Priority Setting and Scarce Resources: Case of the Federation of Bosnia and Herzegovina

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The priority setting within the context of scarce resources in the Federation of Bosnia and Herzegovina (BH) can be divided into priorities within the health care services provision and priorities within the reconstruction process. Facing the resource scarcity, the Federation of BH has chosen to increase health insurance contribution rate to establish cost-sharing arrangements (co-payments) and priority setting to ration access to certain services funded by the compulsory health insurance (“basic package” of the health care services). Reconstruction process of the health care facilities is conducted on the federal level through the effective managerial infrastructure (“project implementation units”). This study reports on the consequences of the war in BH as a peculiar context of the overall reform objectives and priority setting.

Key words: assessment of health care needs; Bosnia and Herzegovina; health care reforms; health transition; insurance, health; medically underserved areas; priorities, health

Health Care System in Multiple Transition

The term transition is used to describe a process of transition from the so-called socialist system into a new political and economic system. However, in the case of the health care system in the Federation of Bosnia and Herzegovina (BH), there is process of multiple transition. In addition to the transition from one into another economic system, there is an administrative transition from the unitary-centralized to federal-decentralized structure, and transition from a war into post-war health system. The fourth type of transition is a reform of the health care system based on the generally agreed principles.

The aim of the reform should be rationalization, and the basis of rationalization is a priority setting (1). The health system of the Federation of BH encounters many problems which are common for all health systems in the world, even for those most developed. However, the war, new administrative structure of the country, and transition from the so-called socialist into political and economic system of a free market confronts the health sector of the Federation with some specific challenges: (a) maintenance of the existing health services; (b) maintenance of the surveillance of the communicable diseases, with short-term goal to reduce morbidity at least to the prewar level; (c) intensification of immunization, especially for children, to achieve the prewar level in the first, and the European level in the next phase; (d) rehabilitation, reconstruction, and purchasing of medical equipment for the health institutions of the public sector; (e) administrative reorganization of the health system which will be in accordance with the Federal Constitution designing the health system in the segment of a common jurisdiction of the Federal and Cantonal authorities, and at the same time important decentralization in relation with the inherited modality; (f) new legislation which will be in accordance with the new administrative organization of the country; and (g) health system reform, especially finance reform, which implies involvement and competition of different forms of financing.

Profile of Health and Health Care System

Discussion of priorities requires an analysis of the inherited situation in health and actual circumstances which determine and limit the actions (2). Before the war, the health system in BH was financed and managed centrally. Hospital services were specialized and subspecialized, while outpatient health care had just started developing, which we consider a negative heritage. The positive aspect was a relatively well developed segment of prevention of communicable diseases by vaccination. Health care system had three sectors. Primary health care was provided at health centers and their outpatient facilities, which were managed on the municipal level. Secondary health care was provided in general and regional hospitals and only partially in health care centers (specialized counseling). Tertiary level was reserved for clinical hospital centers that were the teaching basis of the related university medical schools. Public health sector was organized through hygiene-epidemiologic services in the municipalities, and regional and national institutes of public
In practice, this division of the system resulted in a number of misunderstandings and irrational use of resources. For example, health centers (which were supposed to be institutions for primary health care) became a hybrid of emergency primary care department of and specialized policlincs, some of which developed as a secondary level provenance.

A relatively simple therapeutic procedure would be considered and paid as tertiary just because it was located in the university hospital center, whereas the same or even more complicated activity was considered and paid as a secondary just because the service was provided in a general hospital. Connections within the system were poor, and communication and cooperation between different levels was inappropriate. The role of general practitioners (GPs) was underestimated, whereas the role and influence of specialists on the secondary and tertiary level was overrated. Patients had to visit a GP if they wanted to obtain a referral to a specialist or hospital. The physicians considered their work in the primary level services as a necessary evil and necessary step before obtaining a clinical residency. The result was an enormous increase in the expenses for health and dissatisfaction of patients and physicians.

According to the 1991 census, 4.39 million people lived in BH, out of which 2.78 million on the territory of the present Federation of BH. Today, there are approximately 2.54 million people in the Federation of BH. Present population distribution in the cantons roughly corresponds to the distribution before the war, due to the displacement of people. This fact should be considered in planning priorities. Namely, 72% (2.54 million) of the total population of the Federation is composed of the local population, 25% are displaced persons, and 3% are people who returned from abroad. Total number of displaced persons is 639,266 and 2.4% of them live in collective centers, while all other live in private accommodation (3).

