

REVIEW ARTICLE

Healthcare access in Bosnia and Herzegovina in the light of European Union accession efforts

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Abstract

European Union (EU) member states are bound to ensure accessible, good quality healthcare for all of their citizens. In 2018, Bosnia and Herzegovina has been named as a candidate for accession to EU membership as part of the “Strategy for the Western Balkans”. This scoping review identifies healthcare access issues in the country, aiming to inform policy-makers of challenges that may be faced in a possible membership application process and beyond. While the country has seemingly improved citizens’ healthcare access—as measured by the Healthcare Access and Quality Index—various specific problems remain unresolved. The main barrier to equal access appears to lie in the division of the healthcare system between the Federation of Bosnia and Herzegovina, the Republika Srpska, and the Brcko District, which also influences medicine availability and pricing. Although not necessarily systematic, studies further report distance from healthcare providers, alleged widespread corruption, discrimination of minorities and vulnerable populations, as well as vaccination gaps as problems in healthcare access for specific groups. While certainly not easy to realise, this scoping review concludes that possible solutions could include efforts to unify the healthcare and pricing system, and the implementation of the World Health Organization’s Essential Medicines List, as well as investigating and tackling corruption and stigma issues.

Keywords: Bosnia and Herzegovina, European Union membership, healthcare access, healthcare access and quality index, inequality.

Conflicts of interest: None.

Introduction

In February 2018, the European Commission (EC) announced their “Strategy for the Western Balkans” (1), featuring the discussion of a possible future European Union (EU) membership for Bosnia and Herzegovina (B&H). Since the *Treaty of the Functioning of the European Union* (TFEU) entered into force in 2009, one of the EU’s key objectives is a high level of human health protection (2) with the aim to provide EU citizens access to good quality healthcare and a wide range of evidence-based treatments. However, healthcare access has been named as one of the biggest problems in the healthcare system of B&H (3).

Bosnia & Herzegovina: History and numbers

B&H is located on the Balkan peninsula in South-eastern Europe, with an overall population of 3,507,017 inhabitants, and a GDP of 18.055 Billion US\$ (4). The country declared independence in 1992—

during the breakdown of Yugoslavia—but subsequently fell into a state of civil war and is still heavily affected by its aftermath, which included large-scale war crimes. The country features a very heterogeneous population (see Figure 1 - please note that this data is referring to the Federation of B&H [FBH], not the whole country).

People who have fled the war and have returned afterwards face additional difficulties: returned men are more likely to be unemployed than those who stayed, while formerly displaced women are dropping out of the labour force more often than others of the same sex (5), and all groups are more vulnerable to corruption than those who stayed (6).

The organisation of healthcare is split between the FBH, Republika Srpska (RS), ten autonomous cantons, and the Brcko District (BD) which makes it a heterogeneous structure split into 13 components (8). Similarly, drug prescription systems are different between three entities (9).

Figure 1. Ethnicities in the Federation of Bosnia and Herzegovina (7)

