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# IMPACT OF WAR: REFLECTIONS ON BLOOD TRANSFUSION SERVICES IN BOSNIA AND HERZEGOVINA 1992-2002

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## Abstract

This paper looks at the basic problems in blood transfusion services in post war Bosnia and Herzegovina (BiH). As background, a brief summary is given of the pre war context. The paper then examines the situation during the war 1992-1995 and the post war period until 2002, a decade of different challenging changes. Comparisons between these 3 periods highlight the way war has an impact on the organisation and function of blood transfusion institutions and services.

The impact of war has resulted in difficulties in: motivating blood donors, setting one strategy for the whole country, developing common standards, having a lack of legislation, the education and training of personnel, developing quality management and control, the financing of services and institutions, having an increase in the demand for blood and blood components but fewer resources, and in inefficient and ineffective country wide organisation linked to poor management.

**Key words:** *Blood transfusion services. War. Impact.*

## Pre war

### Political and economic environment

In common with many other European countries there was centralised planning in ex-Yugoslavia as well as regulations and laws common to all the Republics that made up the country. There was also good communication between each of the Republics.

Ex-Yugoslavia was a middle income country with adequate resources which enabled all the Republics to be able to have well functioning public services such as education and health care. There were many opportunities for professionals to travel and learn from other countries and to keep up to date with scientific and other advances.

## **Planning and organisational factors**

Preplanning for the unexpected was always recommended in ex-Yugoslavia. For blood supplies there were both military and civil hospitals and blood transfusion services with very good civil-military collaboration. Each blood transfusion centre was encouraged to keep a reserve of blood taking and testing supplies and of blood. The recommended amount of supplies depended on factors such as the average number of blood donors per month (1).

## **War 1992-1995**

### **Doing things differently**

Suddenly in 1992 things had to function differently, there had to be a change from peace to war strategies. In the health sector there were major changes. For example, all military hospitals became civilian hospitals and civil blood facilities had to assume responsibility for all blood supplies for everyone, the general public and the military. Many cities and towns were besieged for weeks and months. This meant that the sharing of blood supplies between blood transfusion facilities could no longer happen. Also, instead of being countrywide collaboration was limited to small geographical areas.

Instead of relying on blood donors to come to a blood transfusion facility to give blood, staff were organised into small mobile teams and blood donor sessions were held in shops, basements, wherever it was safest (2). Media advertising was replaced by young people going with the mobile teams to get members of the public wherever they could find them. Women, who were not on the front line, were particularly willing to give blood. Motivation was very high as people saw massacres and victims of snipers and shells.

Improvisations were necessary. For example, in Sarajevo where it was very important to try and keep a good reserve of whole blood, a different way of keeping the blood at a safe temperature had to be designed for when there was no electricity, especially in summer.

### **Quality and quantity of international supplies**

During the first year of the war most blood transfusion facilities had sufficient supplies because of the pre-planning policy. In Sarajevo the Blood Transfusion Institute had 4 to 5 times greater the quantity of the

recommended reserve. But by the second year most facilities became reliant on international donations.

The quality of the donated supplies varied. Some of the testing materials were close to, even past, their expiry date and sensitivity and specificity tests often had to be done on them (3).

It was difficult to maintain a reserve of supplies. This was due to a number of factors including:

- The delivery of international supplies was unpredictable. There was often a lack of supplies in the pipeline – organisations were unable or unwilling to purchase large supplies of materials and deliver them on a regular basis.
- Difficulties in getting supplies through the siege. When, in 1995, the World Health Organization brought some much needed blood from England into Sarajevo one of their UN vehicles was shot at.
- Sudden huge demands for blood because of a massacre or heavy bombardment. In Sarajevo 4 years of bombardment, massacres and snipers resulted in about 11,000 civilians being killed of whom more than 1,500 were children less than 12 years of age. And about 60,000 civilians were injured. During those 4 years more than 80,000 blood units were taken and given to the wounded during 60,000 operations undertaken at the University Clinical Centre Hospital. Of those needing an operation 10 per cent were in reversible oligemic shock. And 10 per cent needed more than 10 units of blood (4).

