put it: ''Observing and documenting the effects of weapons does not bring about changes in belief, behaviour or law unless communicated compellingly to both policy-makers and the public'' (*77*).

Some nongovernmental organizations, such as Amnesty International, have explicit mandates to speak out about abuses of human rights. So do some United Nations bodies, such as the Office of the United Nations High Commissioner for Human Rights. Some agencies, however, are reluctant to speak out against those involved in conflicts for fear that their ability to deliver essential services could be compromised. In such cases, agencies may choose to convey information indirectly, through third parties or the media.

If dissemination is to be effective, good data are needed and the experiences from interventions must be properly analysed. Research is crucial for assessing the impact of conflicts on health and on health care systems, and for establishing which interventions are effective.

TABLE 8.5

Post-conflict health challenges

Component of post-conflict health sector activity	Typical situation at present	Actions for a more appropriate response
Setting policy	• Activities are seen as independent projects • Limited attention is given to setting up policy frameworks	• At an early stage, develop policy frameworks within which projects can be based • Encourage donor support to the Ministry of Health for policy development and for gathering and disseminating information • Facilitate communication between key participants
Donor coordination	• Donors agree in principle that coordination is desirable, but none wishes to be coordinated	• Identify areas of common interest and build on these • Strengthen the capacity of the Ministry of Health to take a leading role and to coordinate donors and nongovernmental organizations
Working with the government	• The government is often bypassed, with support being channelled through nongovernmental organizations and United Nations agencies	• Reform the international aid system so as to allow development activities to take place earlier in the period of post-conflict recovery • Consider sector-wide approaches, where donors agree to work within an agreed policy framework
Developing infrastructure	• The aim is to reconstruct exactly what existed before	• Review the needs for services and their distribution • Rationalize and make more equitable the distribution of available services • In placing new services, recognize changed population patterns
Specific disease problems	• Disease control and service delivery is narrowly focused • Donors have considerable control over programmes and provide most of the funds	• Facilitate linkages between different programmes • Ensure programmes operate through the major health system structures • Ensure that disease-focused interventions and those that are health system-oriented complement each other • Fully involve all relevant participants, including the national and local public sector, nongovernmental organizations and the private sector
Reconciliation work	• Activities are focused around temporary cessation of hostilities, so as to carry out disease control	• Recognize the symbolic value of health care in restoring relationships between communities • Recognize the promotion of justice and reconciliation as long-term goals involving the often slow rebuilding of trust between communities • Promote every reasonable opportunity for collaboration between communities • Consider innovative responses, such as truth and reconciliation commissions
Role of the private sector	• Efforts are made to diversify the range of service providers and to deregulate the private sector	• Promote the role of the state in framing policies, setting standards and monitoring the quality of services • Recognize at the same time the important role of the private sector in providing health care • Develop incentives to promote equitable access to and delivery of important public health services
Promoting an equitable society	• Usually considered important but often postponed to a later period	• Recognize that achieving equitable social structures is a prime objective but that in the short term, in the interests of stability, some reforms may need to be delayed • Build links between competing population groups and different localities as key elements of post-conflict reform
Training	• Training is often overlooked, fragmented and uncoordinated	• Recognize the importance of developing human resources • Work out ways to integrate people who have been trained under different systems • Invest in training for planners and managers
Information systems	• Information is not considered a priority • Even when information exists it is not shared	• Make documentation a priority • Set up a central repository for information • Make use of new technologies to disseminate information • Make funding conditional on sharing information

Recommendations

Various measures need to be taken to prevent the occurrence of conflict and – where it does occur – to lessen its impact. These measures fall into the following broad categories:

— obtaining more extensive information and a better understanding of conflicts;
— taking political action to predict, prevent and respond to conflicts;
— peacekeeping activities;

— health sector responses to conflicts;
— humanitarian responses.

Information and understanding

Data and surveillance

Some important measures that need to be taken, with the aim of producing more valid and precise information on conflicts and how to respond to them, include the following:

- Indicators related to public health and the performance of health services should be identified, together with effective ways in which these indicators can be measured, so that deviations in particular groups from health norms, which may be early signs of inter-group tensions, can be detected.
- Recent data-collecting and surveillance techniques dealing with health status in conflict-affected populations should be further refined so as to improve the understanding of the impact of conflicts on other populations – including internally displaced people, refugees who have become integrated with their host communities, and specific vulnerable groups such as child soldiers (see Box 8.3).
- Methods analysing the impact of conflicts on health systems, and how these systems respond, should be improved.

