

Health-care needs of people affected by conflict: future trends and changing frameworks

Paul B Spiegel, Francesco Checchi, Sandro Colombo, Eugene Paik

In past decades, much progress has been made in responding to health-care needs of conflict-affected populations. The evidence base for interventions addressing excess morbidity and mortality has expanded. Motivated by a disastrous response to the Rwanda genocide in 1994, the Sphere standards¹ for service provision were developed, fostering quality and accountability on the basis of principles of do no harm.¹ Overall, mortality has decreased in refugee camp settings.² A new cluster approach to improve coordination of relief outside of refugee situations has been introduced. However, humanitarian space—physical locations that are safe from attack in a conflict, respect for core humanitarian principles of independence, impartiality and neutrality, and the ability of aid agencies to access and help civilians affected by conflict—has shrunk substantially because of political polarisation and a perception by combatants that humanitarian assistance is merely an instrument of interference by foreign powers. These factors have had negative effects on the protection of both people affected by conflict and humanitarian workers, and consequently have affected the ability of organisations to provide preventive and curative health services because of insecurity.

Governments, UN agencies, and international organisations have been slow to adapt to changes in their operating environments. Present priorities and practices for health-care provision in conflict settings¹ are still broadly based on a model of humanitarian relief that was developed during the last two decades of the Cold War, when conflict was usually synonymous with overcrowded refugee camps sheltering young populations from developing countries. These camps had very high mortality rates during the acute phase—mainly fuelled by epidemics (eg, cholera, shigella, and measles), exacerbation of endemic infectious diseases, and acute malnutrition. Thereafter, conditions progressively improved as basic health services, often parallel to host-country services, were established. In many circumstances, health care provided to refugees was better than was care for the surrounding host community—sometimes resulting in tensions. Accordingly, a linear progression from the acute to postemergency phase was the frequently used model.³

Recent changes in conflicts have introduced much complexity. Although the overall number of conflicts has decreased,⁴ most contemporary wars are of protracted duration, intrastate, fought by irregular armed groups, and fuelled by economic opportunities and ethnic rivalry. Direct armed clashes are often infrequent, but violence against civilians, including rape, is pervasive. This violence takes place against a backdrop of increasing

urbanisation and ageing populations. Beginning with the Balkan and Caucasus wars in the 1990s, many conflicts now arise in settings with higher incomes and better baseline health than in previous conflicts, with little in common with refugee camps of the 1970s and 1980s. These developments are profoundly changing the demographics and disease burden of conflict-affected populations. In this Viewpoint, we discuss the implications of these changes and propose new health-care priorities and recommendations to respond appropriately to future conflicts.

During the past decade, increasing numbers of intrastate conflicts have swelled the number of internally displaced people, whereas the refugee population has gradually decreased (figure 1).² Camp situations have always been more rare for internally displaced people than for refugees. An increasing number of forcibly displaced people seek refuge in cities—the largest proportion of refugees now resides in urban environments rather than in camps (figure 2). The urban displaced often live informally alongside residents and economic migrants, forming a type of mixed migration (eg, Iraqis in Syria and Jordan, and Zimbabweans in South Africa). Tens of millions of people, both displaced and not displaced, are also dispersed across large rural regions affected by low-intensity conflict (eg, in the eastern

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Public Health and HIV Section, United Nations High Commissioner for Refugees, Geneva, Switzerland (P B Spiegel MD, E Paik BA); Department of Infectious and Tropical Diseases, London School of Hygiene and Tropical Medicine, London, UK (F Checchi MHS); and Health Unit, International Rescue Committee, New York, NY, USA (S Colombo MD)

Correspondence to: Dr Paul B Spiegel, Public Health and HIV Section, United Nations High Commissioner for Refugees, Case Postale 2500, Geneva, Switzerland spiegel@unhcr.org

