

PAYMENT INCENTIVES FOR IMPROVED QUALITY OF HEALTH SERVICE DELIVERY IN REPUBLIKA SRPSKA AND THE FEDERATION OF BOSNIA AND HERZEGOVINA

DISCUSSION PAPER

APRIL 2023

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WORLD BANK GROUP
Health, Nutrition & Population

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Health, Nutrition, and Population (HNP) Discussion Paper

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Health, Nutrition and Population (HNP) Discussion Paper

Payment incentives for improved quality of health service delivery in Republika Srpska and the Federation of Bosnia and Herzegovina

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Abstract: This report outlines a strategic approach to introduce pay-for-performance (P4P) incentives for improved noncommunicable disease (NCD) care in Republika Srpska (RS) and the Federation of Bosnia and Herzegovina (FBiH). Developed under the context of the Functional Review of Health Systems' Performance Program financed by the European Union and implemented by the World Bank Group, it intends to provide initial framework for methodological documents to be supported by the Health Systems Improvement Project (HSIP), focusing on evidence-based, technically sound, and politically feasible strategies. Participatorily developed, the report synthesizes global lessons and analyzes the policy environment in RS and FBiH. It proposes key design features, addressing strategic opportunities and operational challenges. Behavioral economics insights and political economy factors inform the approach, identifying key levers, opportunities, and challenges affecting P4P implementation capacity. To enhance NCD care quality, the report recommends changes in the provider payment mix, tailored reforms at entity and cantonal levels, and active service user engagement. Emphasizing the importance of linking payment incentives to performance, the proposed design spans dimensions such as performance measures, basis of payment, payment attributes, recipient of payment, and targeted outcomes. An enabling environment is deemed critical. Relatedly, effective implementation requires robust data systems, stakeholder engagement, adapted legal frameworks, and suitable institutional arrangements. Technical assistance and budgetary support needs are identified. It is expected that P4P implementation will enhance NCD care coverage and quality, thereby improving health outcomes and overall health system performance in RS and FBiH.

Keywords: Health financing, quality of care, pay-for-performance, noncommunicable disease, Bosnia and Herzegovina.

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The road map draws on insights from working groups in Republika Srpska (RS) and the Federation of Bosnia and Herzegovina (FBiH), including representatives of the Ministry of Health and Social Welfare (MoHSW) of the RS; the Federation Ministry of Health (FMoH); the RS Health Insurance Fund (HIF); Federal and Cantonal HIFs in the FBiH; the Agency for Quality and Accreditation in Healthcare (AKAZ) of the FBiH; the Agency for Certification, Accreditation, and Health Care Improvement (ASKVA) of the RS; and Cantonal Ministries of Health. The health systems analysis builds on recent work by the World Health Organization (WHO 2022) and feedback from Shomikho Raha (EECG2), Ali Hamandi (HECHN), and Isidore Sieleunou (HHNGF). Richard Crabbe (HECHN) provided editorial services.

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Acronyms and abbreviations

AKAZ	Agency for Quality and Accreditation in Healthcare of the Federation of Bosnia and Herzegovina
ASKVA	Agency for Certification, Accreditation, and Health Care Improvement of Republika Srpska
KM	Bosnia-Herzegovina Convertible Mark (official currency)
BiH	Bosnia and Herzegovina
CIS	Commonwealth of Independent States
COVID-19	Coronavirus disease
CVD	cardiovascular disease
DB	District of Brčko
DRG	Diagnosis-Related Group
HER	Electronic health record
EU	European Union
FBiH	Federation of BiH
FFS	Fee-for-service
FM	Family medicine
FMoH	Federal Ministry of Health
GDP	Gross Domestic Product
HIF	Health Insurance Fund
HSIP	Health Systems Improvement Project
IHD	Ischemic heart disease
IT	Information Technology
IZIS	Integrated Health Information System
LE	Life expectancy
MoF	Ministry of Finance
MoH	Ministry of Health
MoHSW	Ministry of Health and Social Welfare
NCDs	Noncommunicable diseases
OECD	Organisation for Economic Co-operation and Development
OOP	Out-of-pocket payment
P4P	Pay-for-performance
PHC	Primary Health Care
PHI	Public Health Institute
PPP	Purchasing Power Parity
QI	Quality Indicators
QoC	Quality of care
RS	Republic of Srpska
SEE	Southeastern Europe
UHC	Universal health coverage
UMIC	Upper-Middle-Income Country
WBG	World Bank Group
WHO	World Health Organization

Executive Summary

This report presents an approach to implementing payment incentives for improved quality of health service delivery in Republika Srpska (RS) and the Federation of Bosnia and Herzegovina (FBiH). It details a practical operational road map for implementing pay-for-performance (P4P) as a purchasing mechanism in health, proposes key design features, and identifies the key issues and areas that RS and the FBiH should focus on for successful implementation. It serves as an initial framework for the entity-level methodological documents to be developed under the Health Systems Improvement Project (HSIP) and the Multi-Donor Trust Fund (MDTF) for Health Systems Reform. It is motivated by the recognition that the impact of current provider payment methods on noncommunicable disease (NCD) prevention and care remains limited due to inadequate payment incentives for improved access and quality.

An evidence-based, technically sound, and politically feasible approach is proposed. The approach builds on a comprehensive review and synthesis of lessons from past and ongoing implementation of financial incentives for improving effective coverage in health in other countries; an analysis of the current policy environment and political economy for reform; and the ensuing key institutional, legislative, and policy opportunities and bottlenecks; study tours to the Republic of Serbia and the United Kingdom (UK) by RS and the FBiH, respectively; and key informant interviews as well as consultations with various key stakeholders.

