

Primary Health Care in Complex Humanitarian Emergencies: Rwanda and Kosovo Experiences and Their Implications for Public Health Training

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In a complex humanitarian emergency, a catastrophic breakdown of political, economic, and social systems, often accompanied by violence, contributes to a long-lasting dependency of the affected communities on external service. Relief systems, such as the Emergency Response Units of the International Federation of Red Cross and Red Crescent Societies, have served as a sound foundation for fieldwork in humanitarian emergencies. The experience in emergencies gained in Rwanda in 1994 and Kosovo in 1999 clearly points to the need for individual adjustments of therapeutic standards to pre-existing morbidity and health care levels within the affected population. In complex emergencies, public health activities have been shown to promote peace, prevent violence, and reconcile enemies. A truly democratic and multiprofessional approach in all public health training for domestic or foreign service serves as good pattern for fieldwork. Beyond the technical and scientific skills required in the profession, political, ethical, and communicative competencies are critical in humanitarian assistance. Because of the manifold imperatives of further public health education for emergency assistance, a humanitarian assistance competence training center should be established. Competence training centers focus on the core competencies required to meet future needs, are client-oriented, connect regional and international networks, rely on their own system of quality control, and maintain a cooperative management of knowledge. Public health focusing on complex humanitarian emergencies will have to act in prevention not only of diseases and impairments but also of political tension and hatred.

Key words: *international services; Macedonia; physician's role; primary health care; public health; Red Cross; refugees; relief work; Rwanda; Tanzania*

*Health is not merely the absence of disease or infirmity.
(From the preamble to the constitution of the WHO,
signed July 22, 1946)*

*Peace is not constituted by the absence of war.
(From the works of Baruch de Benedictus Spinoza;
1632-1677)*

The last decade has witnessed a large number of humanitarian emergencies of unprecedented proportions and variety. Although the media have focused mostly on the regions of the Balkans and the African Great Lakes during this period, there have been innumerable natural and man-made disasters in nearly all regions of our planet. National, international, and nongovernmental organizations have been active in emergency assistance worldwide, and in the process have collected and exchanged experiences, thus adjusting their emergency planning according to sometimes hard lessons learned in the field (1-3). The complete media coverage and the rapidly developing telecommunication technology during the last decade have contributed greatly to the attempts to set global standards in the field of humanitarian assistance (4-8).

Agencies and organizations have learned their lessons on humanitarian assistance (9), but the question remains whether they are well prepared and equipped to offer assistance in all regions, including industrialized countries, and whether they are capable to undertake preventive actions against violence and hatred as the very pathogens of most humanitarian disasters. Field experiences gained in Tanzania and Macedonia shall be the practical guideline of the following considerations on public health work in complex humanitarian emergencies.

Complex Humanitarian Emergencies

Catastrophic events always yield casualties and loss of resources within the affected community. Depending on the preexisting capacity of the affected population and on the quality and quantity of the catastrophic event, outcome scenarios may be very different (Fig.1).

Locally and temporally limited events, e.g., railway accidents or airplane crashes, immediately cost some lives and consume much of the regional emergency health resources, but they leave almost no long-term effects on the affected population (a in Fig. 1). Earthquakes, floods, and violent man-made disas-

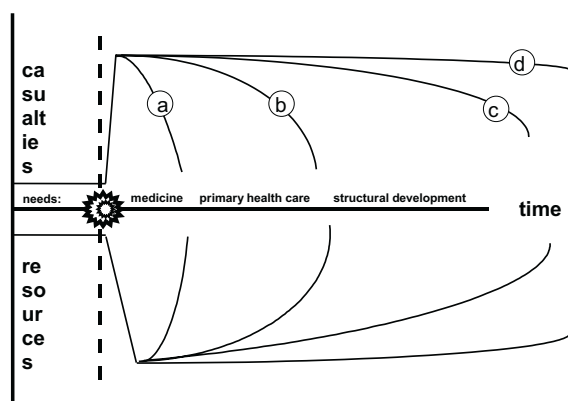


Figure 1. Dimensions and needs in different types of humanitarian disasters. In locally and temporally limited events, regional emergency health services are activated (a), but there are no long-term effects on the population. In larger scale disasters (earthquakes, floods), there is prolonged human suffering and the need for lasting health care interventions (b). Long-term disasters, such as droughts and prolonged war destroy most of the local health care system and create the need for long-term dependence on non-domestic help (c). In complex humanitarian emergency (d), there is catastrophic breakdown of all systems and humanitarian relief becomes the main external service to the community.