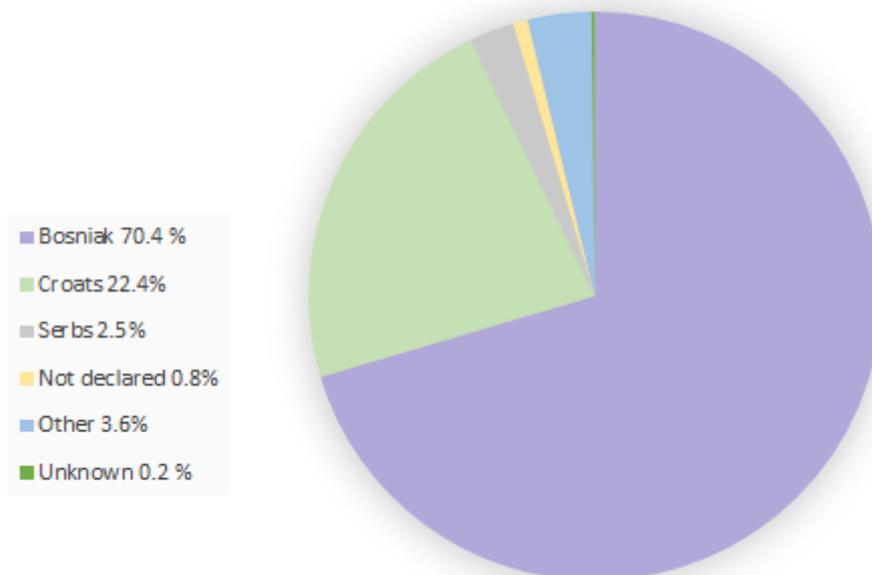
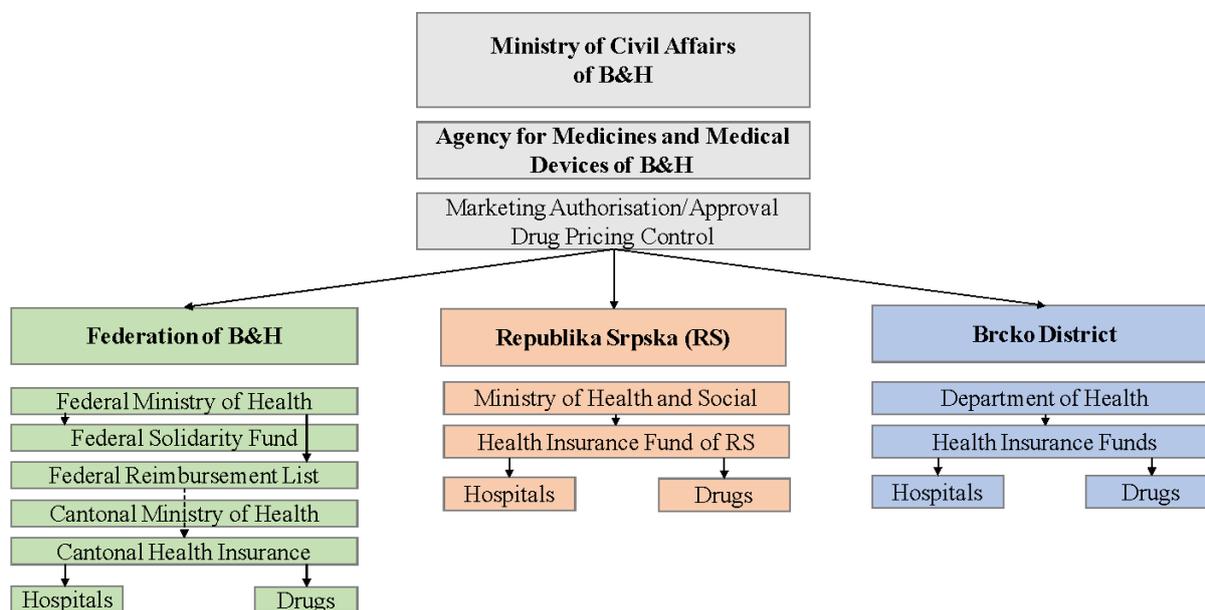


Figure 2. Main stakeholders for drug prescription in the healthcare system of B&H
 [Source: adapted from Guzvic et al. (9)]



While the peace treaty has been in effect for more than two decades, not all laws are in accordance with the conditions outlined in it. Long-term health consequences of deteriorated living standards, high unemployment, and economic insecurity include post-traumatic stress disorder (PTSD) and impaired psychological well-being, not only among patients but also among their treating physicians (10). Likewise, adverse childhood experiences appear to be more common than in the EU - likely fostered by the post-war environment.

A study on 400 hospital patients between 18 and 24 years of age found that 48.7% of respondents had experienced at least one form of childhood adversity and the results “demonstrated associations between adverse experiences in childhood and the probability of engaging in health risk behaviour” (11). This environment and the often-related financial hardships further reduce access to healthcare (12). Other specific health challenges are physical war injuries. Since the beginning of the war, close to 8,000 landmine victims have been

reported (13). B&H remains one of the most landmine infested countries in the European region. While most victims die instantly, survivors often have to undergo amputations, great physical pain, long hospitalisation periods, and can develop anxiety and/or depression.

Data on patient safety in hospitals is scarce, but initial research found anecdotal evidence for an overall low perceived safety in three hospitals (14). A table containing the available health indicators can be found in the accompanying online repository (<https://osf.io/axty3/>).