The proposed P4P design features leverage identified strategic opportunities and address operational challenges. Informed by the above and considering behavioral economics insights and political economy factors, the approach presented in this report identifies a set of key levers, binding constraints, and operational challenges that can affect the capacity of the entities to implement payment incentives for improved quality of NCD care. Recognizing these, the report recommends a set of strategic design features and policy reform initiatives focused on introducing, strengthening, and institutionalizing the P4P mechanism. Drawing on the economics of contracts, it also recognizes the importance of political economy issues and proposes tailored technical assistance needs to strengthen capacity for adaptation, adoption, and implementation. Therefore, the corresponding implications for the proposed design features include the following:

- Changes in the payment mix should contribute to tackling challenges in the health systems.
- The complex administrative and health systems structure implies that payment reforms should be tailored at the entity and cantonal levels (for the FBiH).
- The primary purchaser will play a significant role in the implementation of P4P.
- The role of service users should shift from passive consumption to active engagement.

Linking payment incentives to performance is key for impact on access to and quality of NCD care. To explicitly link payment incentives to performance, the proposed design features span the following key dimensions: performance measures, basis of payment, payment attributes, recipient of payment, and targeted outcomes. Quality of care (QoC) is the performance measure, spanning structure, process, and outcome measures. For cost-effective implementation and to institutionalize P4P, indicators of QoC will be drawn from existing systems—the Agency for Certification, Accreditation, and Health Care Quality Improvement of the RS and the Agency for Accreditation and Quality in Health of the FBiH—and differ by service delivery level. This will happen under the HSIP as per the legal agreement. As a basis for payment, a formula-based continuous threshold methodology and an appropriate qualitative risk-adjustment approach is proposed to incentivize continuous performance improvement by rewarding each activity undertaken. Regarding payment attributes, to stimulate larger behavioral responses, bonuses will be given and linked to performance against the selected indicators. Given the low levels of provider remuneration, no penalties will be imposed. Regarding recipient of

payment, the incentive payments will be directed toward health professionals in family medicine teams. Finally, improved prevention and control of NCDs is the targeted outcome.

An enabling environment is a necessary condition for effective P4P implementation. In line with the agreement to undertake the proposed provider payment reform through the HSIP operation, it is designed to be implemented in phases over the period 2023 to 2026. Starting as a pilot, reform will eventually be scaled up to completely cover the respective entities, using data from monitoring the pilots to inform changes to the programs. The report calls for an enabling environment toward robust data systems, meaningful stakeholder engagement, adapted legal and regulatory framework, and appropriate institutional arrangements. Here, the main elements of an effective P4P intervention could include adapting the legal framework, building support from professional groups, systematic stakeholder engagement, education and training of facility managers, (further) development of P4P methodology, establishing working and coordination committees, and allocating sufficient budgetary and financial resources.

Fully leveraging P4P for improved health systems performance will require targeted high-quality technical support. To support rollout of P4P in RS and the FBiH, the report details technical assistance needs. These may include drafting the legal and regulatory framework changes; developing the P4P methodology; costing the implementation of P4P; advising on the design of incentives, adjustments, and other elements; designing the training curriculum for facility managers and other stakeholders; and adapting the electronic health records (EHR) module. These have budgetary implications, with support envisaged to be provided under the HSIP, the World Bank Multi-Donor Trust Fund (MDTF), and via the annual budgets of the Ministry of Health and Social Welfare (MoHSW) and the Ministry of Health (MoH) of RS and the FBiH, respectively. This paper is a preliminary study that, under the MDTF, will be followed with developing formal inputs to support the changes under HSIP, with the inputs submitted to the Ministry of Finance of BiH, entity-level MoHs, and the Health Insurance Fund (HIF). Finally, compared with business as usual, P4P implementation in the RS and the FBiH is envisaged to not only improve the coverage of NCD care but also the QoC provided. This will improve health outcomes and overall health systems' performance.

I. Introduction

This report presents an approach to implementing payment incentives for improved quality of service delivery in Republika Srpska (RS) and the Federation of Bosnia and Herzegovina (FBiH). Based on extensive stakeholder consultations, synthesis of the literature on pay-for-performance (P4P) mechanisms, and study tours to learn from countries with established P4P systems,¹ this document was developed within the context of the Functional Review of Health Systems' Performance Program (P167607) by the World Bank Group (WBG). It serves as an initial framework for the entity-level methodological documents to be produced under the Health Systems Improvement Project (HSIP P171150) and the World Bank's Multi-Donor Trust Fund (MDTF) for Health Systems Reform. Its development process involved representatives of the Ministry of Health and Social Welfare (MoHSW) of the RS and the Federation Ministry of Health (FMoH) (hereinafter referred to as the Ministries of Health [MoHs]); the Health Insurance Funds (HIFs); the Agency for Quality and Accreditation in Healthcare (AKAZ) of the FBiH; the Agency for Certification, Accreditation, and Health Care Improvement (ASKVA) of RS; and representatives of health care providers.

The health systems in BiH perform a vital social security function. They significantly contribute to social and economic welfare by mitigating health and fiscal risks. Before the coronavirus disease (COVID-19) pandemic, life expectancy in BiH was close to the Southeastern European (SEE)² average and higher than in some European Union (EU) countries. There were significant improvements in maternal and infant mortality because of high rates of attended births and broader access to skilled care. These advances notwithstanding, BiH faces a high burden of noncommunicable diseases (NCDs). Mortality from stroke, ischemic heart disease (IHD), and cancer have increased in recent years (IHME 2022), primarily driven by biological (hypertension) and environmental (tobacco use) risk factors.