The war adversely affected birthrate and mortality rate, newborn mortality rate, maternal mortality and morbidity rate, and other health indicators. During the war, the number of newborns in the Federation decreased by approximately 50% compared to the rate before the war, which was 14.9 live newborns per 1,000 persons. The data for 1995 show that the number increased to 11.4 per 1,000 persons, with a still increasing trend. Reports on the mortality rates for 1992-1995 period (war time) indicate a rough mortality rate 3 to 5 times higher than in 1991 (before the war). There are no reliable data for the period after the war. In the last year before the war (1991), the newborn mortality rate was 14.5 per 1,000 live births, but during the war time (in 1993) it increased to approximately 24.7. Some estimations show that the newborn mortality rate for 1996 was 13.6 per 1,000 live births (3).

Two main factors from the international classification of diseases influence mortality and morbidity. The first is the war (injuries and other causes directly connected to the war). In December 1995, 156,824 persons on the territory of the Federation were reported killed or dead because of physical exhaustion (3). The second factor is communicable diseases. As a direct consequence of the war, the number of communicable diseases increased with the deterioration of living conditions (Table 1). The number of people suffering from tuberculosis increased on an average by 50%, and many young people contracted the disease. Hepatitis A and enterocolitis were the main problems, especially in overcrowded collective centers. Diseases transmitted by rodents, for example tularemia and hemorrhage fever, appeared as epidemics in 1995 (on the battlefronts and in unsuitable accommodation). Fortunately, even during the most difficult times, there were no epidemics that could significantly increase mortality from communicable diseases. The number of postsurgical anaerobic infections (gas gangrene, tetanus) was also relatively low.

Table 1: The most frequent communicable diseases in the Federation of Bosnia and Herzegovina, January-September 1996. [view this table]

The number of persons with physical disability and psychological disturbances due to the war is the next important factor in priority setting. Apart from the normal structure of morbidity, approximately 20,000 of permanently physically disabled persons, with a large number of amputees (approximately 5,000 registered) and those with injured spinal cord, brain, and peripheral nerves, were registered in the Federation (3).

Federal Experts Team for Mental Health estimated that approximately 15% of the total population suffers from psychological disturbances requiring treatment. There is a large number of people with the post-traumatic stress disorder. The main consequence of the non-treated traumas is reflected in the increased number of chronic mental disorders, suicides, drug addictions, etc (4,5).

Naturally, the war caused important changes in other areas, such as nutrition and life styles (increased number of smokers and alcoholics), which have to be taken into consideration in determining priorities.
Health financing is also the key factor which determines priorities. Total expenses of health system in BH for 1991 were approximately 6.5% of gross domestic product (GDP) or approximately US$245 per capita (4). These resources were above the average of the other countries of the so-called socialist block, but irrational organization of health services, as well as inappropriate management of resources, lead to a progressive imbalance between expenses and income. The war terminated rationalization of the system. During the war time, on the territory of the Federation of BH, which was controlled by the BH Army, all funds, as well as the health fund, were canceled, and the health budget became a part of the Ministry of Health budget. The resources were insufficient, the GDP contribution to health sector decreased to 1.25% or yearly approximately US$5 per capita (4,5). Supplies for health system were continued with the assistance of humanitarian aid and very limited intervention from the State budget. On the territory controlled by the Croatian Defense Council, modified acts on health care and health insurance were passed very early, in 1994. The financing was assured by the Health Insurance Fund. However, because of the poor economic situation, these resources were only sufficient for the coverage of very modest salaries for health employees, short list of medicaments that were available only with prescriptions, and only a small part of material expenses of health institutions. The rest was covered from the humanitarian sources, but in a smaller percentage than on the territory controlled by the BH Army.

