HEALTH CARE IN WARTIME CONDITIONS

Health under fire
The WHO in the former Yugoslavia

HANNU VUORI*

In July 1992, in former Yugoslavia the World Health Organization (WHO) launched a humanitarian assistance programme. The programme was aimed at maintaining public health in the war-affected areas with 4 million refugees and displaced persons, over 200,000 dead, at least twice as many wounded, over 60,000 patients in need of rehabilitation and at least 1 million persons with deep psychological scars. The programme had 4 objectives: public health interventions (including health and nutrition monitoring), physical and psychosocial rehabilitation, distribution of medical supplies and health care reform. A key feature was a systematic assessment of the needs of the affected population by means of health and nutrition monitoring which helped to target the assistance. For some areas the WHO’s medical supplies were the only source of much needed drugs. With the health authorities WHO initiated a health care reform, to enable the qualitatively reasonably good but top-heavy and expensive health care systems inherited from the socialist era to recuperate and survive. The WHO programme has helped avert major epidemics, prevented scurvy and rickets and helped people to survive the cold of the winter.

Key words: disaster relief, emergency medicine, war, WHO, Yugoslavia

The first shots of the civil war in Yugoslavia were fired in Slovenia on 27 June 1991 the night following Slovenia’s proclamation of independence from the socialist federal republic of Yugoslavia. The fighting only lasted 10 days and Slovenia escaped from it almost unscathed, but the next victims were not so lucky. The following month, skirmishes between secessionist Croats and minority Serbs in neighbouring Croatia detonated into full-scale war. The results were ruinous – 9,000 dead, 26,000 wounded and 17 hospitals partially or totally destroyed. But worse was yet to come for the region. Most residents of Bosnia-Hercegovina simply did not believe the ethnic war in Croatia could spread to their republic. While strong nationalistic feelings always ran just below the surface of unity in former Yugoslavia, Bosnia had a more federalist and cosmopolitan orientation. People, including the Muslim majority, were rather secular. Intermarriage among ethnic groups was common. Only a small part of the population was old enough to remember the atrocities committed during the Second World War. All these factors seemed to make Bosnia immune to ethnic and nationalistic strife. But it was not. In April 1992, it too exploded into war, a war now estimated to have killed as many as 200,000 people, wounded hundreds of thousands more and driven some 2 million people from their homes. This in a country of barely 4.5 million inhabitants. By comparison, the savage 12 year war in El Salvador (population 5 million) produced approximately half as many casualties and refugees.

THE INTERNATIONAL COMMUNITY REACTS

The European Community was the first major institution to react to the spiralling political crisis. Just 2 weeks after trouble began in Slovenia, it signed an agreement establishing the European Community Monitoring Mission. The UN Security Council soon followed suit. In September 1991 it passed a resolution expressing deep concern at the fighting and calling upon all states to implement a complete embargo on deliveries of weapons and military equipment to Yugoslavia. It was the first in a long series of UN resolutions on former Yugoslavia, many of which have been ignored or are otherwise toothless. It soon became clear that the most valuable contribution the UN could make in the region would be a peacekeeping operation and in February 1992 the Security Council established the United Nations Protection Force (UNPROFOR). The council intended the force to be an interim body that would create the necessary conditions in which to negotiate an overall settlement of the crisis, but by the time of the Dayton peace accord UNPROFOR had become an enduring feature in the former Yugoslavia. More than 30 countries have contributed over 40,000 troops and 5,000 civilians to the mission (October 1995, UNPROFOR, Office of the Spokesman).