Improving the coverage and quality of health services is vital to reducing the disease burden. The country's universal health coverage (UHC) index³ is below the average of the World Health Organization (WHO) European Region. About 3,447 deaths in BiH can be prevented yearly with access to high-quality health care. Of these deaths, 2,504 are attributable to poor quality, and 943 to underutilization of essential care (Kruk et al. 2018). Notably, information on clinical performance is not made public or linked to payments via the respective HIFs. BiH recognizes the need to connect resource allocations to health systems' performance.

The model for paying health care providers contributes to challenges in ensuring access to high-quality NCD care. The provider payment methods being used in BiH include fee-for-service (FFS), salary, global budgets, and diagnosis-related group (DRG⁴)–based case payment. But, in the FBiH, the DRG-based hospital payment system is not fully implemented, and in the RS, tariffs need to be revised because reimbursement is not calibrated with actual costs and incentives for high-quality of care (QoC). The misaligned payment mix contributes to unnecessary hospital admissions for conditions that could be treated in outpatient settings.

A change in provider payment models is critical to improving the efficiency, effectiveness, and equity of health services. P4P has been shown to produce gains in health outcomes (de Walque et al. 2022). Overall, over the last 15 years, P4P has improved effective coverage in health. However, there have been far fewer, if any, improvements in the quality of health services delivered. As used in this

¹ The RS to the Republic of Serbia and the FBiH to the United Kingdom.

² This includes Albania, BiH, Bulgaria, Croatia, Montenegro, North Macedonia, Republic of Moldova, Romania, and Serbia.

³ As used in this report, the UHC index is defined as the average estimated coverage of essential services based on tracer interventions that include reproductive, maternal, newborn, and child health; infectious diseases; noncommunicable diseases; and service capacity and access for the general and the most disadvantaged population.

⁴ As a statistical classification of hospital cases, DRGs are used to categorize inpatient hospital visits by severity of illness, risk of mortality, prognosis, treatment difficulty, need for intervention, and resource intensity. This is the usage adopted in this report.

paper, P4P refers to mechanisms designed to enhance the health systems' performance through incentive-based payments. In other words, what is expected is a performance-related differentiation in pay among providers. This is part of the mechanism through which P4P affects motivation and behavior (Rosenthal and Dudley 2007). These payments may positively affect performance and accountability of health systems in BiH by linking transfers to results. Additionally, if designed and implemented well, P4P has a broader role as an instrument for improving health systems' governance and strategic health purchasing (Langenbrunner, Cashin, and O'Dougherty 2009). Efforts to craft the arrangements for P4P should draw on the empirical and theoretical literature on its design and implementation across countries. To this end, behavioral economics insights can help to design more effective P4P programs to advance health systems' goals (Mehrotra, Sorbero, and Damberg 2010).

Under the forthcoming HSIP, there is agreement to implement P4P in RS and FBiH. Specifically, the HSIP 2022–2027 (P171150) is designed to improve the QoC and the financial sustainability of health care systems in BiH. WBG support has facilitated P4P learning exchanges between RS, the FBiH, the Republic of Serbia, and the United Kingdom. Additionally, developing the P4P model for health care providers is necessary to implement these reforms under the HSIP. These performance payments are envisaged in addition to the existing payments to health workers and the provision of drugs and equipment to facilities. Forder, Robinson, and Hardy (2005) provide an accessible overview to many theoretical ideas relevant to the theory of purchasing.

The introduction of new payment mechanisms can be complex. There is limited prior experience with P4P in BiH. Given the agreement to implement P4P under the HSIP, it is important to outline the rationale for this mechanism and the main steps for implementation. The analysis draws on experiences from other countries to identify essential elements that may lead to smart design, effective implementation, and adequate monitoring in BiH (WHO 2014). Whereas there is heterogeneity in design of P4P schemes, Figure 1.1 lays out the key minimum design features to consider. It is worth noting that an enabling institutional and governance context is critical for success. Relatedly, transparency, accountability, and decentralized frontline financing are important aspects in addition to facility autonomy as preconditions for P4P effectiveness (Langenbrunner, Cashin, and O'Dougherty 2009; Eijkenaar 2013; de Walque et al. 2022). Furthermore, this approach paper prioritizes NCD services. The implementation steps consider the enabling environment, including institutional arrangements, the time line for the rollout, regulatory changes, health information system requirements, and a stakeholder engagement approach.

Figure 1.1: Typology for the Design of P4P Schemes in Low- and Middle-Income Countries

1. What is incentivized?
 - Which measures are used to assess performance
2. Who is incentivized?
 - Whose performance is measured?
 - Who (ultimately) receives the payment?
3. Payment attributes
 - Frequency
 - Size
 - Payments coupled with salary
 - Lag time between reporting and payment
 - Rewards vs penalties
 - Use of money
4. Basis for payment
 - Each action vs threshold of performance
 - Type of ranking (tournament, absolute, relative)
 - Payment adjustment (equity, quality, etc.)
5. Gaming safeguards
 - Performance audits
 - Penalties

Source: Kovacs et al. 2020.

The target audience for this document, developed in collaboration with health authorities, comprise policy makers and providers in BiH—key stakeholders in designing and implementing P4P. The report begins in Chapter II by reviewing the context of the entities' health systems. It then describes the proposed P4P methodology (Chapter III). Chapter IV describes the enabling environment for the introduction of P4P, including a time line for developing and implementing the same.