Access to health services; inequities, and inequalities

Access to health services and healthcare is imperative for a healthy society. EU member states “have a clear mandate to ensure equitable access to high-quality health services for everyone living in their countries” (15). The EXPH clarifies that unmet healthcare needs should be addressed by allocating an appropriate amount of resources towards them. In that

sense, proper access to healthcare features the following eight characteristics:

- Financial resources are linked to health needs
- Services are affordable for everyone
- Services are relevant, appropriate, and cost-effective
- Facilities are within easy reach
- There are enough health workers, with the right skills, in the right place
- Quality medicine and medical devices are available at fair prices
- People can use services when they need them
- Services are acceptable to everyone

This paper seeks to examine the status of healthcare access in the general population and vulnerable groups in B&H. Areas for improvement are identified, so that they may inform further specific research and recommendations for the EC as outlined in Art. 168 (2) in the TFEU should an accession process be put into motion. To do this, the country- and region-specific healthcare access problems are identified, inequities and inequalities are investigated, and compared to EU expectations (EXPH recommendations related to results can be found at: <https://osf.io/zsq23>).

Methods

Given the urgency of the issue, a scoping review was deemed to be the most fitting approach to identify healthcare access issues in B&H. While not fully exhaustive, scoping reviews allow for a faster (compared to systematic reviews) summary and dissemination of research findings, as well as the identification of research gaps (16), especially when the aim is to map broad topics. It has been argued that while there is no universally accepted precise definition of scoping reviews, their flexibility allows for the inclusion of more diverse evidence—such as grey literature—and therefore yields great potential to inform practice, policy, education, and further research into specific aspects (17).

An iterative approach based on a framework by Arksey and O'Malley (18) was employed. To identify relevant studies, *PubMed* was searched first, but this endeavour showed only limited results. A search in *Google Scholar* revealed a much greater amount of hits, but also clearly showed a massive number of unrelated results. The full number of results using ["healthcare access" AND "Bosnia"] ($n = 384$), and an arbitrary number of results using [healthcare access AND Bosnia] ($n = 250$ out of 16,100) were scanned and included if relevant. Based on these results, the identified topics were then again used in *PubMed* searches. Lastly, databases in Bosnian and Croatian language were searched for healthcare access issues in B&H to include local research and grey literature. For a detailed overview of search strings and results, please see <https://osf.io/yn6ed/>. A total of 14 scientific papers and policy documents were included in the full evidence review, based on the criterion that they investigate a healthcare access issue related to one or more populations in B&H. Results are portrayed in a narrative structure. Whenever possible, the investigated studies are also compared to the overall ratings of the *Healthcare Access and Quality Index (HAQ)* which is based on data from the *Global Burden of Diseases, Injuries, and Risk Factors Study 2015 (GBD)* (19), building on six factors:

- i. Health expenditure per capita
- ii. Hospital beds (per 1000 inhabitants)
- iii. Universal health coverage tracer index of 11 interventions
- iv. Physicians, nurses, and midwives (per 1000 inhabitants)
- v. Proportion of population with formal health coverage
- vi. Coverage index of three primary health-care interventions

To calculate the HAQ, these were combined into a scale from 1 (lowest access

and quality) to 100 (highest possible access and quality) and measured per state and globally.

Results

Overall healthcare access and quality score

The HAQ is generally improving globally and has even slightly improved in B&H during the war. It, therefore, may appear as if the war has hindered the development of overall access, but not thrown it back. However, the HAQ should not be taken as an indicator of equal healthcare access during 1990 and 1995, but merely interpreted as that the six outlined factors were invested in. When the war ended in 1995, B&H had an overall HAQ of 62.1 (compared to 60.9 in 1990) and has since constantly improved, up to a level of 78.2 in 2015 (19). The highest score was in diphtheria [100] and the lowest in adverse effects of medical treatments [45]. For comparison: B&H's EU neighbour Croatia had an overall HAQ of 70.4 in 1995 and improved to 81.6 in 2015.

Access to healthcare in Bosnia & Herzegovina

The HAQ may only serve as a point of reference for specific problems in order to check whether improving one of the six factors could serve as a starting point in solving the problem. In 2006, the uptake of basic healthcare insurance in B&H—which covers medical services at an appointed general practitioner or through specialist recommendation, as well as specific drug prescriptions—was 84%, ranging from 63% in Hercegbosanski kanton to 93% in Sarajevo kanton, leaving around 380,000 citizens uninsured (20).

Coverage of basic healthcare for women in FBH and RS is lacking for 13–16% of the population, with the number rising up to 60% in Roma women (21). In general, Roma women, impoverished women, individuals living in rural areas, and people

with disabilities have been found to have the lowest rates of healthcare coverage.