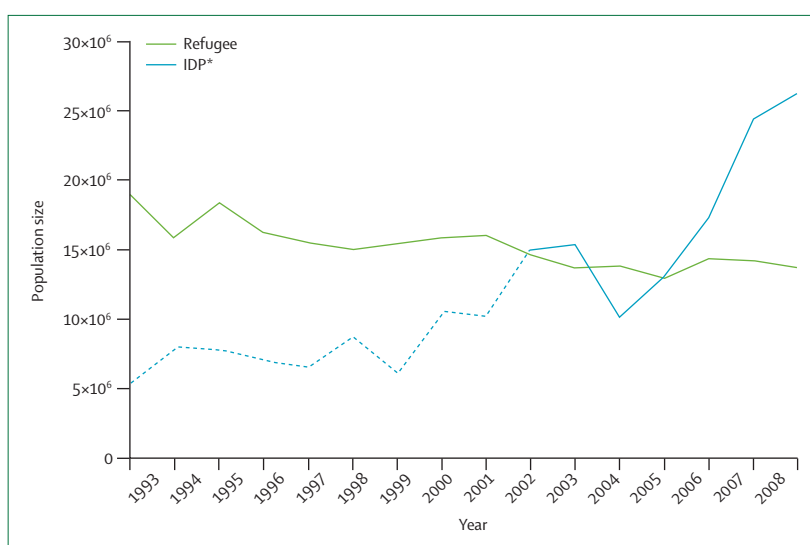


Figure 1: Estimated populations of refugees and internally displaced people,* 1993 to 2008²⁻⁸

*Dashed line from 1993 to 2001 shows that population data for internally displaced people (IDP) were inconsistently recorded. Data are combined Internal Displacement Monitoring Centre (IDMC) and UN High Commissioner for Refugees (UNHCR) estimates. IDMC figures were used when two numbers for the same country were reported for both sources, because UNHCR reports for only IDPs for whom they have responsibility. The midpoint was used if IDMC figures provided a range for population size.

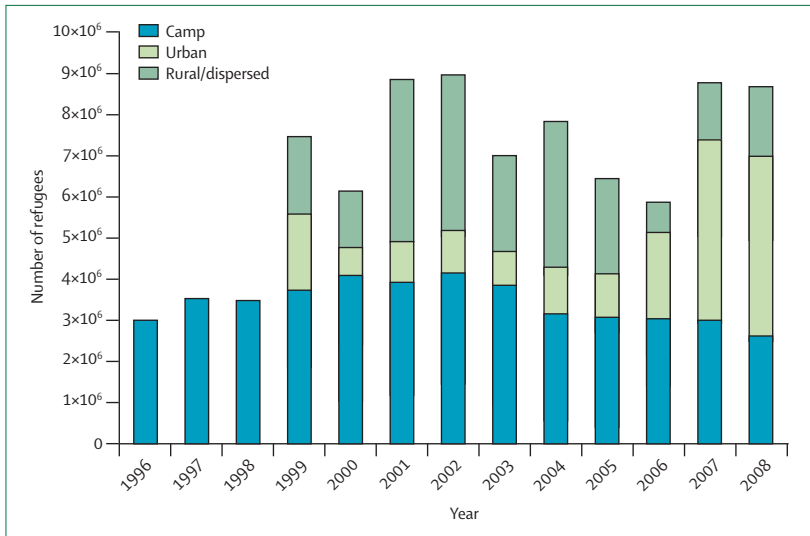


Figure 2: Number of refugees living in camp-like, urban, or rural and dispersed settings, 1996–2008*

*Only major refugee populations recorded by UN High Commissioner for Refugees (UNHCR)⁶⁸ (generally >50 000 people) are included; thus, numbers do not represent total refugee population. Definitions of major populations used by UNHCR varied by year ($\geq 10\ 000$ in 1993 and 1994, not stated in 1995, ≥ 100 in 1996 and 1997, ≥ 1000 in 1998, ≥ 100 in 1999 and 2000, ≥ 5000 in 2001–05, no limit stated in 2006–08). Before 1999, refugees were mainly registered in camps, and data for those in urban or rural and dispersed localities were mostly not recorded, and are only shown for years since 1999.