II. Country and Sector Context

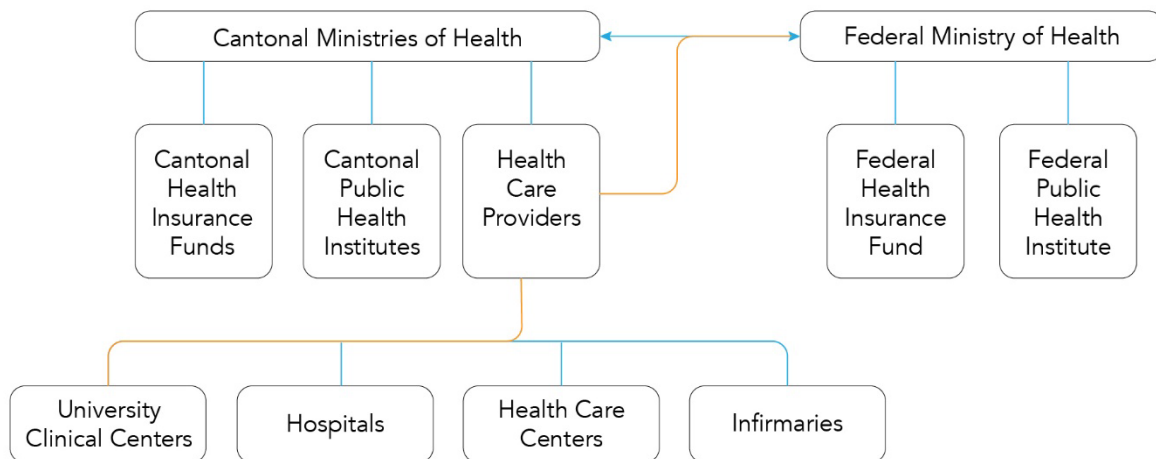
This chapter describes the challenges of the health systems that the payment reform will address. It also analyses the provider payment mix at the primary, secondary, and tertiary levels. Furthermore, the chapter draws implications for the best way forward. Finally, the chapter analyzes the relevant national political and economic context (Smyrl and Genieys 2008 as the health systems are anchored in a broader national context. As a comprehensive health sector review has recently been undertaken (World Bank 2020), examples from the entities are used for illustration in this chapter and do not seek to be a comprehensive review of the health sector in both the FBiH and RS.

A. Political and Economic Context

The political and governance system in BiH is complex. As Figure 2.1 shows, it reflects the provisions of the country's Constitution, developed as an integral part of the General Framework Agreement for Peace in Bosnia and Herzegovina to end the conflict, and subsequent changes introduced under the guidance of the international community through the Office of the High Representative. The FBiH has 10 autonomous cantons and 79 municipalities and cities. On the other hand, the RS has 10 cities and 54 municipalities. State functions and powers belong to the entities. The constitutional architecture also includes the autonomous and self-governing District of Brčko (DB) under the direct authority of the Council of Ministers. This structure has implications for the organization of the respective health systems.

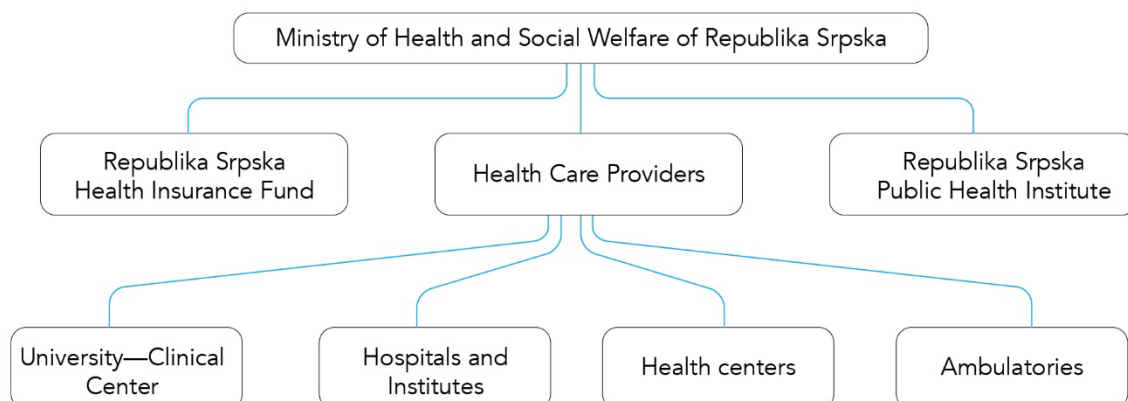
Figure 2.1: Organigram of the Health Systems in BiH

Figure 2.1.1: Leadership and Governance Structure of the Health Care Systems in the Federation of Bosnia and Herzegovina



Source: World Bank 2020.

Figure 2.1.2: Leadership and Governance Structure of the Health Care System in Republika Srpska



Source: World Bank 2020.

BiH is an upper-middle-income country (UMIC), with the imbalance of its economic model as a critical challenge. For example, the economy is skewed toward consumption rather than investment, and imports rather than exports. Furthermore, the COVID-19 pandemic posed a severe challenge to the country, mainly through a slowdown in key productive sectors, the most affected being health, tourism, transport, and agriculture. There was also lower demand for BiH exports and a spike in unemployment. Notably, the number of registered unemployed increased by 4.7 percent in 2020. The recovery from the COVID-19-induced double shock of a health and economic nature is ongoing (Kurowski et al. 2022).

BiH is a major transit route for migrants to the EU, with resultant fiscal and social pressures. More than 75,000 migrants and refugees arrived in BiH in 2018, most of them fleeing from conflict and poverty in Pakistan, Afghanistan, Syria, and Iraq. Although the majority intend to stay temporarily in BiH, their need for social services overstretches the capacity for provision in the border regions. Other challenges include inadequate sanitary and living conditions (WHO 2022; MSF 2019, 2021).

