

Organ Transplantation in Bosnia and Herzegovina

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INTRODUCTION

Bosnia and Herzegovina (B&H) belongs to the countries of the Western Balkan located in Southeast Europe with an area of 51 129 km². The country is located in the continental part of Europe and extends to the Adriatic Sea. B&H is bordering Croatia in the north, west, and south; in the east, the country is bordered by Serbia, in the southeast by Montenegro, and in the southwest by the Adriatic Sea (Figure 1).^{1,2} According to the 2013 population census, B&H has 3 531 159 inhabitants, which is significantly less than in the 1991 census when the country counted 4 377 033.² There are 2 219 220 people living in the Federation of B&H and 1 228 423 in the Republic of Srpska, and 83 880 people live in the Brčko District.^{1,2}

POLITICAL SYSTEM AND MEDICAL CARE IN B&H

B&H is territorially divided into the Federation of B&H, the Republic of Srpska, and the Brčko District (Figure 2). The complex structure and organization of B&H is an essential problem in effectively establishing all aspects relevant for organ transplantation.³ There are defined competencies for health care and its organization that are performed at the level of entities and cantons. Unfortunately, there is currently no political consensus to structure transplantation or any other aspect of health care through a single platform for concerns that this approach may infringe on the authority of any of the political entities. In the Federation of B&H, there is 1 ministry of health that has a coordinating

role and rarely decides exclusively on healthcare issues. In the Federation of B&H, there are 10 districts, each responsible for the organization of health care. The Republic of Srpska has a health insurance system linked to the Ministry of Health as the umbrella organization. The Brčko District has its own Health Office in charge of health care. In total, there are 13 ministries in B&H that independently organize health care for their territory (Figure 2).⁴

From 1974 to 1992, there was an Institute of Transplant Medicine of B&H in Sarajevo that performed the second highest volume of transplantations in The Socialist Federal Republic of Yugoslavia. There are now 3 transplant centers in B&H: 1 is in the Republic of Srpska, and 2 are in the Federation of B&H (Figure 3).

Since 1995, the Clinical Center at the University of Tuzla has contributed with >70% of all transplantations in B&H, including kidney, liver, cornea, and bone marrow transplantations. None of the centers in B&H currently provide transplant services for blood group incompatible donors and recipients, those with reoccurring kidney diseases, or highly sensitized patients. There are 27 dialysis centers in B&H; 11 of them are privately owned, with 16 in the public sector. Costs for dialysis are covered by health insurance (Figure 3).

SOCIOECONOMIC STATUS

The gross domestic product of B&H is one of the lowest in Europe and amounts to 6057 US dollars per capita; 3.2% of the gross domestic product is allocated to health care.⁵⁻⁷ Transplantation costs are covered by public healthcare plans of B&H, the Republic of Srpska, and the Brčko District. Notably, there is no out-of-pocket payment for patients. If there is a need to perform transplantations outside of B&H based on the assessment of evaluating institutions, transplant costs will be covered by those institutions. The budget for those situations is usually not entirely used with an annual surplus of approximately 700 000 US dollars. The average cost of a living-donor kidney transplantation is approximately 15 000 US dollars.

LEGAL FRAMEWORKS

B&H has a law regulating organ and tissue transplantation based on the legal framework that existed in the former state of Yugoslavia. In the Federation of B&H, laws on organ transplantation have been in place since 1997 with updates in 2004, 2009, and 2017, all aiming to improve the process.⁸

With the most recent modification (November 5, 2017), legal frameworks for living donation have been implemented. Deceased organ donation is based on an opt-in

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