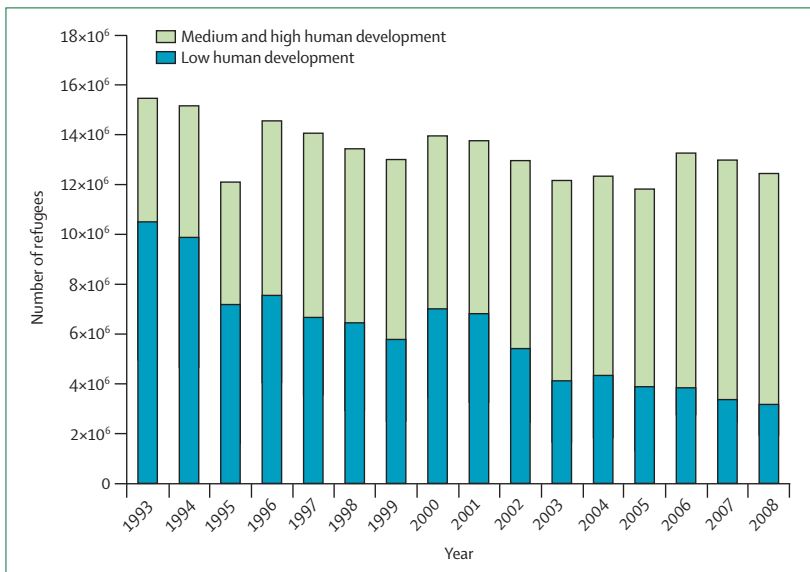


Figure 3: Number of refugees* by human development index category (low versus medium to high) of country of origin, 1993–2008

*Only major refugee populations recorded by UN High Commissioner for Refugees (UNHCR)⁶⁸ are included; numbers do not represent total refugee population. Definitions of major populations used by UNHCR varied by year ($\geq 10\ 000$ in 1993 and 1994, not stated in 1995, ≥ 100 in 1996 and 1997, ≥ 1000 in 1998, ≥ 100 in 1999 and 2000, ≥ 5000 in 2001–05, no limit stated in 2006–08). Total population sizes per year differ from figure 2 because of differences in types of data gathered. †Human development index (HDI) is a composite index computed from life expectancy, income per head, adult literacy rates, and school enrolment. The cut-off between low and medium-to-high HDI is 0.5.

Democratic Republic of the Congo, northern Uganda, and Darfur).

Absolute excess mortality rates of people affected by conflict are generally higher outside than they are within camps, and are higher for internally displaced people

than for refugees,² showing poor access to services and the absence of mandate and funding for one agency to assume decisive responsibility for non-refugee populations. High coverage of health interventions outside of camp settings is especially challenging because of poor security, intermittent accessibility, and the incapacity of fragile states to effectively provide services to their own populations or to those who are displaced. Health-system issues, previously not addressed in the context of parallel services for displaced people in camps, are becoming of great importance. These issues include health financing in protracted crises; barriers to access because of user fees; and the need to integrate services within the formal health system, partly to prevent inequity between beneficiaries and host populations when both have similar needs and vulnerabilities.

The profile of countries affected by conflict is gradually shifting towards higher baseline incomes and life expectancies than previously, as shown by data from refugees (figure 3) with the human development index (HDI) as a classification method.⁹ Some camp-based populations in protracted refugee situations now have longer life expectancies than in past decades. However, country-level indicators might mask inequalities within different regions in a country—Sudan is in the medium HDI category but those people living in Darfur and southern Sudan are assumed to have far lower life expectancies than the country average. Thus, the specific conflict setting, rather than the country as a whole, needs to be taken into account.

As the profile of conflict-affected populations changes over time, so does the burden of disease. Infectious 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 (eg, cholera, shigella, and measles) might be arising less frequently than previously because an increasing number of populations live in non-camp-like settings. Furthermore, scaled up malaria and measles control programmes seem to be having a substantial effect. Conversely, neonatal disorders, pneumonia, and endemic diarrhoea continue to cause substantial mortality and morbidity in underserved, insecure regions of sub-Saharan Africa and Asia.¹⁰ Access to HIV services is more difficult in such settings than in non-conflict areas.¹¹ Similarly, access to tuberculosis services is problematic and will become increasingly difficult because of multi-drug resistant strains and increased treatment costs. However, exceptions to the rule will always exist. Zimbabwe, although not a classic conflict situation, had a massive cholera epidemic in 2008–09, that was unrelated to camp-like settings but rather to prolonged economic and infrastructure collapse.