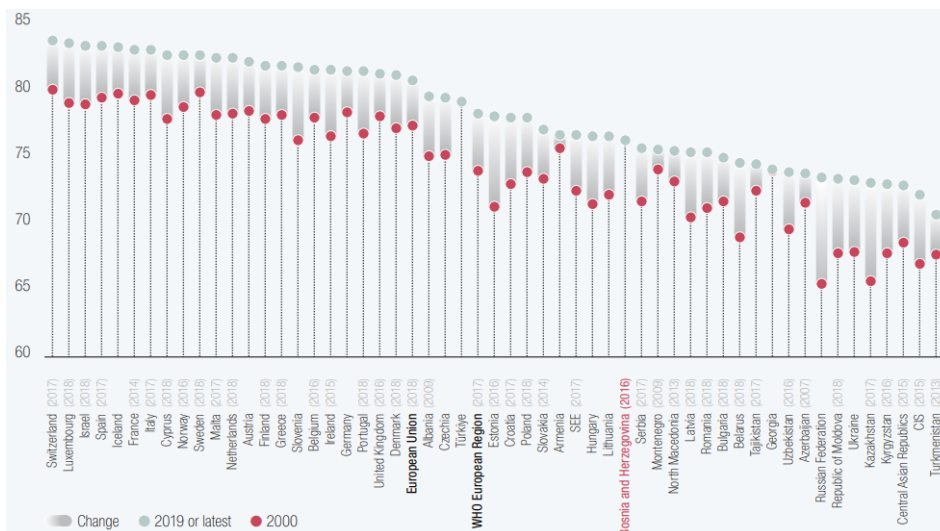
Multiple reform efforts have improved the economic environment in BiH. In July 2015, the Council of Ministers of BiH, and the governments of the RS and the FBiH adopted a joint program of reform. This reform agenda presents a rare window of opportunity for structural reforms in BiH, underpinned by broad national consensus on the country's critical challenges and priorities and the sustained support of key development partners. As a result, significant progress has been made in the reform process in the health sector (World Bank 2020). However, given the harsh fiscal realities of the recent economic downturn and the fact that most health spending comes from public budgets, BiH is looking for ways to improve the efficiency of the health systems. This road map advances this goal.

B. Health Systems Performance

Life expectancy (LE) has risen but remains below the average of the WHO European Region. As a measure of population health, LE at birth stood at 76.3 years, which was just below the average in Southeastern Europe (SEE) (76.7 years) in 2016 (see Figure 2.2). However, the LE at birth in BiH was two years below the WHO European Region (78.3 years). The average LE increases reflect reductions in maternal and child deaths. The difference in LE at birth between genders was 4.9 years, with male life expectancy of 73.8 years and a female life expectancy of 78.7 years (WHO 2022). NCDs are significant drivers of ill health (IHME 2022). There are also marked differences in mortality patterns. For

example, suicide rates are much higher in males than in females—13.5 and 3.4 per 100 000 in 2019, respectively. In contrast, cardiovascular diseases (CVDs) cause more deaths among females (604.5 deaths per 100,000) than males (534.9 deaths per 100,000) (IHME 2022).

Figure 2.2: Life Expectancy at Birth



Source: WHO 2022.

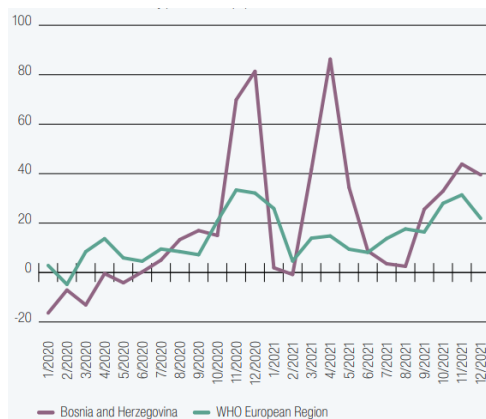
Note: Data are for 2019 or the latest available year (shown in brackets). No data for 2000 for Türkiye and BiH; data for Georgia for 2000 were not shown, as these were only marginally lower than in 2019.

CIS = Commonwealth of Independent States.

The COVID-19 pandemic resulted in preventable mortality. The pandemic disrupted essential health care use and led to excess mortality. By January 2022, the cumulative number of COVID-19-attributed deaths was 416.7 per 100,000 (see Figure 2.3), a rate more than double the average and the second highest in the WHO European Region. Additionally, the excess mortality rate⁵ during the pandemic was very high, with peaks in December 2020 and April 2021 at 94 percent and 102 percent, respectively (Our World in Data 2023). Despite BiH swiftly implementing numerous measures to contain the SARS-COV-2 virus, COVID-19 testing levels and vaccination uptake remained low. By 29 January 2022, a year since the first vaccination date, less than a third (i.e., 29.2%) of the total population had received *at least one dose* of the COVID-19 vaccine (Our World in Data 2023).

⁵ In this report, excess mortality from all causes of death is defined as the difference between the total number of deaths and the number that would have been expected in the absence of a crisis—for example, the COVID-19 pandemic. This difference is assumed to include deaths attributable directly to COVID-19 as well as deaths indirectly associated with it through impacts on health systems and society.