A low number of available gynaecologist practices and a lack of basic information about the process of acquiring health insurance are further hindering equal healthcare access. Employers do not always contribute regularly to workers healthcare schemes. This affected 27% of employees in 2015 in RS, with 16% receiving no payments at all towards their healthcare plan (21).

Regional inequalities in health care access and provisions

The division of the healthcare system between FBH, RS, and BD likely poses the greatest challenge in providing equal healthcare and healthcare access to citizens of B&H. Health policy making already proves to be extremely difficult because of a decentralised system and a large variety of decision makers in multiple regions (9). This also influences health technology assessment (HTA), which is needed to ensure that proper technology and methodology for screenings, diagnoses, and treatments are available. While HTA has been recognised in legislation, it has still not been introduced in full capacity due to lack of experts and education, and resistance from within the political environment (9).

Drug prescription and reimbursement are decentralised and differ between regions, leading to discrepancies in pricing (Figure 2). This causes an inequity regarding access to essential medicines, with prescribed drugs being 20% more expensive on average in RS compared to FBH (22). The highest price difference was found for atorvastatin—used in the treatment of dyslipidaemia and prevention of cardiovascular disease—which is 39% more expensive in RS than in the FBH. In general, prices in BD are 14% lower, compared to FBH. Prices and reimbursement for drugs also vary between cantons. Neighbours divided by a simple

canton border may have different access to prescriptions and reimbursements.

Access to crucial medicine is further hindered by the limited number of drugs included on the FBH's list of basic medicines (FBL). Compared to the WHO's *Essential Medicines List* (EML) it is not a sufficient list of important drugs which should be reimbursed (23). Considering the scarce financial resources, the authors of the comparison conclude that the government should rather rely on the established, evidence informed EML. One example where this kind of inequity apparently has grave consequences is cancer treatment. Kurtovic-Kozaric et al. (24) claim that cancer patients in B&H either never receive the accurate therapy because it is missing from the list of government-reimbursed drugs, or they are put on a waiting list for one of the nine available drugs which are reimbursed - still causing a delay in treatment, with some treatments supposedly not available at all.

Unmet healthcare needs

Long distance to the nearest primary healthcare provider is problematic for citizens in various regions (3). About a quarter of the inhabitants live 1.5–5 kilometres away from their nearest place of primary health care and 22% live more than 5 kilometres away (20). This further disadvantages vulnerable populations, such as children, the elderly, or individuals with chronic ailments, who may be in special need of timely treatment or regular check-ups (21). Rural areas also lack dental care specialists, compared to urban areas.

Mandic Dokic (21) found that individuals with lower comprehension of written materials—with illiteracy being unequally distributed by gender (5.32% in men versus 0.93% in women)—face a barrier in understanding medical conditions or treatment information written at a level too complex for them to understand.

Healthcare access inequities and inequalities are often found for specific

groups, especially minorities. In B&H, the number of Sinti and Roma is estimated to be around 35,000–40,000 (25). They are 2–3 times more likely to report unmet health needs compared to non-Roma living nearby, especially when uninsured (26). Even when adjusted for “variation in gender, age, marital status, employment status, education, number of chronic conditions, health insurance status and geographical proximity to medical provider” (26) they are more likely to report unmet health needs in B&H specifically (Odds Ratio [OR]=1.44 adjusted for the aforementioned factors, OR=1.95 unadjusted). The authors call for increased inclusion of Roma in the system and highlight the need for a detailed assessment of their needs within and outside of the health system.

One of these unmet health needs is a gap in vaccination. An investigation (27) found that in Central and Eastern Europe, “Roma children have a lower probability of being vaccinated compared to non-Roma ([OR]=0.325). The odds of being vaccinated for a Roma child is 33.9% to that of a non-Roma child for DPT [diphtheria, pertussis, tetanus], 34.4% for Polio, 38.6% for MMR [measles, mumps, rubella] and 45.7% for BCG [tuberculosis]” (27). By comparing the means of vaccination coverage, the authors show that in B&H, the proportion of Roma children having received any vaccination is 14.8% lower compared to non-Roma. They are lower specifically by 21.2% for BCG vaccine, 35.3% for Polio vaccine, 33.9% for DPT vaccine, and 35.8% for MMR vaccine. This is especially worrying, as Roma tend to live in closed groups, making them less protected by the overall population's herd immunity. The factors leading to low vaccination levels are relatively unknown but are likely related to a lack of access to healthcare in general, low level of education, and discrimination.