Non-infectious chronic diseases are becoming increasingly prominent in conflict settings because of improved recognition of their importance, possible increases in their prevalence in some long-term refugee

	Low income and life expectancy	Medium-to-high income and life expectancy
Camp-like settings		
Occurrence	Common (eg, long-term refugee camps in Nepal and Kenya, IDP camps in Darfur and northern Uganda)	Uncommon (eg, Palestinian refugee camps in Jordan)
Demographic and epidemiological profile	Young populations, often disproportionately female; ageing populations in long-term refugee camps; acute but timebound excess mortality; exception is inaccessible IDP camps; mostly infectious disease burden; increasingly non-infectious diseases	Ageing populations; low excess mortality; mostly non-infectious disease burden
Main challenges	Expand humanitarian access to IDP camps; negotiate land to avoid overcrowding; ensure equity of health care of displaced and host communities by supporting services for host communities; integrate parallel services into government systems through common policies and guidelines and fair allocation of resources; address malnutrition and micronutrient deficiencies	Arrange and pay for complicated and expensive referrals outside of camp settings
Urban settings		
Occurrence	Common (eg, urban refugees and IDPs in Nairobi, Kenya; IDPs in Peshawar, Pakistan)	Common (eg, refugees in Damascus, Syria; IDPs in Tbilisi, Georgia, and Bogota, Colombia)
Demographic and epidemiological profile	Young but ageing populations, often disproportionately male; possibly high excess mortality during acute crises, although not well documented; mainly infectious but increasingly non-infectious disease burden	Ageing populations; mild to moderate excess mortality depending on context; exacerbation of existing chronic diseases; mostly non-infectious disease burden
Main challenges	Identify and count populations; avoid fragmentation of services attributable to concentration of resources and humanitarian organisations in urban settings; improve quality of care in unregulated environments; integrate services into often weak government systems, while expanding services for new arrivals; reduce financial barriers to access; scale up mental and reproductive health services	Identify and count populations; integrate into government services while expanding services for new arrivals; reduce financial barriers to access; triage and pay for complicated and expensive secondary and tertiary care cases; achieve equity with host populations
Rural, dispersed settings		
Occurrence	Common (eg, IDPs and affected residents in eastern DRC, refugees in Cameroon, affected residents in Darfur)	Unlikely scenario
Demographic and epidemiological profile	Young populations, often disproportionately female; often very high excess mortality if exposure to conflict is protracted or access to services is very poor; mostly infectious disease burden	
Main challenges	Provide essential health services despite poor accessibility or large geographical areas; expand range of interventions including use of temporary mobile services when relevant; undertake mass campaigns when accessibility allows; reduce financial barriers to access; scale up mental and reproductive health services	
IDP=internally displaced people. DRC=Democratic Republic of the Congo.		
Table: Matrix of conflict settings according to income and life expectancy, with demographic and epidemiologic profiles and key future challenges		

camps, and because conflicts in middle-income populations that affect older populations seem to be increasing relative to those in low-income countries (although conflict in low-income countries is still most predominant). This pattern will probably continue as populations age further and incomes increase. Furthermore, evidence^{12,13} from conflicts and natural disasters shows that much excess morbidity and mortality results from exacerbation of existing non-infectious diseases (eg, hypertension, diabetes, and cancer).

In view of these patterns, approaches to preventive and curative health responses from primary to tertiary care in conflicts need to evolve substantially. To assist with orientation of future health strategies, policies, and interventions, we propose a matrix of three types of settings (camp-like, urban, and rural-dispersed) and two income and life-expectancy categories (low and medium to high; table). As with any classification, categories are not always mutually exclusive and different settings could coexist within the same conflict area. On the basis of this framework, we outline four key areas in which we believe new policies and practices are needed, with related key recommendations (panel).