Further research

There is clearly a great need for further research, documentation and analysis, so as to prevent future conflicts, reduce the vulnerability of specific groups, and deliver the most appropriate services in the most effective ways during and after crises of violence. Two particular aspects of documentation and analysis that need to be focused on are:

- Developing effective ways of recording the experiences of conflict-affected populations.
- Conducting objective post-conflict analyses, describing the build-up to violence, its impact and the responses to it. Some analyses along these lines have been carried out, particularly following the Rwandan genocide of 1994 (*74*).

One specific question that needs addressing is why certain countries that exhibit a number of the signs of risk for violent conflict are in fact able to avoid it, while others progress to conflicts or even near-collapse of the state. Angola, Liberia, Sierra Leone, Somalia and the former Yugoslavia are some examples of the latter category. One useful avenue of research would be to determine a pre-emergency set of indicators that could help predict whether a crisis would degenerate into a major complex emergency.

Preventing violent conflicts

The outright prevention of conflict must be a priority from the point of view of public health.

Key measures for governments here include:

- Respecting human rights, adhering strictly to the spirit of the United Nations Charter and promoting the full adoption of human rights laws and international humanitarian laws.
- Promoting the adoption of treaties and other measures restricting the production, distribution and use of anti-personnel landmines.
- Promoting efforts to decrease the production and availability of biological, chemical, nuclear and other weaponry; specifically, new initiatives on light weapons, including the European code of conduct on the transfer of light weapons, should be strongly encouraged.
- Building on recent measures to integrate the monitoring of the movement of small arms with other early-warning systems for conflict (*79*). Since 1992, for example, the United Nations has maintained a Register of Conventional Arms, which includes data on international arms transfers as well as information provided by Member States on military holdings, procurement through national production, and relevant policies.
- Monitoring the adverse effects of globalization, and promoting more equitable forms of development and more effective development assistance.
- Working for accountable forms of governance throughout the world.

Boutros Boutros-Ghali, the former Secretary-General of the United Nations, has stated that social integration must be seen as a development priority: ''Manifestations of the lack of social integration are

BOX 8.3

Child soldiers: issues for health professionals

The number of child soldiers active around the world at any time has been estimated at some 300 000, though this figure is almost certainly a considerable underestimate. Unless children are routinely recruited into armed forces, they normally become involved only after a conflict has been in progress for some time. However, once children start being recruited, their numbers generally escalate rapidly and their average age decreases.

Health consequences

Clearly, the involvement of children as combatants in armed conflicts exposes them to risks of death and combat-related injury. Other serious health effects are less publicized, such as the mental and public health aspects.

Research (*78*) has shown that the most frequent combat-related injuries of child soldiers are:

- loss of hearing;
- loss of sight;
- loss of limbs.

These injuries partly reflect the greater sensitivity of children's bodies and partly the ways in which they are likely to be involved in conflicts — such as laying and detecting landmines. Child recruits are also prone to health hazards not directly related to combat — including injuries caused by carrying weapons and other heavy loads, malnutrition, skin and respiratory infections, and infectious diseases such as malaria.

Girl recruits, and to a lesser extent young boys, are often required to provide sexual services as well as to fight. This puts them at high risk of sexually transmitted diseases including HIV, as well as exposing them — in the case of girls — to the dangers associated with abortion or childbirth. In addition, child recruits are often given drugs or alcohol to encourage them to fight, creating problems of substance dependency, apart from the other associated health risks.

Teenagers recruited into regular government armies are usually subjected to the same military discipline as adult recruits, including initiation rites, harsh exercises, punishments and denigration designed to break their will. The impact of such discipline on adolescents can be highly damaging — mentally, emotionally and physically.

Health sector aspects

Medical professionals should understand the need for thorough, but sensitive, medical screening of all former child soldiers at the earliest possible opportunity. This may be at the time of formal demobilization, but may also occur when child soldiers are captured, escape or otherwise leave service. Screening may need to be carried out in stages, addressing the most vital problems first and then proceeding to more sensitive issues, such as sexual abuse.