International humanitarian agencies responded almost as quickly. In November 1991, the United Nations High Commission for Refugees (UNHCR) and the World Food

* H. Vuori, at the time of writing the article: Special Representative of the Regional Director to the former Yugoslavia; currently: WHO Representative to Turkey
Correspondence: H. Vuori, MD, PhD, MA, WHO Representative to Turkey, WHO, 197 Atasözer Bulvarı, 06680 Ankara, Turkey, tel +90 312 4284031, fax +90 312 4677028
Programme (WFP) began providing the 500,000 refugees and displaced persons generated by the war in Croatia with food and shelter. The outbreak of fighting in Bosnia saw a radical increase in the number of refugees and displaced, which peaked at nearly 4 million for the entire region by late 1994 and has receded only slightly since then. The aid mission grew correspondingly to meet the challenge.

The UN seeks donor funding for its humanitarian assistance efforts through regular interagency appeals. In August 1992, the first UN Inter-Agency Mission determined that more than 2.7 million people were directly affected by the war and in need of assistance, including food, shelter and health care. The total requirements at the time were calculated at more than US$ 1 billion, with almost half urgently required to address life-threatening needs. The level of assistance has since decreased as some refugees and displaced persons have returned to their homes and a successful seed programme has regenerated local food production in many war-torn areas.

In addition to a large family of UN agencies (UNHCR, WHO, UNICEF, WFP, FAO and UNESCO), the European Union and some 250 governmental and non-governmental organizations (NGOs) have provided humanitarian assistance to the former Yugoslavia.

ENTER THE WHO
In June 1992, the former Chief Medical Officer of the United Kingdom got an urgent phone call from WHO's Regional Office for Europe asking him to go to the former Yugoslavia. The task was to give public health advice to UNHCR and to help coordinate the work of non-governmental agencies, particularly in the distribution of medical supplies. This was the beginning of an operation that has grown to become the largest humanitarian assistance programme in WHO's history, with an annual budget exceeding US$ 30 million and, at the time the programme was most extensive, 120 staff members working in 8 offices throughout the region. The WHO did not arrive on the scene until almost 6 months after the UNHCR, UNICEF and WFP had already established their offices, a fact which made national health authorities and some NGOs in the region rather unhappy. The main reason for the delay was the novelty of the situation. Until that time, the WHO's Regional Office for Europe had simply had no comparable experience in emergency work to bring to bear on the problem. It had implemented humanitarian assistance programmes for the victims of earthquakes in Turkey and Armenia, but the scale and nature of the crises in former Yugoslavia was altogether different. The WHO member states and its professional staff were at first hesitant to get involved in such a large-scale enterprise. Did the WHO have a mandate for it? Had the organization the manpower, skills and infrastructure, the flexibility and speed needed to tackle such a complex disaster with such serious political ramifications?

Resources were another problem. The WHO's regular budget contained no allocation for such a programme, nor was there any certainty of attracting voluntary donations. Many were afraid that a programme of such size would inevitably spread the organization's resources too thin, resources that were sorely needed by the former socialist countries of Eastern and Central Europe to help them to reform their health care systems. An operation in the former Yugoslavia might put those activities at grave risk. But the humanitarian mandate was clear, as millions of people in the midst of Europe were by then directly affected by the war. The organizational mandate was also clear. The WHO's constitution invites the WHO to act as the 'directing and coordinating authority' of international health work and also requests the agency to furnish 'technical assistance and, in emergencies, necessary aid' upon the request or acceptance of governments. So despite many doubts, the Regional Office for Europe launched a humanitarian assistance programme in former Yugoslavia in the late summer of 1992, with a two-fold objective: to protect the health of the population in the region during the conflicts and to prepare national health services for post-war development.

THE WHO'S PROGRAMME
From initially providing public health advice and co-ordination the WHO's humanitarian assistance programme for the former Yugoslavia has grown to encompass 4 major projects: public health, rehabilitation, medical supplies and health care reform. All activities are based on established WHO policies.

Neutrality
The WHO's programme covers all republics of the former Yugoslavia except Slovenia, which has not asked for help. Within the operations area, the WHO helps all sides according to need.

