At a Glance

• Capital and largest city – Sarajevo

• National languages - Bosnian, Croatian and Serbian

• Population - 3,856,181 (July 2017 est.)

• Area - 51,129 sq km (19,741 sq miles)

• Major religions – Islam (47%), Orthodox Christianity (36.9%) and Roman Catholics (15%)

• Currency - Bosnian convertible Mark (1,96 KM = 1 Euro)

• In February 2016 the country formally requested to join the European Union

• Nearly 70% of Bosnians are online. Facebook is the top social media resource

• Administrative divisions - 3 first-order administrative divisions - Brcko District (Brcko Distrikt) (ethnically mixed), the Federation of Bosnia and Herzegovina (Federacija Bosne i Hercegovine) (predominantly Bosniak-Croat), the Republic of Srpska (Republika Srpska) (predominantly Serb)

• Government - Federal parliamentary constitutional republic

• The presidency in Bosnia-Herzegovina rotates every eight months between a Serb, a Bosniak (Bosnian Muslim) and a Croat. The responsibilities of the presidency lie largely in international affairs. In addition, the Federation of Bosnia and Herzegovina, and Republika Srpska each have their own presidents

• Bosnia-Herzegovina prime minister - Denis Zvizdic, of the Muslim Party of Democratic Action, became federal prime minister in February 2015, after the party won the most votes in the October 2014 elections

GDP (PPP, purchasing power parity):
$43.85 billion (2017 est.)
$42.78 billion (2016 est.)
$41.94 billion (2015 est.)

GDP per capita (PPP, purchasing power parity)
$11,400 (2017 est.)
$11,100 (2016 est.)
$10,900 (2015 est.)

GDP- real growth rate:
2.5% (2017 est.)
2% (2016 est.)
3% (2015 est.)

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One Country, Two Entities

Bosnia and Herzegovina is a country in south-eastern Europe located on the Balkan Peninsula. The country (often known informally as Bosnia), still recovering from the devastating three-year war (1992-1995) which accompanied the break-up of Yugoslavia in the early 1990s, is now an independent state and home to three main ethnic groups or, officially, constituent peoples, as specified in the constitution: Bosniaks, the largest group of the three, Serbs, the second largest and Croats.

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The war destroyed much of Bosnia's infrastructure and economy. Around two million people - about half the population - were displaced. **Bosnia and Herzegovina is made up of two separate subnational entities: The Federation of Bosnia and Herzegovina and the Republika Srpska, each with its own president, government, parliament, police and other bodies. Overarching these entities is a central Bosnian government and rotating presidency.** The main cities in the Federation are the capital Sarajevo, and the cities of Mostar, Tuzla, Bihac and Zenica, while in the Republika Srpska entity the main cities are Banja Luka, Bijeljina, Prijedor and Trebinje. Formally part of both entities is the Brčko District, a multi-ethnic self-governing administrative unit, over which neither the Republika Srpska nor the Federation of Bosnia and Herzegovina have jurisdiction. As well as its own education system, the city of Brčko has free-standing courts and separate health and police services. It is, practically, a free city in Europe. The political system in Bosnia-Herzegovina is complex, making governance extremely difficult, but reflecting the provisions of the country's constitution developed to end ethnic conflict. A highly decentralized government hampers economic policy coordination and reform, while excessive bureaucracy and a segmented market discourage foreign investment. The economy is among the least competitive in the region.

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In July 2015, the Council of Ministers of Bosnia-Herzegovina, the Government of Republika Srpska and the Government of the Federation of Bosnia and Herzegovina adopted a joint program of structural reforms known as the reform agenda, aiming to promote a unified economy in such a highly decentralized country. In 2016, Bosnia also began a three-year IMF loan program, but it has struggled to meet the economic reform benchmarks required to receive all funding instalments. Since 2013, Bosnia-Herzegovina has witnessed positive economic growth, though severe flooding hampered recovery in 2014. It became a full member of the Central European Free Trade Agreement in September 2007. High unemployment remains the most serious macroeconomic problem.

Key economic challenge is the imbalance of its economic model: public policies and incentives are skewed toward the public rather than the private sector, consumption rather than investment and imports rather than exports. The country needs to shift to a business environment conducive to private investment that supports both vibrant small and medium-sized enterprises and the growth of larger companies, facilitates export performance and productivity improvements, and generates much-needed private sector employment. At the same time as addressing these imbalances in the economic model, the country must also ensure the sustainability and inclusiveness of future growth. Top economic priorities are: acceleration of integration into the EU; strengthening the fiscal system; public administration reform; World Trade Organization membership and securing economic growth by fostering a dynamic, competitive private sector.