Figure 2.3: Excess All-Cause Mortality per 100 000 Population

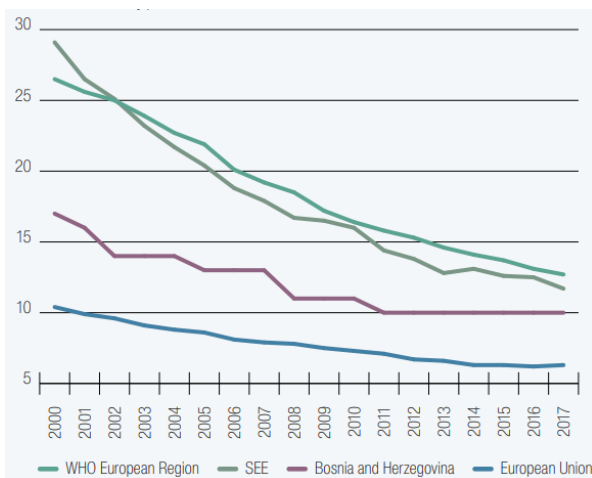


Source: WHO 2022.

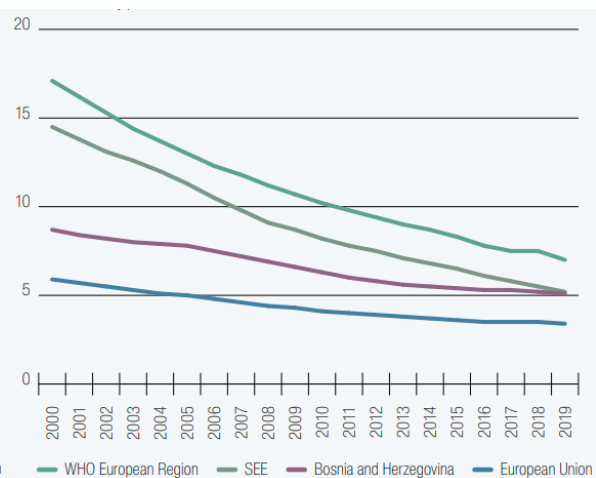
Maternal and child health has significantly improved in the past two decades. As a result, maternal mortality declined from 17 to 10 deaths per 100,000 live births between 2000 and 2017. However, as shown in Figure 2.4, this level remains below the average in the WHO European Region (12.7 per 100,000) and SEE (11.7 per 100,000) (WHO 2022). Similar positive trends have been observed in infant mortality. It has declined from 18.7 to 5.1 deaths per 1,000 live births between 2000 and 2019 (see Figure 2.5).

Figure 2.4: Maternal Mortality per 100,000 Live Births

Figure 2.5: Infant Mortality per 1,000 Live Births



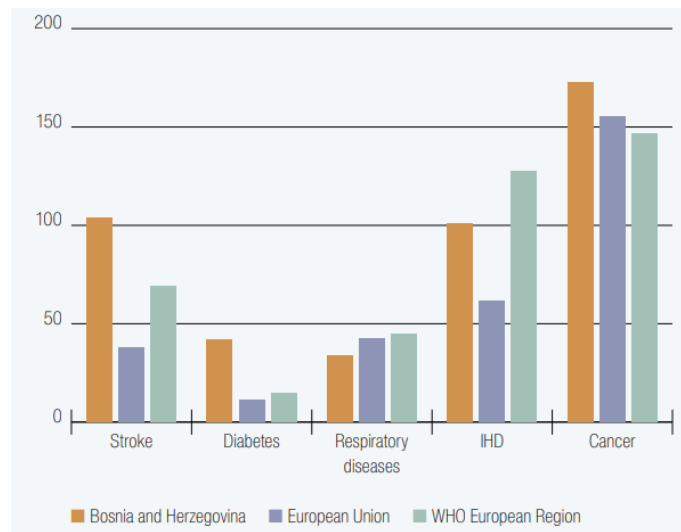
Source: WHO 2022.



Source: WHO 2022.

There is an epidemiological transition, with most deaths attributable to NCDs. Over 90 percent of deaths in 2019 were due to NCDs, mainly CVDs and cancer (IHME 2019). Figure 2.6 shows that diabetes accounted for 43 deaths per 100,000 in 2016. This rate is three times higher compared across the European Region (WHO 2022). The epidemiological transition from communicable diseases to NCDs is primarily due to unhealthy diets, alcohol consumption, cigarette smoking, a sedentary lifestyle, and the elderly population.

Figure 2.6: Mortality Rates in BiH by Cause



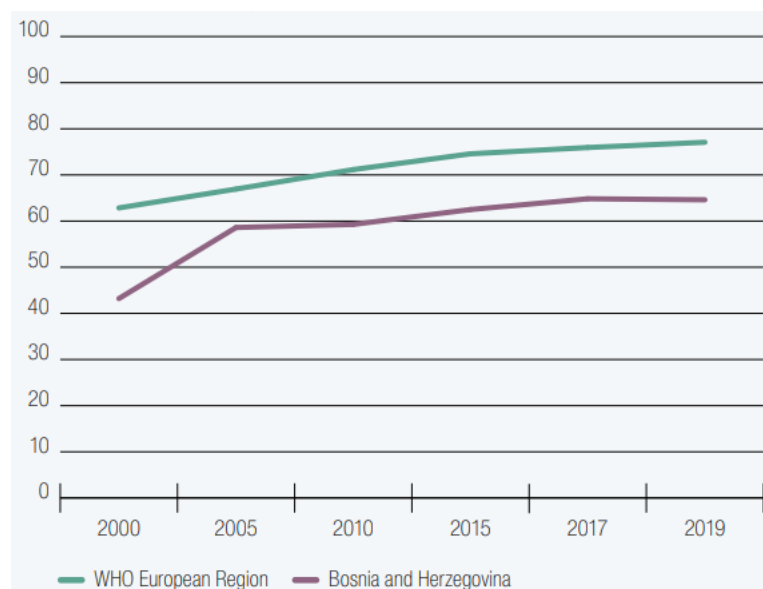
Source: WHO 2022.