Equitable coverage
Contrary to many other humanitarian agencies, the WHO does not distinguish between the local population and refugees. All users of health services are eligible beneficiaries of the WHO aid, a position which is easy to justify. Most refugees and displaced persons stay with local families rather than in collective centres, making it almost impossible to create a system benefiting only refugees and the displaced. An exclusive focus on refugees would also increase tension between them and the local population.

Public health orientation
The WHO's basic task is to provide technical and normative support in public health-related issues rather than to carry out operational 'hands-on' activities.

Population orientation
Many NGOs help individual patients or specific patient groups. As an intergovernmental and public health organization, the WHO works with local health authorities and the official health care system in order to help population groups and institutions.
Primary health care orientation
The WHO feels that with its limited resources, the agency can do the greatest good for the greatest numbers of people by supporting primary and secondary care institutions to meet basic needs, rather than supporting specialized tertiary care institutions.

Strengthening of local capabilities
All WHO programmes have a training component, the goal being to produce a critical mass of people with the skills to introduce and sustain new preventive, diagnostic, therapeutic and managerial approaches and techniques.

PUBLIC HEALTH
The WHO’s public health programme follows a simple model: identify a problem by means of health and nutrition monitoring, assess what is needed to solve it and carry out the requisite public health intervention. The early work of the WHO’s health monitoring unit is described by Healing et al. The focus has shifted from the collection of primary data to identify problems towards helping existing public health institutions at the national, regional and local levels to analyse and interpret the data which they collect. The WHO also helps its local staff members to improve their epidemiological skills and supplies local institutions with computers and other tools. The WHO has made a number of direct public health interventions in the former Yugoslavia. The agency has provided materials for delousing refugees and displaced persons in order to control the spread of scabies and prevent typhus, an endemic disease in Bosnia. Winter survival guidelines have been disseminated to help the residents of Sarajevo and other besieged cities stay alive during the winter months in houses without sealed windows and fuel. The WHO has provided rodenticides and pesticides to control the fast-growing population of rats and mice, a major public health problem in many urban areas and a new tuberculosis treatment protocol was introduced to modernize local treatment practices and curb possible increases in the incidence rate of the disease. During that first terrible winter of war in Bosnia, there was great concern in the outside world that thousands of people might actually die of hunger. To provide early warning of developing problems as well as an empirical basis for action, the WHO launched a systematic nutrition monitoring programme in several besieged cities of the country. The agency measured the nutritional status of the population at regular intervals using simple scientific methods. The population generally lost weight during the first 2 years of the conflict (in Sarajevo, an average of 12 kg in the 1992-1993 winter) and there was some malnutrition, particularly among elderly people who lived alone. However, serious hunger was for the most part prevented, and the large-scale deaths feared did not materialize. Most importantly, children did not suffer from malnutrition. Early on, the WHO advised the UNHCR and WFP to adjust their ‘food basket’ of humanitarian aid by adding micronutrients, a measure that probably helped prevent scurvy and rickets.

REHABILITATION
The wars in the former Yugoslavia have left many thousands of victims in need of rehabilitation, some 60,000 in all by the WHO’s estimate. Of these, 6,000 are amputees, 2,800 have traumatic brain injuries, 1,400 have spinal cord injuries and 5,000 have suffered peripheral nerve lesions and sensory loss (blindness and deafness). The WHO’s physical rehabilitation programme focuses on people with the most severe disabilities – amputations, spinal cord injuries and traumatic brain injuries. In addition, according to the WHO’s conservative estimates nearly 1 million people in the region are suffering from post-traumatic stress disorder (PTSD), the overwhelming majority as a direct result of war trauma. To gain a clearer picture of the needs for physical and psychosocial rehabilitation, the WHO has established a rehabilitation information system in Croatia and is in the process of doing so in Bosnia.