Administratively and legally, the two governmental entities of Bosnia-Herzegovina are divided further into 10 cantons in the Federation of Bosnia and Herzegovina, 7 regions in Republika Srpska and 156 municipalities overall, plus Brcko District.

Consequently, healthcare finance, management, organization and provision in Bosnia and Herzegovina are the responsibility of each entity, while Brcko District runs a healthcare system over which neither entity has authority. In this context, the health system in the Federation of Bosnia and Herzegovina is arranged on the principle of decentralization, with a high degree of autonomy of cantons, while in the Republika Srpska the healthcare system is centralized. Brcko District has its own healthcare system.

Bosnia and Herzegovina, therefore, has 13 ministries of health and health systems for its 3.8 million population: one for Republika Srpska, one for Brcko District, one for the Federation level and ten cantonal ministries in the Federation of Bosnia and Herzegovina (one for each canton). Despite the huge administrative apparatus and complex legal divisions, there is no national mandate for healthcare financing and provision and no regulation exists to rule over inter-entity issues in healthcare utilization. Such an organization raises insurmountable operational difficulties.

The country healthcare system is based on compulsory social health insurance. Under the Dayton peace agreement, the Serb entity, Republika Srpska, established its own centralized health insurance fund while in the Federation of Bosnia Herzegovina, a Law on Health Care and a Law on Health Insurance, adopted in 1997, stipulated that each of the ten cantos would have their own insurance fund.

The revenues are raised through a payroll tax on a compulsory basis, as well as government contributions. Furthermore, patients pay for part (or the total) of the cost of their treatment and drugs. Supplementary contributions may also be made. **Nonetheless, the breadth of coverage by social health insurance has been low, with many population groups falling through the gaps, including refugees, some pensioners and people working in the large informal sector.** Despite a wide option for the people to get healthcare it is estimated that 15 % of population in general are not covered by health insurance.

Comparing with western European countries, where most dental clinics are equipped with the latest technical facilities and supported by health professionals from various specialties, public dental health services in Bosnia-Herzegovina are mostly directed to provide emergency care or interventions towards certain age group population (pregnant women, pre-schoolchildren, school children etc.), neglecting the rest of the population. Public dental services offer basic oral care coverage and intervention procedures mostly consist of treating exist-

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ing problems and restoring teeth and related structure to normal function. As such the need to work on disease prevention and health promotion policies to improve oral health conditions, in general, is evident.
Public dentistry very much reflects general health and Bosnia-Herzegovina's national capacity and human, financial and material resources are still insufficient to ensure availability and open access to essential oral health services of high quality for individuals and population, especially in deprived communities.
Accessibility to public oral healthcare facilities differs between administrative units, varying by cantons and regions and even more by municipalities. Furthermore, access to dental care depends on financing and socioeconomic factors, creating inequalities.
The number of oral health personnel, and specifically dentists, appears irrelevant, as well as undertrained, to the actual oral health needs and demand. The entire oral health organization (public and private) is amongst the less developed in Europe. To improve oral health, an adjustment of existing oral health manpower structures with the training programmes for types of personnel which would match the oral health needs are needed in Bosnia-Herzegovina.

In recent years however, the biggest change has been the wide scale privatization of the previously public dental services and the exceptional growth of private practices. According to the Federation of Bosnia-Herzegovina chamber of dentists, there are some 400 dental practices in the Federation and some 260 are estimated in the Republika Srpska. Furthermore, dental tourism is gaining momentum, mainly in Sarajevo, in the Herzegovina region and in the north-west area of the country, bordering with Croatia. Dental implants are a very common procedure among European and international tourists because of remarkably low prices and fairly good quality. Orthodontic procedure on the country are not much requested and only few dental practices offer them. On such a perspective, the dental sector has good potential for development and growth. There are some 7-8 dental importers and distributor in the country.

A study conducted in the Federation of Bosnia-Herzegovina, in a time period of six years (2005-2011), gives us a deeper understanding on public dental healthcare in the Federation.

The number of dentists employed in the public sector slightly increased from 529 in the year 2005 to 587 in 2011. In such a time period, the study also shows an increased number of graduate dentists. An estimated total number of dentists, including dentists employed in the private sector, is given by the WHO in 2014, amounting to 825 (787 in 2000).

Number of graduated doctors of dental medicine (DDM) during the period from 2005 to 2011 and number of doctors of dental medicine/ number of DDM per 100,000 populations employed in public sector during the same time period.

Year	Number of graduated Doctors of Dental Medicine	Number of Doctors of Dental Medicine/ number of DDM per 100,000 populations*
2005	57	529/23
2006	107	573/25
2007	108	547/23
2008	66	514/22
2009	78	515/22
2010	55	595/25
2011	68	587/25

* The data of number of doctors of dental medicine employed in the private sector is missing.