ters lead to prolonged suffering of the population and to substantial loss of health resources, thus requiring immediate medical help and lasting assistance in primary health care interventions, e.g., provision of water, sanitation, and nutrition (b in Fig. 1). Finally, long-term drought and especially lasting war in its "endemic form" (10) absorb and destroy all locally available health-related administration and thus create a long-term dependence on non-domestic delivery of health and life-sustaining goods until local resources have been restored (c in Fig. 1). Finally, in a complex humanitarian emergency (d in Fig. 1), "the disaster is not a temporary blip on the rising graph of development, but a catastrophic breakdown of economic, social, and political systems, often accompanied by great violence. In such circumstances, there is little prospect of rapid return to normality. Relief is no longer auxiliary to other services, but becomes the main external service the disaster-affected communities depend on" (1). Long-lasting humanitarian assistance, especially in violence-based situations, must always avoid supporting underlying political structures and conflicts (11,12).

Fields of Intervention in Primary Health Care

While delivering basic emergency medical assistance during a disaster, planning for sustaining activities in primary health care has to be immediately made. The 1978 conference of the World Health Organization (WHO) in Alma-Ata pointed out "primary health care as the key to achieving an acceptable level of health throughout the world". And it stressed the "importance of maximum community and individual self-reliance as the most reliable route to wide-

spread, equitable, and sustained improvements of health" (13). The nongovernmental organizations readily adopted the principles of primary health care from the 1978 conference of the WHO in Alma-Ata and included them in their humanitarian assistance programs (1,6-7,14-17). The following eight fields of intervention in primary health care have been identified: 1) nutrition; 2) sanitation and water supply; 3) maternal and child health care including family planning; 4) control of communicable diseases; 5) expanded immunization; 6) health education; 7) basic curative care; and 8) access to essential drugs.

System of Emergency Response Units

The International Federation of Red Cross and Red Crescent Societies (IFRC) has developed different types of Emergency Response Units for rapid delivery of technical and medical assistance in cases of disaster worldwide (18,19). The most important asset of a nongovernmental organization functioning globally, such as IFRC, is the fact that in almost every host country and in almost every displaced population there will be a local Red Cross or Red Crescent counterpart organization. In the long run, all international assistance by the IFRC will thus enable local technical and health professionals to resume the responsibility for primary health care. The Emergency Response Units rely on highly professional nondomestic personnel and on predesigned and highly standardized, reliable, and sturdy equipment according to appropriate technological principles. Beside the general engineering considerations in selecting the technological level of medical diagnostics and therapy, the local level of health care always has to be taken into account. Any medical treatment of a displaced population superior to the health care level available for the residents in the host country should be avoided in order not to jeopardize the local acceptance of humanitarian assistance in regions with very severe health problems, such as western Tanzania where HIV-prevalence is more than 6% (20). The German Red Cross is providing eight different types of Emergency Response Units, according to the demands and to the site of intervention in primary health care (19). These Units deal with 1) basic health care; 2) referral hospital; 3) mass sanitation; 4) mass water; 5) specialized water; 6) information; 7) telecommunications; and 8) logistics.

Malaria, Dehydration, and Death: Tanzania, August-October 1995

The presence of UN officials and UN troops could not prevent genocidal mass killings of Rwandan Tutsi by Hutu Interahamwe gangs after April 6, 1994. The Hutus were finally stopped by the advance of the Rwandan Patriotic Front, and this dramatic change of political circumstances gave rise to an exodus of Rwandan Hutu population. It is estimated that, between May and July 1994, half a million Rwandans crossed the border into Tanzania and about a million of them into Zaire, now Democratic Republic of Congo (21). The intensive media coverage of the infernal exodus and camp situations in

Zaire and Tanzania induced an unprecedented worldwide humanitarian campaign for the displaced Hutu population near the Rwandan borders (22-31). In the overcrowded camps in Zaire, resting on solid volcano rock near Goma, the water supply and sanitation problems finally caused a cholera outbreak that killed about 50,000 people within a few weeks (21). Humanitarian action and assistance focused on the very basic needs according to the primary health care concept. During the so-called Great Lakes Crisis, from 1994 until 1996, the Emergency Response Unit referral hospital of the IFRC was in full operation in the field for the first time. On the Tanzanian side in the Benaco camp near Ngara, the referral hospital was the major medical referral unit for a population of at least half a million (Fig. 2).



Figure 2. Benaco refugee camp, Tanzania 1995.