## **Post war**

### **Complex wider context**

With the signing of the Dayton Agreement end 1995 Bosnia and Herzegovina, which in 1992 had become a small, new country, was divided into 2 entities, the Federation and Republika Srpska. There is little exchange of information between each of them.

At State level there is no Minister of Health and so there is an absence of leadership for developing laws, regulations and policies common to the 2 entities. Furthermore each Canton in the Federation has its own Minister of Health and health insurance fund resulting in fragmentation and inequities in health care.

Experience in other Central and East European countries shows that political and economic transition is a difficult process. In BiH transition is further complicated by

being in a post war phase. A war that wreaked devastation on the people, economy and social infrastructure of BiH.

### **Resource scarcity**

BiH is now a poor country with few resources. The pre war huge state factories and other businesses no longer exist. Unemployment is between 35 and 40 per cent and there are strikes and irregular salary payments - dissatisfied people do not give blood. Institutions are smaller meaning fewer blood donors in one place.

Another factor affecting blood supplies is that during the war while intellectuals were leaving the country, rural people came into towns and cities and stayed. Traditionally, people from the countryside were never blood donors and much time is needed to change their attitudes. Furthermore, the change process is complicated by the fact that unlike pre war, no blood facility has a multidisciplinary team to design blood donor motivation campaigns. The salaries cannot be afforded.

The health system has to adapt to epidemiological changes that are taking place within a relatively short time frame. For example, there is a higher rate of transmissible diseases and the incidence of cancer seems to be much higher than pre war. The type of surgical operations has changed again resulting in an increase in the demand for blood components. Overall however, there are fewer resources and inefficient and ineffective countrywide organisation resulting in poor management.

### **Management change**

All the complex challenges facing the country call for innovative, different ways of working. New policies or strategies need different processes and management skills (5). But for the most part thinking is pre war, 30 years of socialist mind set. Change is difficult for the 50 years + age group but they are the people with power. They are one of 4 distinct groups of people in the country. The other 3 are:

- Bosnians returning from having worked and trained in other countries with different experiences.
- Internationals with development and other agencies, some of whom think they know best.
- Young people eager and willing to change things but with no power or influence.

Confusion reigns in such an environment and management change extremely difficult. In the field of blood transfusion it is hindering setting one strategy for the whole country, developing common standards, the passing of legislation, the



education and training of personnel, developing quality management and control, and the financing of services and institutions.

## Conclusions

The situation in Bosnia and Herzegovina is getting better, despite all the problems. Inter entity collaboration is improving and the private sector is slowly functioning more efficiently and effectively.

One of the main challenges is to change the way people think. This has to happen before producing blood transfusion regulations and laws. Otherwise they will exist on paper but there will be no change in practice, in how things are done.

The impact of war has resulted in major problems affecting the equity and efficiency of blood transfusion services. It may take 5-10 more years to re-establish quality blood transfusion institutions and services in Bosnia and Herzegovina following the 4 year war that happened in Europe towards the end of the 21<sup>st</sup> century.

### Apstrakt

#### UTICAJ RATA NA SLUŽBU TRANSFUZIJE U BOSNI I HERCEGOVINI

Ovaj rad ukazuje na osnovne probleme u transfuziološkoj službi u poratnom periodu u Bosni i Hercegovini (BiH). Kao podloga prezentirana je kratka informacija o stanju u oprijeratnom periodu. Rad istražuje ratni period 1992-1995 i poslije ratni period do 2002. godine, dekadu različitih izazova i promjena. Komparacijom ova tri perioda prezentira se kako je rat uticao na organizaciju i funkcionisanje transfuzioloških institucija.

Uticaj rata rezultirao je teškoćama u: motivaciji darivalaca krvi, jedinstvene strategije za cijelu državu, razvoj zajedničkih standarda, legislative, edukacije i treninge personala, razvoja kvalitetnog menadžmenta i kontrole, financiranja i servisiranja u institucijama što je dovelo do smanjenja

Količine krvi i komponenata, smanjenje resursa na efikasnu i ne efikasnu organizaciju službe u državi, uključujući i loš menadžment.

**Ključne riječi:** Službe transfuzije., rat, uticaj

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