First, new strategies are needed to deliver health services to dispersed, intermittently accessible populations in low-income settings with a continuing high burden of infectious diseases and neonatal disorders. Mass delivery

of interventions, currently restricted mainly to measles vaccine, vitamin A, and sometimes insecticide-treated materials and meningitis vaccine, is especially appropriate for these settings, and could be greatly expanded to target maternal and neonatal health diseases. For example, where routine WHO Expanded Programme on Immunization services fail because of insecurity, isolation, and poor infrastructure, implementation of repeat rounds of integrated mass vaccinations could maintain adequate coverage while simultaneously delivering other preventive interventions.

Second, chronic diseases should be addressed more systematically in all conflict settings than they are at present, irrespective of income and life expectancy. These diseases include tuberculosis, HIV, and common, manageable non-infectious disorders, such as diabetes and hypertension.^{13,14} In settings with high incomes and life expectancies, complex disorders such as renal and cardiovascular disease, complex surgeries, and cancer need to be more equitably managed than they are now.¹⁵ Treatment continuation is essential—both to save lives and reduce development of drug resistance (eg, for tuberculosis and HIV). Such treatment continuation will be easiest in camp-like situations, but might also be achieved with increased resources and concerted efforts in urban settings, rural and dispersed communities, and even within active conflict zones, in which lulls in fighting should be used as

Panel: Proposed health policies and interventions to address four key areas in future conflict settings

Delivery of health services to inaccessible conflict-affected people

- Radically expand range of mass-delivered interventions, including new or underused interventions for:
 - maternal and neonatal health (eg, presumptive antimalarial treatment and tetanus vaccination of pregnant women)
 - airborne droplet diseases (eg, *Haemophilus influenzae* type B, *Streptococcus pneumoniae*, influenza vaccinations, and zinc supplementation)
 - diarrhoeal diseases (eg, rotavirus, typhoid, and cholera vaccinations)
 - neglected tropical diseases (eg, deworming)
 - malnutrition (eg, lipid-based ready-to-use foods, micronutrient spreads and powders)
- Offer these interventions in integrated mass campaigns; if necessary repeat at epidemiologically appropriate intervals to maintain adequate coverage and herd immunity
- Expand use of negotiated ceasefires; previously used successfully for polio vaccination in several conflict settings (eg, Angola, Democratic Republic of the Congo, and Sri Lanka), to create humanitarian space for these mass campaigns

Address chronic diseases in conflicts

- Include systematic registration of prevalent cases of locally treatable chronic disease (at least tuberculosis, HIV/AIDS, diabetes, and cardiovascular disease) as one of the top priorities during any emergency health response, and develop rapid case-identification methods, eg, with key informant-driven or respondent-driven referral
- Develop simplified home-based care guidelines for diabetes and heart disease and treatment kits for use in settings of insecurity and restricted health-facility coverage
- Investigate effectiveness and harm-to-benefit ratio of new, adherence-promoting ways to offer tuberculosis and AIDS treatment with reduced laboratory and health-system contact needs, and safe treatment discontinuation strategies in case of permanent patient departure from programme catchment area
- Systematically include chronic disease care as part of public health training modules for humanitarian staff
- Anticipate increased costs attributable to expensive tests and treatments, long disease duration, and specialist consultations in financial planning

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an opportunity to provide patients with chronic disease with home-based management and lasting drug supplies.