If the financing of health relied only on the health insurance funds, it could not cover even the most restrictively defined priorities at the present moment, and it is thus necessary to find additional sources. There are some estimates that health insurance fund in 1997 could cover 45.8% of the necessary resources. By the year 2000, we expect it to increase up to 64.9%. The remaining part in this year should be collected from the following sources: 10.2% by direct payments from citizens, 29% from federal, cantonal and municipal budgets, and 15% from other sources, humanitarian in the first place (5). If the economic revival should progress as planned, the need for additional sources should progressively decrease.

Before the war, there were approximately 4.6 beds per 1,000 inhabitants in BH. In 1996, the Federation of BH had 10,296 beds or 4.1 beds per 1,000 inhabitants, which is within the acceptable range (6). However, they were not equally distributed, which means that the number of beds has to be reduced in certain areas and increased in the other areas (Table 2). Medications represent especially important health care planning issue, where, after setting the priorities, large amounts of money and resources can be saved or spent. Before the war, spending of medications in BH was irrational, amounting to approximately 17% of the total expenses of the health system. In the Federation of BH, 22% of all the resources spent on health are for covering medications. However, without clear and firm state policy in this respect, the costs can increase up to 30-35%, as it is the case in some east European countries, whereas the west European average is about 15% (4). The first step made by the Ministry of Health was the creation of the list of essential medications in 1996. This proved to be a positive action. The following steps involve legislative and educational measures, monitoring, evaluations of medications, etc.

**Resources Projections**

Before the discussion on priority setting in the context of scarce resources (2), it is necessary to consider all the projection resources in the health funds for this year and for a medium-term period. According to data for 1996, resources for health system approached DM77 per capita. Based on this data and bearing in mind the estimations and analyses of experts from the World Bank and International Monetary Fund on the GDP level, we have designed a projection of financing health care system for the 1997-2000 period (5). According to this projection, the resources for health financing which are to be realized through health insurance funds would be approximately DM150 per capita. It is less than 50% of the prewar level and only the correct choice of priorities can maintain the health system sustainable (7).

The following actions should be considered health priorities in the BH Federation: control of communicable diseases, immunization of children, and prevention and eradication of vaccine-preventable communicable diseases. Thanks to a continuous process of immunization which is being carried out by the Federal Committee on Expanded Program of Immunization, the level of general vaccination coverage in 1997 increased to the prewar level, even though it decreased by 50% during the war (more in some enclaves that were under long-lasting war blockade). Children vaccination against tuberculosis is above the prewar level. In 1997, two vaccination campaigns against childhood polio were undertaken in an attempt to eradicate the wild poliovirus (in BH, polio as a disease was eradicated some 25 years ago). Vaccination quality indicator for children aged 3-15 months in Bosnia and Herzegovina in 1995 is shown in Table 3.
Health Insurance

Structure of the health care financing in 1997 and projection for year 2000 are shown in Table 4.

Confronting resource scarcity in the health care system, the Federation has chosen to increase the health insurance contribution rate through “payroll taxation”, as well as to establish cost-sharing arrangements (co-payments) and priority setting within the provision of health care (“basic package” of health care services) (9). Contributions to compulsory health insurance are not gathered through “general taxation” or “premiums”, but through “payroll taxation”. With incremental GDP, the rate of contribution to health insurance will gradually decrease.

The main task of establishing the cost-sharing arrangements in the Federation is to gather some additional funds necessary for normal functioning of the health care system (9). Establishing of co-payments might make the control of the entire expenditures in the health care system much more difficult. Broadly based drop out rates of cost-sharing will alleviate the inequities for people with a lower income, as well as the inequities in the usage of health care services for the elderly, children, and chronically ill patients. Priority setting in the health care system, which should be covered by the compulsory health insurance, will be designed in the “basic package” of health care services (9). This package will guarantee the same rights based on the health insurance for all citizens of the
Federation and at the same time, it will satisfy the principles of equity and solidarity. The services which will not be a part of the basic package could be left over to the individual responsibility of the citizens, with regard to the social approach to the concept of health (10). Establishment of private health insurance companies might contribute to the increase of additional resources.

**Education**

Education, especially education in the management, will contribute to the rational usage of scarce resources. Only a motivated and educated health employee is able to use the resources rationally. Unfortunately, this field was neglected and that is the reason why in future it should be treated as a priority. The rationalization is most needed when the resources are insufficient, and the basis of every rationalization is a proper choice of priorities (11).

**References**


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