Other nongovernmental organizations, such as Physicians without Borders, focused primarily on the outpatient medical assistance according to their reliable and well-proven standards (16,32-34). Although there have been many critical comments on disease-management and cooperation of the different humanitarian organizations (21), there is no doubt that their joint efforts saved hundreds of thousands Rwandan lives. The concept of appropriate technology and standard drug therapy (33) turned out to be most effective and superior to earlier attempts to import the newest sophisticated medical technology. As an example of the still dreadful inpatient clinical situation in the Tanzanian camp, however, we can use hospital statistics of the pediatric ward in September and October 1995 (Table 1) (24,25,28,35), showing extremely high morbidity and mortality rates.

Children, as a well-known and well-defined population at risk, particularly those under five, suffered

Table 1. Morbidity and mortality in the pediatric ward of the International Federation of Red Cross referral hospital Benaco, Tanzania, September-October 1995 (n = 150)

Diagnosis	No. (%) of cases	Fatal cases (%)
Malaria tropica	76 (51)	25
Severe anemia	71 (47)	35
Dehydration	38 (25)	29
Diarrhea	35 (23)	25
Pneumonia	34 (23)	47
Bacterial enteritis	29 (19)	33

the most in the camps near the Rwandan border (15,36-39). Malaria and concomitant anemia, diarrhea, dehydration, and pneumonia were the classic killers within this population group, which was under the intensive scrutiny of media worldwide (Fig. 3).

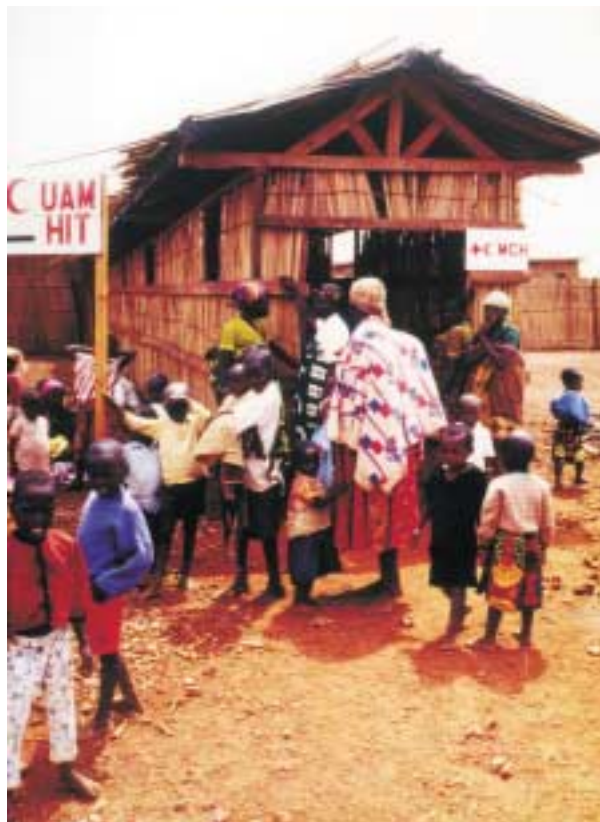


Figure 3. Dispensary of the International Federation of Red Cross and Red Crescent Societies in Benaco refugee camp, Tanzania 1995. UAM – unaccompanied minors, HIT – health information team, MCH – mother and child health.

Women, the elderly, and disabled persons suffered as well, being worn out by their family duties or deprived of food and water for the benefit of the rebuilding Hutu forces within the camps. This very universal conflict between justice and humanitarianism was sharply displayed in the Rwandan camps, where many adult male inhabitants indeed should have been designated fugitives rather than refugees, having been active and passionate members of murderer gangs only weeks or days before displacement. In 1997, the International Red Cross pointed out (1): "In many complex emergencies where we are assisting mass refugee or internally displaced populations, those populations will contain people who have committed grave acts of human rights abuses. They or others may still be committing such acts in the refugee camps, or they may be planning and organizing for future acts."

Historically, the Rwandan genocide and its sequel was not at all an African-made disaster of undeveloped people in undeveloped countries, finally rescued by the civilized Western world and their humanitarian organizations. On the contrary, it is by

now well agreed upon that the very roots of ethnic conflicts in the African Great Lakes region were caused by nineteenth-century colonial politics (40-42). Germany and Belgium, the colonial powers of today's Rwanda and Burundi, intentionally stirred up hatred between the previously peacefully coexisting Hutu and Tutsi populations by their politics of indirect rule. Up until the genocide in 1994, growing ethnic tensions and increasing hatred in Rwanda and Burundi could have been easily detected and monitored by the international community, but not a single step of violence prevention was taken after first signs of it began to appear. Considering these historical and ethical entanglements, the humanitarian assistance in the Great Lakes region of Africa since 1994 has not been an act of charity by the industrialized countries but a heavy obligation after more than a century of unscrupulous and deceitful interference by European powers in Central Africa.