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Number of visits and performed treatments per doctor of dental medicine in public dental service during the time period year 2005 to 2010

Treatments	2005	2006	2007	2008	2009	2010
Filled primary teeth	34.0	29.0	28.0	34.0	38.0	30.0
Filled permanenth teeth	439.0	436.0	433.0	563.0	548.2	479.5
Extracted primary teeth	163.0	163.0	143.7	152.0	141.3	118.6
Extracted permanenth teeth	412.0	421.0	411.3	473.4	445.3	370.6
Complete dentures	8.0	8.1	7.7	10.4	9.5	8.1
Partial dentures	8.0	6.8	6.3	8.2	6.9	5.9
Single crowns	5.0	3.6	4.5	3.2	3.6	2.9
Removable orthodontic appliances	9.4	9.7	11	21.2	11.9	10.7
Periodontal treatment	200.6	172.2	197.6	260.5	267.0	251.5
All visits, total	**1775.1**	**1716.8**	**1696.0**	**2063.2**	**2032.2**	**1840.6**

Dental caries and periodontal diseases are among the most common oral diseases in the Federation. In 2011 there were 1,352 caries per 10,000 population (against 1,256 in 2005), for pulp and periapical tissues diseases the rate was 948 per 10,000 population and gingivitis and periodontal diseases, 219 per 10,000 population.

Year	Dental Caries per 10,000 population
2005	1,256
2006	1,540
2009	1,303
2010	1,322
2011	1,352

In the table above, which measures number of visits and dental treatments performed, it is interesting to note the small number of filled deciduous (primary) teeth in 2010 (30 per dentist) compared to the number of extracted deciduous

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HEALTH STRUCTURE

Health Centres (Dom zdravljas) - owned by the municipal governments, each one covering a population of 30,000 to 50,000 residents. They provide outpatient care but they do offer a wide variety of specialist services. Medical services provided include, general practice, maternity care, child healthcare, healthcare for lung diseases and dental care. They also provide emergency medical aid as well as laboratory, radiology and other diagnostic services.
Health centres provide general practice medicine and are staffed with doctors and nurses; some have small maternity hospitals attached, temporary accommodations for patients and centres for rehabilitation.

Health Stations (ambulantas) – are field posts for the health centres. They are outpatient clinics, which employ general practitioners, dentists and community health nurses. They are sometimes attached to a health centre; otherwise, they are run as private practices. The high number of specialist doctors has made the ambulanta services more expensive and unequal. They tend to be used by people in the cities and urban areas and they often overuse the services, whilst those living in rural areas have little access to any form of medical care.

Hospitals - Hospital management is poor because there is a low level of trained hospital managers and poor technical systems to aid hospital administration. Hospitals provide care, emergency care and treatment for both inpatients and outpatients once a patient is referred by a doctor. There are four types of hospitals: clinical centres, general acute hospitals, specialised hospitals and small district hospitals. General hospitals usually have four departments: internal medicine, surgery, paediatric care, and gynaecology/midwifery. Apart from caring for inpatients, hospital doctors also provide consultancies to outpatients who are referred to them by a general practitioner.

Pharmacies - State pharmacies are reimbursed for drugs on the Essential Drugs List. Private pharmacies, however, are excluded from reimbursement by the state fund. WHO and UNICEF helped the Bosnia-Herzegovina government to put together an Essential Drugs List. Private pharmacies abound, but there is a lack of hospital pharmacists. Drugs are expensive and prices vary tremendously making it inconvenient for patients, who are forced to search retail pharmacies for cheaper drugs.

teeth in the same time period (119 per dentists). **Limited access to oral health services can be considered as one of the reasons for such a big number of extracted primary teeth as well as permanent teeth.** Because of limited access to oral health services, teeth are often left untreated and later extracted because of pain or discomfort. The study also reports an almost equal number of fillings in permanent dentition and extracted permanent teeth, which certainly increases the number of patients who needs partial dentures or even total prosthesis as a treatment.

Having in mind that early extraction of deciduous teeth usually leads to loss of space, many extractions of primary teeth can be partly considered as the cause of increased number of dentofacial anomalies. A strong positive correlation has been seen between the increased number of dentofacial anomalies and increased usage of removable orthodontic appliances. The figure below shows the increased number of dentofacial anomalies (grey line) during the time period from 2005 to 2011. This trend can be considered one of the reasons for the increased number of removable orthodontic appliances (red line) recorded in the same period.