Physical rehabilitation
Technology now permits amputees to be easily fitted with prefabricated prostheses. A skilled technician can fit 3-4 prostheses per day almost any place where electricity is available. The WHO orthopaedic specialists have fitted over 600 patients with amputations in Bosnia, Croatia and the rump Federal Republic of Yugoslavia (Serbia and Montenegro) and provided machinery and materials to local workshops sufficient to manufacture another 700 prostheses. Nearly all patients with spinal cord injuries are paraplegics. Urinary tract complications and pressure sores can shorten life and reduce its quality, particularly in the understaffed and underequipped hospitals of the former Yugoslavia. To improve this situation, the WHO has developed a Clean Intermittent Catheterisation kit for patients with spinal cord injuries and trained local health personnel in its use. The technique keeps patients dry and reduces their risk of infections and pressure sores. In addition, the WHO has provided rehabilitation centres with anti-decubitus mattresses, wheelchairs and other much-needed equipment. Many rehabilitation patients are refugees or displaced persons who have no place to go after completing their primary treatment. As a result, the average length of stay in institutions has increased to the extent that clinics have become permanent homes to many patients. Aggression, apathy, self-destructive behaviour and substance abuse are common. Even for patients who have a place to go, the social environment is not handicap-friendly and there is virtually no tradition of community-based rehabilitation services. The WHO has supported the development of national rehabilitation policies which ensure a continuum of care from the primary treatment of lesions through institutional care to community-based rehabilitation. Orientation courses have also been given for social planners and architects to sensitize them to the needs of the handicapped.
Psychosocial rehabilitation
The focus of the WHO's psychosocial rehabilitation programme is to help the health care system help people with PTSD. This it does primarily by conducting special training for local mental and primary health care personnel to diagnose and treat the problem of PTSD. The programme also attempts to ‘care for the caretakers’ by providing psychological and psychiatric support and help to humanitarian aid workers suffering from excessive stress and burn-out symptoms.

MEDICAL SUPPLIES
When the mission in the former Yugoslavia was first established, the WHO sought merely to coordinate the distribution of medical supplies by other organizations. However, it soon became clear that other organizations would only accept the WHO in such a coordinating role if the agency itself was engaged in supply activities. The WHO launched its own supply programme in the autumn of 1992.

The first supplies, donated by the British Overseas Development Administration, came in bulk form. The WHO quickly discovered that distributing such supplies was fraught with a number of difficulties and that providing pre-selected drugs in pre-packaged kits was the best way to reach the greatest number of people in need. The kits are designed to cover the average needs of a given target group or institution either for a fixed period of time or case load of patients. Among other advantages, the use of kits makes procurement and distribution much simpler.

The second lesson was that the WHO had to custom-design its own kits to take into account local disease patterns and treatment practices. With the help of donors and consultants, the WHO mission in the former Yugoslavia has developed kits for biochemical and microbiological laboratories, chronic diseases, tuberculosis, reproductive health and rehabilitation, among others.

During the first winter of war in Sarajevo, the director of Kosevo Hospital (the city’s university teaching hospital) said about the new WHO surgical kit: 'The kit is wonderful, but what can we do with it when our last anaesthesia machine just went out of commission because we don’t have spare parts?’ The problem grew more acute as the war dragged on and eventually led the WHO to begin a spare parts project. A biomedical engineer performed a thorough analysis of the need for spare parts in 7 major hospitals in Bosnia, which the WHO addressed by making a special appeal to donors. The agency has also supplied spare parts to facilities in Serbia and Montenegro, where UN sanctions have rendered the maintenance of hospital equipment extremely difficult.

The WHO is only one of a number of agencies supplying drugs to the region. Sarajevo in particular got many private donations, but the quality of these donations was often suspect. The WHO estimated that as much as 35% of donated medicines were either useless (irrelevant to needs) or downright harmful (expired or containing obscure ingredients). Such donations take up precious air cargo space and require precious fuel to be destroyed. To help donors spend their money in the best way possible, the WHO issued donor guidelines which have since been adapted for use in other emergencies as well. The WHO also issued guidelines for visiting specialists, who came prepared to do good but sometimes did harm because of their total ignorance of local realities.