Diabetes, Dialysis, and Hypertension: Macedonia, April 1999

After the beginning of the forced mass migration of Albanian Kosovars into Albania and Macedonia (43-45), the Emergency Response Unit referral hospital of the IFRC was called into service in Macedonia and began to provide health care in the Stenkovec 1 camp on April 12, 1999. On the Macedonian territory, several camps neighboring the border of the Federal Republic of Yugoslavia received some ten thousand people expelled from Kosovo who had spent days or weeks on the road or in the no-man's land infernal, cold, and muddy makeshift-camp Blace, without shelter or sanitation. During the spring of 1999, Stenkovec 1 refugee camp, north of the Macedonian capital Skopje, housed between 9,000 and 35,000 displaced persons from Kosovo (Fig. 4).



Figure 4. Stenkovec refugee camp, Macedonia 1999.

The medical corps of the different NATO forces on location had begun to provide effective basic health care for the expelled; however, since they were combatant forces in a war that still went on, there were certain considerations in international law to be respected (46,47) in order not to endanger the lives of camp inhabitants on neutral territory but under the shield of actually engaged armies. The humanitarian assistance of non-NATO-forces, such as Israel's and New Zealand's armed forces, was warmly

welcomed by the nongovernmental organizations on location and turned out to be most professional (48). The IFRC Emergency Response Unit referral hospital served as the inpatient reference facility for camps Stenkovec 1 and 2, Blace, Radusha, and Bojane between April 12 and July 3, 1999 (Table 2).

Table 2. Hospital statistics of the International Federation of Red Cross and Red Crescent Societies referral hospital Stenkovec, Macedonia, April-July 1999 (19)

Parameter (No.)	No. of services or patients
Outpatients	6,225
Inpatients	541
Births	105
Major surgical procedures	102
Deaths	18
Tuberculosis cases	18
Laboratory investigations	1,808

In comparison with the Great Lakes crisis in Africa, the classical epidemics in camps were not observed, perhaps because of the large scale humanitarian assistance and climatic conditions (49). Hospital morbidity and mortality records revealed the underlying morbidity of the regional population and, unlike in Rwanda, some form of underlying medical care of the displaced population existed before the migration. Within the camps in Macedonia, the referral hospital not only served as an emergency unit, but also, or even more, as the replacement for the lost regional inpatient facility for the expelled (Fig. 5).



Figure 5. Water purification by an Emergency Response Unit of the International Federation of Red Cross and Red Crescent Societies, Macedonia 1999.

In Europe, in most situations even uncomplicated obstetrics will take place in a hospital and there will be patients in therapy for diabetes, cerebral convulsions, or malignant diseases who will need a continuous drug supply, as well as technologically dependent patients like, such as those suffering from renal insufficiency or premature born infants. For humanitarian emergencies in developed countries with sophisticated medical care, the concept of appropriate technology and the restrictions of a standard drug list may have to be reconsidered (50-51). The Macedonian experience, on the other hand, showed the great importance of medical evacuations in complex humanitarian emergencies and the very responsible

ethical and medical decisions regarding the selection for evacuation under those dramatic circumstances (52).

Historically, there had been many symptoms of growing tension and hatred in the region long before the military actions in Kosovo. Again, as in Central Africa, the international community did not take any effective steps on time to prevent the conflict. Therapeutic intervention in the form of humanitarian assistance during and after fighting surely was an effective, but a delayed reaction (Fig. 6).



Figure 6. Referral hospital of the International Federation of Red Cross and Red Crescent Societies, Macedonia 1999.

Isolation, Prejudice, and Hopelessness: Asylum Seekers, Refugees, and Residents without Permission in West Europe

Finally, a very small segment of displaced populations and victims of natural or man-made disasters will find their way to foreign host countries (Fig. 7). Here, the immediate dangers of the home countries are indeed remote, but being an asylum-seeking family, a tolerated refugee, or living without legal permission is a pathogen of its own kind, as social-epidemiological studies can show. The everyday fear of forced remigration by the local immigration authorities and the experience of nationalistic and racist movements in the host countries strongly influence the physical and mental health of refugees (53-56). As yet, most countries of Western and Central Europe have not realized their *de facto* status as immigration countries and the overall benefits of an open exchange between the inhabitants of the different regions of Europe as a whole (57).