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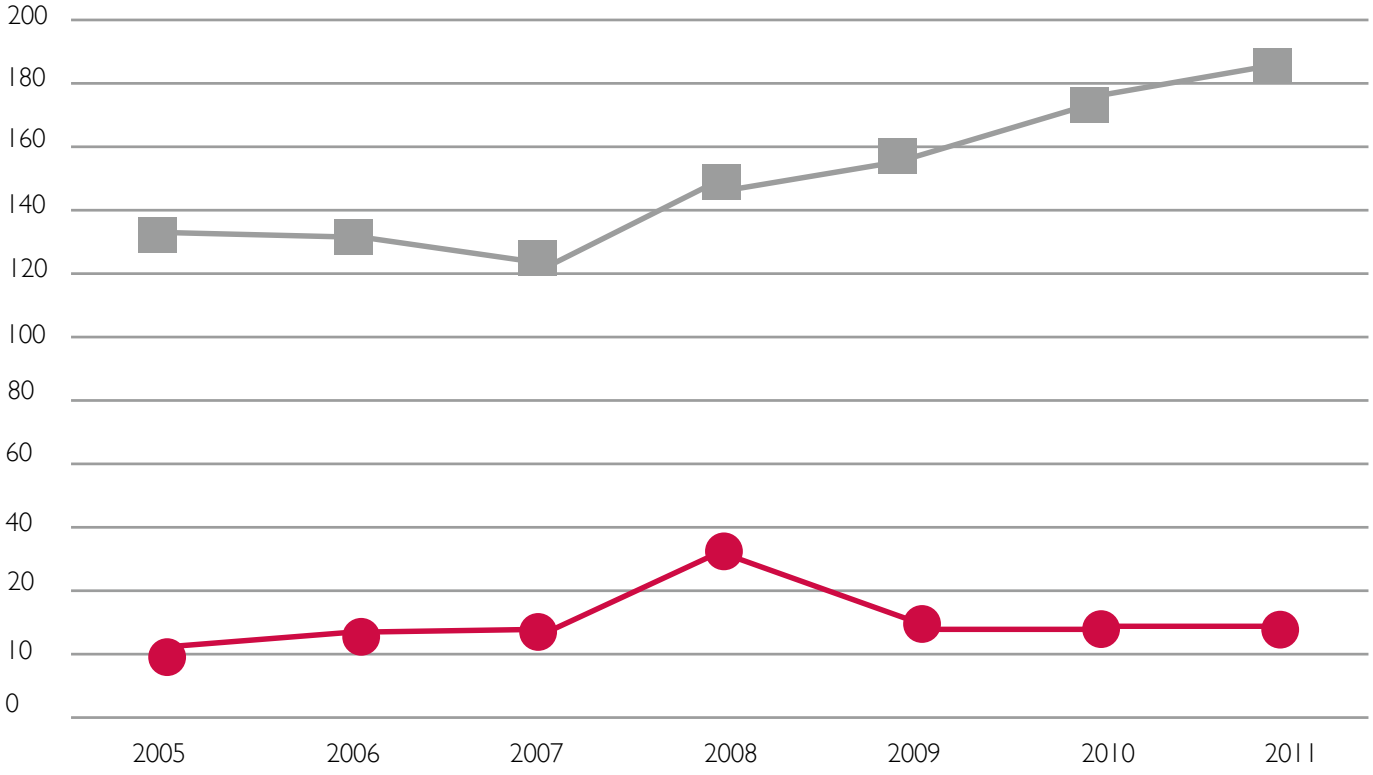

The results of this study found that the extraction of permanent teeth is the most common treatment in dental offices in the Federation of Bosnia-Herzegovina. These results correspond with the results registered by WHO where 78 % of edentulous adults in Bosnia and Herzegovina, aged 65 years and more, present the biggest percentage of edentulous people in the world. Although losing teeth is a natural consequence of aging, those results indicate the need to reorient oral health services in Bosnia and Herzegovina towards prevention and oral health promotion. Incidence rates of malignant neoplasms found in this study coincide with the incidence rates in most countries worldwide. Those incidence rates relate directly to risk behaviours such as smoking and alcohol consumption. It seems, while oral and pharyngeal cancers are both preventable, in Bosnia-Herzegovina, like in most countries, they remain a major challenge to oral health programmes. **Severity of oral health burdens registered in this study partially can be considered as the result of changing of socio-demographic factors.** Reform of oral health services in the Federation of Bosnia-Herzegovina should lead to increased interest in basic preventive oral health interventions (especially in high-risk populations) as an easy and reliable approach to reduce systemic load of curative dental treatments with the aim to improve not only oral health but the health in general.

Among main sources:

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