Before the war, all the republics of the former Yugoslavia had access to a broad array of drugs. Doctors tended to be ‘prescription-happy’ and overprescribing of drugs was rampant. Even in the midst of the war they could complain that the international aid had not enabled them to stick to their old prescription habits. Fortunately, the local health authorities have slowly realized that it is simply impossible to afford such habits any longer. The WHO has tried to turn necessity into virtue by introducing the idea of an essential drug list and by supporting the development of rational drug policies. In Bosnia, the authorities first proposed a list consisting of some 1,200 drugs which, with the WHO’s advice, they have gradually scaled down to less than 130.

HEALTH CARE REFORM
The former Yugoslavia had a comprehensive health care system with universal access and reasonably high quality. However, the system was very top-heavy, that is, hospital- physician- and drug-oriented. Cost-efficiency was poor. Inflation and high unemployment were undermining the system’s economic basis even before the war. The domestic drug industry lost a major market for its products when socialism crumbled in the Central and Eastern European countries.

The war has greatly aggravated the situation. For example, the drug industry had a clear division of labour and production among the various republics of the former Yugoslavia. With the war, drug companies experienced a double loss – large portions of their market and access to raw materials. The war drained resources from health care and in parts of Croatia and much of Bosnia-Herzegovina destroyed the physical infrastructure. In the other republics, the physical infrastructure is intact but the need to provide health care for thousands of refugees and displaced persons puts a tremendous strain on the systems.

Even before the wars began, the republics realized that the old system was no longer tenable. Slovenia and Croatia have already made much progress in reforming their health care systems. Serbia and Montenegro and the Former Yugoslav Republic of Macedonia, although recognizing the necessity of health care reform, have not been able to move as fast. The UN sanctions in Serbia and Montenegro adversely affected the health care service and served to block new developments. In Bosnia, the immediate requirements imposed by the war have taken priority over long-term planning. However, there is a definite need to implement new management systems in Bosnia, both to ensure the best use of current resources and to rebuild after the war.

Although the WHO’s most visible role in the former Yugoslavia has been the provision of emergency relief, its traditional role remains as advising local authorities on
long-term issues such as reform of the health service. In
Croatia, the WHO has supported the development of a
‘master plan’ for health that will totally overhaul the
national health care system. In Bosnia, the UN adminis-
trator in Sarajevo assigned the WHO responsibility for
health care as part of the plan to restore essential health
services as called for by UN resolution 900.2

Health care reform is the backbone of the WHO’s pro-
gramme in the former Yugoslavia after the Dayton peace
accord. The areas in greatest need of reform and stream-
lining are health care organization and management,
referral systems, health care financing, primary health
care, information systems and quality assurance. The
training of health personnel needs drastic overhauling to
strengthen primary health care and the role of nurses.

ACHIEVEMENTS

What has the WHO’s humanitarian assistance pro-
gramme achieved? First, it is clear that the WHO was not
alone. UNHCR’s shelter programme, WFP’s food aid and
UNICEF’s support to education, albeit not directly health
related, undoubtedly contributed greatly to maintaining
health as well. Many NGOs, such as the International
Committee of the Red Cross, Médecins sans Frontières,
Pharmaciens sans Frontières, and Handicap International
had important and successful health programmes. This
work would not have been possible without the support
of many donor agencies such as the European Community
Humanitarian Office and the British, Canadian, Danish,
Finnish, Norwegian and Swedish development agencies.
Finally, one should not forget the important role played
by those countries, e.g. Denmark, The Netherlands, Nor-
way and the UK that put convoy teams at the disposal of
the UNHCR to transport the humanitarian aid to its
destination, often under very adverse conditions. Mostly,
agencies providing health-related humanitarian assis-
tance cooperated in their efforts. One of the WHO’s task
was to coordinate their work.