Public Health Training: Influenced by and Qualifying for Humanitarian Assistance in Complex Emergencies

Since 1978, the concepts of primary health care have proven repeatedly to be excellent guidelines for all programs of humanitarian assistance, in addition to being valuable in other fields. The concept of standardized Emergency Response Units of the IFRC is, therefore, a good example of the translation of the Alma-Ata ideas into action for the purpose of practical work in the field. Successful health and medical work in humanitarian disasters depends on a truly multidis-



Figure 7. Refugees from the Balkans in Germany 1999.

ciplinary approach and excellent communication between administration and fieldwork proper. The examples given above of different refugee situations show clearly the need for continuous adjustment of preexisting programs and standards of humanitarian assistance to the local circumstances and the demands of the population, thus resembling the pedagogic concept of lifelong learning (Table 3).

Public health as "the combination of science, practical skills, and values (or beliefs) directed to the maintenance and improvement of the health of all the people" (58) will serve as the primary guideline and sound theoretical basis of all health-related assistance in humanitarian emergencies. Public health itself can provide a reliable and honest framework for humanitarian assistance even in violence-based complex emergencies, because of its following eight characteristics:

1. Public health is peace-promoting. Even in ongoing wars, the activities of caring health workers on either side will often be respected and tolerated and thus will create the very first nonviolent contact between the combatants according to the principles of the Red Cross (47).

2. Public health is reconciliation. Reconstruction of health care systems and infrastructure in post-conflict areas has often proven to be a field of common endeavor, irrespective of former affiliations.

3. Public health is democratic. The tradition of democratic cooperation among all professions and af-

Table 3. Synopsis of health status and health care requirements for the different refugee situations in Tanzania in 1995, Macedonia in 1999, and Germany in 2001

Situation	Tanzania, 1995	Macedonia, 1999	Germany, 2001
Specific population groups at risk	children under 5 years of age, women, elderly, handicapped	drug- or technologically dependent, handicapped	women, children, handicapped
Previous care	low level	medium standard	very different
Morbidity	high	increased	increased
Main diagnoses	infectious diseases	chronic diseases	chronic diseases
Psychological distress	high	high	high
Mortality	high	increased	slightly increased
Simple technology	sufficient	insufficient	insufficient
Standard drug list	sufficient	insufficient	insufficient

flicted populations, being the very essence of public health work, will truly serve as a positive pattern for reconstruction of conflict-torn societies.

4. Public health is border-crossing. Since no artificial border, no mine barrier, and no barbed wire will withstand the spread of infectious diseases or other pathogens, a border-crossing effort in health matters is advised and often practiced even during ongoing conflicts.

5. Public health is worthwhile. The WHO report on macroeconomics and health (59) and recent European political changes clearly indicate the long-term political benefits of investment in public health, e.g., Health Policy and EU Enlargement – Situation in the Candidate Countries and Necessary Measures (60).

6. Public health is preventive. By definition and in its essence public health is preventive, as recently reconfirmed by the Council of Europe: "Policy to improve health status should be therefore based on strong prevention strategies. It is not only a question of health. It is basically a problem of human rights" (61). In cases of complex humanitarian emergencies, the preventive aspect of the international community activities should be focused not only on health matters proper, but also on tensions and hatred, as we have clearly learned from the Rwanda and the Kosovo experiences.

7. Public health is based on science, skills, and values. Public health, as evidence-based community health work with a sound scientific background (58), will readily provide help to endangered populations in natural or man-made disasters. Besides the professional skills, additional competencies are necessary in working under restricted conditions: "Professional medical undergraduate and postgraduate courses and in-services training have to add training in partnership skills, advocacy skills, negotiation and communication skills, as well as social and management training. Health personnel should participate in the development and advertising of educational programs in schools, workplaces, and in any other relevant social settings" (61).

8. Public health is a ray of hope. In all humanitarian emergencies, cooperative health work and empowering the endangered population to rebuild and restart their own system of health care are the paramount contributions to the strengthening of comprehensibility, manageability, and meaningfulness within the population, and thus to the promotion of health (62).

For the further promotion of public health, it has to be emphasized that public health today acts as a strong movement against an ever-increasing atomistic reduction of modern clinical health-related professions. Public health topics, therefore, will have to be incorporated into the curricula of all health professions from the beginning, promoting awareness of historical, political, and ethical fundamentals of and implications for the health of populations.