Notes: Data for BiH are for 2016, the EU for 2018, and the WHO European Region for 2017.

IHD = Ischemic heart disease.

The trends in health outcomes reflect access to health services. Proxied by the UHC Service Coverage index, as shown in Figure 2.7, BiH's index increased from 43 (out of 100) in 2000 to 65 in 2019. This, however, is below the average for the WHO European Region. Access to care for NCDs is lower than for maternal and child health. In the subindex for NCD care, the coverage rose from 44 to 50 over the same period. Performance is much better for the reproductive, maternal, newborn, and child health subindex; coverage rose from 58 in 2000 to 63 in 2019. These average scores mask the poor access among the most disadvantaged populations—those of low socioeconomic status—as access is highest among the wealthy, of higher socioeconomic status.

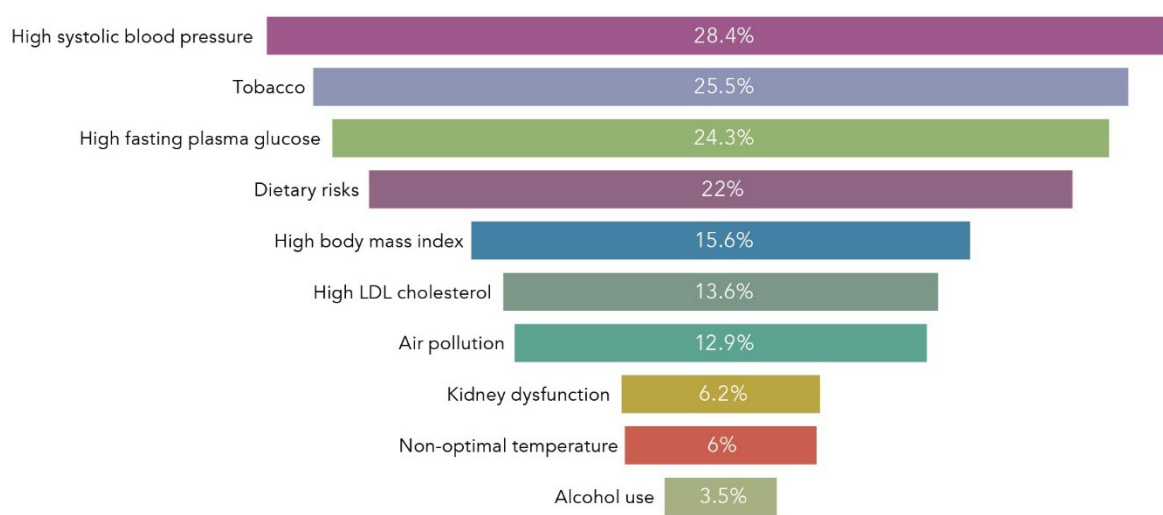
Figure 2.7: UHC Service Coverage (Percent)



Source: WHO 2022.

Hypertension and tobacco use also contribute to the burden of disease. Figure 2.8 shows that 28 percent of all deaths are attributable to high blood pressure. Also, tobacco use drives 26 percent of the burden, while 24 percent is linked to high blood sugar (IHME 2019). Hypertension and metabolic risk factors such as high blood sugar are related to unhealthy behaviors, such as smoking, unhealthy diets, and lack of physical activity. In 2018, the country had one of the highest smoking rates among adults (37.2 percent) in the WHO European Region, far exceeding the averages for SEE (28.2 percent) and the WHO European Region (24.6 percent). Nearly half of all men regularly consume tobacco (45.7 percent), and about one-third of women do so (28.9 percent). These rates are 12 percentage points above the regional averages (WHO 2022). The high smoking prevalence is related to the low price of a pack of cigarettes.

Figure 2.8: Top 10 Risk Factors as a share of All Deaths



Source: IHME 2019.

Notes: Shares overlap and therefore add up to more than 100 percent.

LDL = Low-density lipoprotein.

C. Demographic Trends

BiH has faced negative demographic trends in recent years. Like many other European countries, BiH has an aging population. Between 2008 and 2019, the population aged 65 and above increased from 13.8 percent to 17.2 percent. The aging population contributes to the high NCD burden and multimorbidity. The latter is defined as the co-occurrence of two or more chronic conditions. In addition, the total fertility rate (TFR) declined from 1.69 in 1996 to 1.26 in 2018. Furthermore, in 2017, net migration was -107,926. The emigrating population consists primarily of working-age adults (World Bank 2020). Due to these factors, the total population in both entities is declining.

The emigration of health professionals is a threat to health systems' functioning. Health workers leave for the EU to find better remuneration and working conditions. For example, in 2015–16, the rate of doctors born in BiH who emigrated to work in Organisation for Economic Co-operation and Development (OECD) countries was 14 percent (Socha-Dietrich and Dumont 2021). This trend exacerbates the already existing shortage of health professionals in the country. Moreover, the COVID-19 pandemic has brought this challenge to the fore. As a result, essential health services could not be maintained in all places due to the lack of qualified health workers. Similarly, the inadequate availability of health care workers limits the capacity to provide NCD services effectively.