Special attention should be given to the mental and psychosocial health of child soldiers, as well as to their physical health. The problems that may afflict former child soldiers include:

- nightmares, flashbacks and hallucinations;
- poor concentration and memory;
- chronic anxiety;
- regression in behaviour;
- increased substance abuse as a coping mechanism;
- a sense of guilt and refusal to acknowledge the past;
- poor control of aggression;

BOX 8.3 *(continued)*

— obsessive thoughts of revenge;

— feelings of estrangement from others.

In addition, the ''militarized behaviour'' of the children may lead to a low level of acceptance of the norms of civilian society. As the World Health Organization pointed out in its contribution to the United Nations study on child soldiers (*78*):

''Children going through the development stages of socialization and acquisition of moral judgement in [a military] environment are ill-prepared to be reintegrated into a non-violent society. They acquire a premature self-sufficiency, devoid of the knowledge and skills for moral judgement and for discriminating inappropriate risk behaviours – whether reflected in violence, substance abuse or sexual aggression. Their rehabilitation constitutes one of the major social and public health challenges in the aftermath of armed conflict.''

Health professionals may also play a valuable educational role in helping prevent children being recruited into armies (including as volunteers), by raising awareness among children and adolescents who are at risk, as well as among their families and communities, and by stressing the associated dangers, including the severe damage to psychological and mental health.

familiar: discrimination, fanaticism, intolerance, persecution. The consequences are also familiar: social disaffection, separatism, micronationalism and conflict'' (*80*).

Peacekeeping

Despite massive increases in peacekeeping activities by the United Nations, the effectiveness of such operations has often been questionable. The reasons include uncertainty about the mandates for such interventions, poor lines of control between the various forces contributing to a peacekeeping effort and inadequate resources for the task. In response to these problems, the Secretary-General of the United Nations created a Panel on United Nations Peace Operations to assess the shortcomings of the existing system and to make specific recommendations for change. The Panel, composed of individuals experienced in various aspects of conflict prevention, peacekeeping and peace-building, made recommendations covering operational and organizational areas for improvement, as well as politics and strategy. These recommendations were summarized in a report that is more commonly known as the ''Brahimi report'' (*81*).

Health sector responses

The potential – and limitations – of the health care sector in helping prevent and respond to conflicts should be more thoroughly researched and documented. More documentation of good practice is required, particularly with regard to providing effective services after conflicts – an area where new lessons are beginning to emerge.

Governments should support organizations, such as the World Health Organization and other United Nations agencies, in a global effort to devise more effective policies for the prevention of and responses to conflicts.

Humanitarian responses

Both the standards and the level of accountability of organizations responding to violent crises need to be raised. The Sphere Project, which is based in Geneva, Switzerland, is seeking to have minimum standards for humanitarian assistance agreed and acted upon. Similarly, the Humanitarian Accountability Project, a network also based in Geneva and supported by donor agencies and nongovernmental organizations, is working to raise levels of accountability, especially among potential beneficiaries of humanitarian activities. Governments and humanitarian agencies are urged to support both these efforts.

Conclusion

This chapter has focused on the impact of violent conflicts on public health and health care systems, and has attempted to describe the range of possible

responses to such crises. Clearly, there is a need for a greater emphasis on primary prevention, which seeks to prevent conflicts from occurring in the first place.

There is much that needs to be learnt – and acted upon – concerning the prevention of collective violence and dealing with its underlying causes. In the first instance, this applies to the forms of collective violence that have become common in the past hundred years or more – conflicts between states or involving organized groups within a specific geographical area (such as regions in rebellion against the central state), civil wars and the various forms of state-sponsored violence against individuals or groups.

The shape of collective violence is changing, though. At the start of the 21st century, new forms of collective violence are emerging, involving organized but highly dispersed organizations and networks of organizations – groups without a ''fixed address'', whose very aims, strategies and psychology differ radically from earlier ones. These groups make full use of the high technologies and modern financial systems that the globalized world order has created. Their weaponry is also new, as they seek to exploit such forms as biological, chemical and possibly nuclear weapons in addition to more conventional explosives and missiles. Their goals are physical as well as psychological, involving both mass destruction and the creation of widespread fear.

The world will need to learn quickly how to combat the new threat of global terrorism in all of its forms, while at the same time showing a high degree of determination to prevent and lessen the impact of conventional forms of collective violence, which continue to cause the overwhelming proportion of deaths, illness, injuries and destruction. A strong will is needed, together with a generous commitment of resources, not only to reach a much deeper understanding of the problems of violent conflict, but also to find solutions.

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