At the postgraduate level of public health training, the very multiprofessional and democratic approach must be continued if public health is to remain an academic field without one profession dominating and thus an excellent pattern for future practical activities in the field. Ethical and historical aspects of population health must be emphasized, as well as international health and international law. All the health-related professional fields must participate and contribute their expert skills, as the Council of Europe pointed out: "More attention is needed to expand the traditional health teams, including social workers, counselors, adult and child health education specialists, community health promotion agents, etc. Health professionals, community leaders and representatives of communities concerned should promote human rights and make the marginal groups aware of them" (61). For specific postgraduate education in the field of humanitarian assistance, modular training in basic and specific competencies and mutual life-long learning will be the organizational form. The recent concept of competence centers will precisely meet these requirements of professional education for humanitarian assistance. By definition, competence centers focus on core competencies adapted to future needs, are client-oriented, connect regional and international networks, rely on their own system of quality control, and maintain a cooperative management of knowledge (63). The professional knowledge from many health-related fields will have to be coordinated, including politics and medicine, nursing and education, engineering and nutrition sciences, facility management, social work, education, architecture, logistics and administration, and so forth. But besides professional skills, successful humanitarian work relies on important additional competencies, such as historical and ethical consciousness, sound knowledge in international law and international humanitarian law and, above all, culturally sensitive health care, social, and communicative competencies.

Sensitive communication and respectfulness are core competencies for public health work in emer-

gency situations and paramount tools in preventing tension and hatred. Activities, such as "Collaboration between philosophers – contribution for a new spiritual climate on the Balkans" (64), in this view, are most important steps to prevention of humanitarian crises and disasters. Or, as the renowned musical virtuoso Eliot Fisk recently pointed out, "we are not only in need of public health, just so we need public music" (65).

Any reflection on primary health care and public health in complex humanitarian emergencies would be incomplete without tribute to the visionary Henri Dunant (1828-1910), who founded the Red Cross, was awarded the first Nobel Peace Prize in 1901, and stated as early as 1862 (66): "Last of all – in an age when we hear so much of progress and civilization, is it not a matter of urgency, since unhappily we cannot always avoid wars, to press forward in a human and truly civilized spirit the attempt to prevent, or at least to alleviate, the horrors of war?"

Acknowledgment

I am most grateful to Professor Edward J. Eckenfels (Chicago, USA) for critical review of the manuscript, to Dr Richard Munz (Marburg, Germany) for a first concept of Figure 1, and to all colleagues and friends of the IFRC Emergency Response Units for lasting professional and humane enrichment.