Financial barriers in healthcare access

People formerly displaced through the war may return to their home country to find the healthcare system not to be welcoming. A series of semi-structured interviews conducted among 33 refugees who returned to B&H after long-term residence in Denmark provides an insight into their perception of the healthcare system (6).

Interviewees reported widespread corruption and added that it influenced them even more negatively than it does people who stayed. Results indicate that corrupt physicians ask for larger bribes from returnees than from other citizens, facilitating a barrier to accessing various forms of healthcare. The situation is even worse for people suffering from chronic illnesses, as they are in need of frequent care.

Focus group interviews with returnees (28) found that healthcare quality in general was perceived as extremely low, going as far as to state that “[n]one of the participants could see any bright future in the healthcare system” (28). While the authors suggest that educational activities for healthcare professionals—teaching them how to meet the needs of returned migrants—are needed, success is questionable in the light of the apparent existence of widespread corruption.

One public opinion survey (3) found that many people believed that corruption occurs in hospitals (77% agreed), health centres (68%), and outpatient clinics (60%). Homo- and bisexual men are reportedly facing barriers in obtaining healthcare. Qualitative data obtained from 12 in-depth interviews suggests that stigmatisation, discrimination, prejudice, and inequities this group faces in Bosnian & Herzegovinian society extends to the healthcare sector (29). While further, quantitative, investigation is needed to estimate the extent of this situation, Stojisavljevic and her colleagues (29) highlight the need for both educational

trainings of professionals, as well as structural reform.

This article features additional materials hosted on the Open Science Framework at <https://osf.io/z8sd3/>.

Discussion

The most important task goal B&H appears to be fostering re-unification of citizens and the healthcare system, whereas the latter is probably not possible without the former. If equity and equality in healthcare access ought to be improved as outlined by the EXPH (12), it is imperative that more treatments are made available and that they are available to all citizens, with medicine equally prescribed and reimbursed.

A big step is an ordinance announced in January 2017 (30) by the Agency for Medicinal Products and Medical Devices, which is supposed to harmonise medication prices. However, its implementation has been described as insufficient and hindered by bureaucracy (3). Equity will also probably face a greater setback if B&H joined the EU: should the B&H health system stay similar to how it is now, some citizens are likely to choose medical travel to meet their health needs - an option that is, however, too expensive for most citizens. While Directive 2011/24/EU (31) constitutes a great opportunity to receive treatment which is not available in one's own country, it is unlikely that—given the low income and overall GDP in B&H compared to the EU average—the majority of citizens will be able to profit from it.

One straightforward option to work towards healthcare access equity would be to replace the national or regional medicine lists with the WHO's EML and to adjust reimbursement schemes accordingly. If all three regions were to adopt the EML, this might also speed up the process of building a more unified healthcare and reimbursement system in general. Another possibly beneficial innovation is telemedicine. While it is currently only being adapted slowly in B&H, Naser et al.

(32) outline its potential, both in educating young professionals, as well as in treatment. However, the authors also note that its implementation is heavily reliant on investments in infrastructure and equipment, as well as a positive political climate welcoming it. While this seems highly ambitious, especially vulnerable groups could gain access to physicians of their choice more easily. Should B&H continue in its accession plans, the way will be a long one—especially in healthcare—and will likely require some societal changes first. While many have called for more educational and change programmes, clear ideas on how these could look like or could be implemented are missing.

As a scoping review, this investigation has a number of limitations by default. As it is supposed to serve as an overview of issues to address, there is no guarantee that it exhaustively covers all healthcare access issues in the country. The strength of

evidence varies and is rather weak for certain areas; for example, while the vaccination gap in Roma is rather well researched—and immediate, specific action may be recommended—especially qualitative evidence for discrimination and bribery—although definitely issues to be investigated—are hard to quantify and their actual spread hard to know. Further, there is no indication to the extent of publication bias regarding the topic.

In conclusion, both, the EU and B&H politics appear to be in need of addressing a multitude of healthcare access issues and establish solutions before accession seems sensible for both sides with regard to the goals set out by the EXPH. Should they succeed in this, however, citizens in B&H may be able to benefit from better access through the implementation of health law harmonisation, and hopefully also even cross-border healthcare at a later point.

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