Third, creative approaches to ensure adequate health coverage and access for conflict-affected people living in urban settings should be developed. In Jordan and Syria, the UN High Commissioner for Refugees (UNHCR) and

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Improve health services for conflict-affected people in urban areas

- Integrate services into existing national health services through reinforcement of health-care personnel, centres, medicines, and equipment and through capacity building
- Ensure primary and emergency health-care services are established before concentrating on secondary health care—tertiary health care should then be established if sufficient funds are available
- Develop context-specific standard operating procedures for secondary and tertiary referral care, including development of referral-care committees to adjudicate complex and expensive cases
- Plan finances appropriately, especially before committing to fund expensive and complex diseases (eg, renal dialysis and cancers)
- Address barriers to access of national health systems, including issues related to user fees, and consider innovative strategies such as the possibility of negotiating favourable premiums for health insurance and finding donors and international organisation that can pay for the most vulnerable part of the population

Changes in surveillance, assessment, and monitoring of conflict-affected populations

- Include systematic population estimation as one of the top priorities in emergency response, and institute donor-funding mechanisms that create incentives for agencies to accurately and transparently estimate population figures on a regular basis
- Develop highly simplified methods for community surveillance of mortality and other key health outcomes
- Adapt population estimation and survey methods for complex urban settings through simulation and field testing of novel sampling designs; develop these methods into guidelines
- Greatly expand capacity of agencies to undertake demographic and epidemiological surveillance and decision makers to rationally commission and interpret data through a global programme of targeted field training

other agencies work together to ensure Iraqi refugees have access to outpatient and inpatient health care that is similar to that of host communities. Rather than establishing parallel health services, this process entails subsidising beneficiaries' access to government and Red Crescent facilities, facilitating referrals, and creating referral committees to make decisions about expensive surgeries.¹⁵ This programme is UNHCR's costliest health programme per beneficiary. As similar situations arise in the future, increased costs should be anticipated and innovative strategies explored to ensure that affected populations have adequate health care in situations in which they do not have access to national health systems or face financial barriers.

Fourth, crucial challenges in measurement and surveillance need to be addressed. Estimation of total numbers of people affected, including vulnerable groups (eg, children, pregnant women, and people with chronic disease), is crucial to establish the true size of populations in need and monitor intervention coverage and effectiveness.^{10,16} Relief interventions rarely have a target coverage, partly because population estimation and registration is non-existent, and thus effects of interventions cannot be measured. Although surveillance is feasible in stable camp situations, affected urban populations are generally hidden, and often only the vulnerable seek assistance. Similarly, estimates of the size of conflict-affected populations living in dispersed rural settings are difficult or impossible to obtain. In non-camp settings, population-based sample surveys have proved difficult, politically controversial, and bias-prone, and some of these methods still need validation. Prospective, community-based surveillance of mortality, nutritional status, and other key health events is a more useful approach in many situations but is rarely done, perhaps showing a failure of imagination and funding rather than insurmountable technical difficulties.

In the past decade, recognition of the effects of conflict on mental and reproductive health has improved. These areas need serious reinforcement. Essential mental health interventions should be expanded beyond populations traditionally covered (eg, medium-to-high income settings), and research to assess their effectiveness needs to be expedited.¹⁷ Interventions include consensus measures such as so-called psychological first aid, provision of essential psychotropic drugs, and promotion of community participation (eg, through schooling, cultural events, and religious worship). Reproductive health requirements for those affected by conflict (both internally displaced and non-displaced people) need increased investment, particularly in settings of protracted conflict. Despite the cost and logistical difficulties, emergency obstetric and neonatal care should remain a priority while other especially neglected interventions, such as family planning, should be prioritised.¹⁸

Health policies and interventions have not kept up with the profound global changes in conflict settings during past decades. Old paradigms for developing countries with large, camp-based refugee populations with infectious diseases and malnutrition do not address the complexity of present and future conflicts. Similarly, coexistence of crises of differing natures and intensities in the same region renders the traditional classification of emergencies in linear phases increasingly irrelevant. In the next few years, impending threats might alter the worldwide trend of a decline of conflicts. The present financial crisis is predicted to increase political instability and social unrest, especially in fragile states.¹⁹ In the long term, climate change is expected to increase risk of conflict through environmental displacement and heightened competition for resources.²⁰ As humanitarians and

health professionals, we have a collective responsibility to anticipate these new challenges, understand the increasingly complex environment in which we work, and adapt our interventions accordingly.

Contributors

PBS, SC, FC, and EP developed the idea for this Viewpoint and contributed to writing and reviewing of the report.

Conflicts of interest

We declare that we have no conflicts of interest.

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