References

- 1 International Federation of Red Cross and Red Crescent Societies. Handbook for delegates. Geneva: ICRC; 1997.
- 2 International Federation of Red Cross and Red Crescent Societies. The Sphere Project – humanitarian charter and minimum standards in disaster response. Geneva: ICRC; 2000.
- 3 Ärzte für die Dritte Welt eV. The Blue Book – a medical guide for our projects. Frankfurt: Ärzte für die Dritte Welt; 2000.
- 4 Pan American Health Organization. Establishing a mass casualty management system. Washington (DC): PAHO; 1995.
- 5 United Nations High Commissioner for Refugees. Refugee emergencies. A community-based approach. Geneva: UNHCR; 1996.
- 6 United Nations High Commissioner for Refugees. Handbook for emergencies. 2nd ed. Geneva: UNHCR; 1999.
- 7 World Health Organization. The new emergency health kit 1999. Geneva: WHO; 1998. Available at: <http://www.who.int/medicines/library/par/new-emergency-health-kit/nehken.htm>. Accessed: December 15, 2001.
- 8 World Health Organization and Pan American Health Organization. Health library for disasters. Geneva: WHO; 2001. Available at: <http://www.vdl-bvd.desastr.es.net/>. Accessed: December 15, 2001.
- 9 Antequera GM, Suarez-Varela MM. Lessons on humanitarian assistance. Bulletin of the World Health Organization 1999;77:607-9.
- 10 Enzensberger HM, editor. Krieger ohne Waffen – Das Internationale Komitee vom Roten Kreuz. Frankfurt/M: Eichborn; 2001.
- 11 Ärzte ohne Grenzen. Im Schatten der Konflikte; schützt humanitäre Hilfe Menschen in Not? Bonn: Dietz; 1996.
- 12 Kabou A. Et si l'Afrique refusait le développement? Paris: L'Harmattan; 1991.
- 13 World Health Organization. Primary health care report of the International Conference on Primary Health Care; 1978 Sep 6-12; Alma-Ata, USSR. Geneva: WHO; 1978.
- 14 Hackenbruch E, editor. Going international; Pflegende in der Entwicklungszusammenarbeit und Humanitären Hilfe. Wiesbaden: Ullstein Medical; 1998.
- 15 Krawinkel M, Renz-Polster H. Medical practice in developing countries. Ulm: Jungjohann; 1995.
- 16 Médecins sans Frontières. Technicien sanitaire en situation précaire. 2nd ed. Paris: Médecins sans Frontières; 1994.
- 17 World Health Organization. Cost analysis in primary health care: a training manual for program managers. Geneva: WHO; 1994.
- 18 Flintrop J. Humanitärer Einsatz in Mazedonien; 20 Kilometer entfernt fallen die Bomben. Deutsches Ärzteblatt 1999;96:C981-4.
- 19 Schnabel M, Munz R, Bohe M. The Referral Field Hospital of the Emergency Response Unit (ERU) of the German Red Cross [in German]. Dtsch Med Wochenschr 2000;125:857-61.
- 20 Swai RO. Mpango wa taifa wa kudhibiti Ukimwi Tanzania bara. 25-26 Agosti, 1998. Regional conference on HIV and AIDS. Kigoma (Tanzania): Regional Commissioner Kigoma; 1998.
- 21 Van Damme W. Do refugees belong in camps? Experiences from Goma and Guinea. Lancet 1995;346:360-2.
- 22 Brown V, Reilley B, Ferrir MC, Gabaldon J, Manoncourt S. Cholera outbreak during massive influx of Rwandan returnees in November, 1996. Lancet 1997;349:212.
- 23 Chamla D. Malaria in refugee society. Mtabila I, II and Muyovosi experience. Kigoma (Tanzania): Tanzania Red Cross Society; 1998.
- 24 Gardemann J. Final report concerning IFRC Rwanda Refugee Program Benco Camp, Tanzania, Referral Hospital August to October, 1995. Geneva: ICRC; 1995.
- 25 Gardemann J. Motto of the pediatric ward of Maweni Regional Hospital in Kigoma/Tanzania; an example of pediatric primary health care. Sozialpädiatrie, Kinder- und Jugendheilkunde 2000;22:397-8.
- 26 Marschang A. Complex catastrophies—the Rwanda crisis [in German]. Chirurg 1999;70 Suppl: 119-22.
- 27 Summerfield DA. Legacy of war: beyond "trauma" to the social fabric. Lancet 1997;349:1568.
- 28 Gardemann J. Primary Health Care. Als Gesundheitskoordinator in Tansania. Blickpunkt Öffentliche Gesundheit 1999;15:4-5.
- 29 Geltman P. Rwanda: physician complicity and rebuilding the medical community. Lancet 1997;350:64.
- 30 Ramsay S. Killing fields and killing hospitals of Rwanda. Lancet 1994;344:1011.
- 31 Banatvala N, Howarth JT, Roger AJ, Besse CP. Emergency medical aid for refugees. Lancet 1997;349:212-3.
- 32 Médecins sans Frontières. Guide clinique et thérapeutique. 3rd ed. Paris: Hatier; 1992.
- 33 Médecins sans Frontières. Médicaments essentiels. Guide pratique d'utilisation. 2nd ed. Paris: Médecins sans Frontières; 1993.
- 34 Médecins sans Frontières. Gestes medico-chirurgicaux en situation d'isolement. Paris: Hatier; 1989.
- 35 Dean, AG, Dean JA, Colombier D, Brendel KA, Smith DC, Burton AH, et al. Epi Info, Version 6: A word-processing, database, and statistics program for public health on IBM-compatible microcomputers. Atlanta (GA): Centers for Disease Control and Prevention; 1995.