In the realm of medical supplies, the regional Minister of
Health in Zenica summed up the role of international aid
by saying, ‘You have kept our health care system going.’
The WHO is by no means alone in assessing credit for this
achievement, but it has been the main supplier of medi-
cines for central Bosnia, the UN Protected Areas of
Croatia and Serbia and Montenegro and one of the main
suppliers to Sarajevo.

And the other programmes? Public health activities are
notorious for the difficulty in assessing their impact, be-
cause they tend to be most successful when nothing
happens. However, despite 2 years of vicious fighting,
serious hunger and bitter winter cold in Bosnia-Herce-
govina, epidemics of infectious disease have thus far been
avoided.18 This sharply contrasts with what has been
observed in major wars of the past and represents a
remarkable achievement, one that has combined the efforts
of local people, international aid agencies and the donor
community.

What has been the impact of the WHO’s public health
interventions? In spring 1993, the WHO recognized the
danger of typhus breaking out among refugees and started
a delousing programme.19 Whether this prevented a sin-
gle case of typhus will never be known, but had there been
an outbreak of typhus and the WHO not done anything
to prevent it, the world would have been unforgiving.

One can certainly assume that the implementation of the
WHO’s winter survival guidelines saved people from
dying of hypothermia. We can also assume that the
WHO’s advice to enrich the aid food basket with micro-
nutrients probably prevented outbreaks of scurvy and
rickets. In the area of rehabilitation, the results are clearer.
Nearly 1,400 amputees are able to walk today thanks to
the WHO’s programme and even more will benefit from
the skills which the WHO helped local prosthetic tech-
nicians to acquire. Croatia is already in the process of
designing handicap-friendly buildings and residences.
The city of Tuzla in central Bosnia had already started an
ambitious new policy for building a handicapped-friendly
society during the war.

Before the WHO inaugurated its mental health pro-
gramme, few professionals even knew what PTSD was or
how to recognize it, much less how to treat it. Now, scores
of psychologists and psychiatrists are being trained in
PTSD therapy each month and official awareness about
the nature and scale of the problem has increased dra-
matically.

In the summer of 1994, the WHO took a bold step by
becoming the first UN agency to invite a group of outside
experts, all with extensive experience in emergency relief
operations, to evaluate the effectiveness of its programme
in the former Yugoslavia. While the group found reasons
for criticism, they concluded their report by saying: ‘This
programme has been highly successful in spite of its short-
comings [primarily WHO’s somewhat bureaucratic rules
and procedures that sometimes slowed down the opera-
tions and rendered them less flexible than desirable]. Even
if none of the observed shortcomings were corrected
before the next call for humanitarian action, this pro-
gramme is well worth repeating.’20

The WHO’s humanitarian assistance would not have been possible
without the courageous work of the local staff particularly in the field
offices in Bosnia (Sarajevo, Mostar, Zenica and Tuzla) but also in
area and field offices in Croatia (Zagreb and Split, and later
Metkovic), the Federal Republic of Yugoslavia (Belgrade) and the
Former Yugoslav Republic of Macedonia (Skopje).

REFERENCES

1 United Nations. UN Consolidated Appeals. Geneva:
UN Department of Humanitarian Affairs, December 1992 and
June 1995.
2 United Nations. The United Nations and the situation in
the former Yugoslavia. New York: UN Department of Public
3 United Nations. United Nations consolidated inter-agency
programme of action and appeal for former Yugoslavia. Geneva:
UN Department of Humanitarian Affairs, 1992.
4 Acheson ED. Health, humanitarian relief, and survival in
5 World Health Organization. Annual Report 1993:
humanitarian aid for former Yugoslavia. Zagreb: WHO Regional
12 Wig NN. The present state of mental health institutions in the countries of former Yugoslavia. Zagreb: WHO Regional Office for Europe, Zagreb Area Office 1993.

Received 17 October 1995, accepted 3 June 1996