- 36 King M, King F, Martodipoero S. Primary child care: a manual for health workers. Book one. Oxford, Delhi: Oxford University Press; 1991.
- 37 Stanfield P, Brueton M, Chan M, Parkin M, Waterston T, editors. Diseases of children in the subtropics and tropics. 4th ed. London, Melbourne, Auckland: Edward Arnold; 1991.
- 38 World Health Organization. The management of nutrition in major emergencies. Geneva: WHO; 2000.
- 39 World Health Organization. Management of the child with a serious infection or severe malnutrition. Guidelines for care at the First-Referral Level in developing countries. Geneva: WHO; 2000.
- 40 Chamberlain ME. The scramble for Africa. Seminar studies in history. 2nd ed. London, New York (NY): Longman; 1999.
- 41 Gourevitch P. We wish to inform you that tomorrow we will be killed with our families. Stories from Rwanda. New York (NY): Farrar Straus and Giroux; 1998.
- 42 ISOKO Internationale Solidarität und Kommunikation, editor. Amakuru Ki? Über leben in Rwanda. Vivre au Rwanda. Frankfurt/M: Verlag für Interkulturelle Kommunikation; 1987.
- 43 Agovino T. Caring for ethnic Albanians in Macedonia's refugee camps. *Lancet* 1999;353:1701-3.
- 44 Kondaj R. Management of refugee crisis in Albania during the 1999 Kosovo Conflict. *Croat Med J* 2001;43:190-4.
- 45 Donev D. Refugee crisis in Macedonia. *Croat Med J* 2001;43:184-9.
- 46 Deutsches Rotes Kreuz. Die Genfer Rotkreuz-Abkommen vom 12. August 1949 und die beiden Zusatzprotokolle vom 8. Juni 1977 sowie das Abkommen betreffend die Gesetze und Gebräuche des Landkrieges vom 18. Oktober 1907 (Haager Landkriegsordnung). 8th ed. Bonn: DRK; 1988.
- 47 Perrin P. War and public health. Geneva: International Committee of the Red Cross; 1996.
- 48 O'Sullivan A. Macedonian MASH. Israeli style. The Jerusalem Post 1999 Apr 9 [internet edition]. Available at: <http://www.jpost.com/com/Archive/09.Apr.1999/News/Article-5.html>. Accessed: December 12, 2001.
- 49 Ciment J. Kosovo refugees spared epidemics so far. *BMJ* 1999;318:1028.
- 50 World Health Organization. WHO medicines strategy: framework for action in essential drugs and medicines policy 2000-2003. Geneva: WHO; 2000.
- 51 World Health Organization. The use of essential drugs: Eighth report of the WHO Expert Committee. Geneva: WHO; 1998.
- 52 Szilard I, Cholin B, Gorbacheva O, O'Rourke T. Medical evacuations from former Yugoslav Republic of Macedonia. *Lancet* 2000;355:1020.
- 53 Mazimpaka T. Ein Tutsi in Deutschland; das Schicksal eines Flüchtlings. Leipzig (Germany): Evangelische Verlagsanstalt; 1998.
- 54 Gardemann J, Mashkooi K. Health Situation of refugee children in Münster. *Gesundheitswesen* 1998;60:686-93.
- 55 World Health Organization. Mental health of refugees. Geneva: WHO; 1996.
- 56 Moser C, Nyfeler D, Verwey M, editors. Traumatisierungen von Flüchtlingen und Asyl Suchenden; Einfluss des politischen, sozialen und medizinischen Kontextes. Zürich: Seismo; 2001.
- 57 Gardemann J. Migration and health: public health services coordinating health related variety. *Gesundheitswesen* 2001;63 Suppl 2:115-9.
- 58 Last JM. Public health and human ecology. 2nd ed. Stamford (CT): Appleton & Lange; 1998.
- 59 World Health Organization. Investment in global health will generate substantial returns, says Commission on Macroeconomics and Health. *Current WHO Information* [serial online]. Available at: <http://www.who.int/home-page/index.en.shtml>. Accessed: December 29, 2001.
- 60 Bellach BM, Stein H, editors. The new public health policy of the European Union. Conference Proceedings. München: Urban und Vogel; 1999.
- 61 Council of Europe. 49th Meeting of European Health Committee (CDSP). Draft meeting report. 49th Meeting of European Health Committee (CDSP); 2001 Jun 19-20; Strasbourg, France. Strasbourg (France): Secretary European Health Committee; Health Department – Directorate General III – Social Cohesion; Council of Europe; 2001.
- 62 Antonovsky A. Unraveling the mystery of health; how people manage stress and stay well. San Francisco (CA): Jossey-Bass; 1987.
- 63 Buggenhagen HJ, Busch KH, Schellenberg M. Bildungsunternehmen im Wandel zu Kompetenzzentren. Schwerin: ITF Informationstransfer- und Forschungsinstitut für berufliche Aus- und Weiterbildung; 2001.
- 64 Efremov G, Stardelov G, Gurcinov M, editors. Science and culture in a joint action for peace and development. Proceedings of the International Conference on the Balkans in the New Millennium; 2001 May 25-26; Skopje, Macedonia. Skopje: Macedonian Academy of Sciences and Arts; 2001.
- 65 Fisk E. Public health and public music. *Blickpunkt öffentliche Gesundheit* 2001;17:4.
- 66 Dunant H. A memory of Solferino. Geneva: International Committee of the Red Cross; 1986.

Received: December 29, 2001

Accepted: February 13, 2002

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