D. Health Governance

The health systems in BiH are organized in compliance with the constitutional arrangement. Health policy decision making occurs at the entity level. Furthermore, the two entities and DB each have distinct Health Care and Insurance laws. The RS is a centralized health system with authority held by the government of RS (MoHSW). On the other hand, the government of FBiH (FMOH) has a mandate to create a legal framework for the health system in FBiH. The 10 cantonal governments are responsible for planning and delivering health insurance and services. Each entity has established a health care accreditation and quality improvement agency—AKAZ in the FBiH, and ASKVA in the RS. These institutions undertake voluntary (for AKAZ) and voluntary plus mandatory certification programs (for ASKVA) for health care providers. Both monitor quality and safety indicators of health protection.

Decentralized health governance creates policy-making challenges, with a limited role for service users. Decision making is further complicated by many stakeholders and little intergovernmental coordination (World Bank 2019). For example, there are decisions to exclude interentity discussions on revenue mobilization, pooling, and care coordination. In addition, service users are rarely involved in decision making and are passive as consumers of care. Nevertheless, there was a recognition among stakeholders interviewed for this road map that citizen engagement in decision making could have positive implications for the implementation of payment reforms.

Health information systems are underdeveloped, constraining evidence-informed policy. In both entities, electronic health records (EHRs) can, in theory, contribute to better care coordination and purchasing. However, their utilization is uneven, data are not shared across providers, and insights do not inform purchasing decisions (World Bank 2020). Although access to most health care facilities' databases is possible in the RS, they are often incomplete. Since 2021, most providers have commenced using the Integrated Health Information System (IZIS), which does not have established data transfer mechanisms with the ASKVA and omits essential information for measuring the quality of care. It is important to note that ASKVA does not have data for the primary level of health care provided by most health centers that have switched to IZIS. For the secondary and tertiary levels, data are entered monthly.

E. Service Delivery

Health services are provided through public and private facilities. In BiH, there are 29 public hospitals (18 in the FBiH, 10 in the RS, and one in Brčko District) and six specialized hospitals (World Bank 2020). This network provides various health promotion, prevention, diagnostic, and treatment services at the primary, secondary, and tertiary levels. Primary care is mainly provided in primary health care (PHC) centers.

Ownership varies by administrative level in the public sector. The cantons own most hospitals in the FBiH. Cantons, as founders of cantonal hospitals, are the de facto owners of these hospitals. However, in the RS, most inpatient health facilities are owned by the entity-level government. Cantons⁶ or municipalities⁷ own PHC centers. Ownership of the three university clinical centers in the FBiH is shared between the cantons and the FBiH. Facility capacity varies by canton, with gaps resulting from inadequate funding, inefficient spending, and inadequate pooling. Pharmacies, and dental and specialist practices are predominantly private (Rakic et al. 2018). In the RS as well as in FBiH, privately owned health institutions can also sign a contract with the HIF.

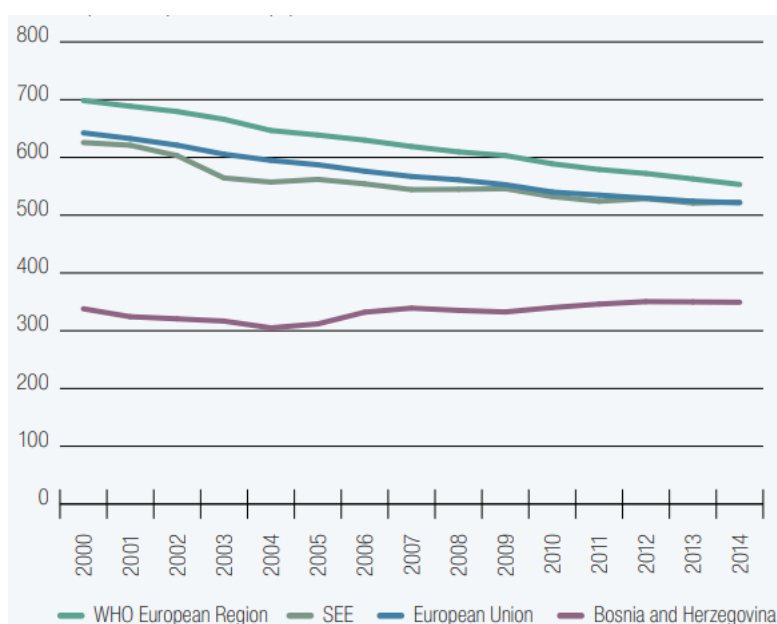
BiH has low hospital bed density and occupancy rates. As shown in Figure 2.9, the number of hospital beds per 100,000 population remains below the averages for the EU, the WHO European

⁶ Sarajevo Canton, Una-Sana Canton, Canton 10, West Herzegovina Canton, Herzegovina-Neretva Canton.

⁷ Zenica-Doboj Canton, Tuzla Canton, Posavina Canton, Middle Bosnia Canton, Herzegovina-Neretva Canton, Bosnian Podrinje Canton.

Region, and Southeastern Europe. In addition, hospital occupancy rates are low. In the FBiH, average bed occupancy is less than 60 percent, with considerable variation between hospitals.

Figure 2.9: Hospital Beds per 100,000 Population



Source: WHO 2022.

The hospital sector is dominant in health care delivery and expenditure. At independence, BiH inherited hospital-dominated health systems. In 2015, hospital care accounted for 35 percent of overall health expenditure; outpatient care and medical goods—medicines, personal protective equipment, medical supplies, and other hospital supplies—accounted for about 28 percent each (WHO 2022). Between 2008 and 2014, hospital discharges per 100,000 population increased. Also, many ambulatory health services continue to be provided through hospital admissions due to a lack of incentives encouraging outpatient treatment. As a result, the level of avoidable hospital admissions for conditions that could be treated in outpatient settings, such as asthma, diabetes, and hypertension, continues to increase in BiH.

Rebuilding primary care was a central objective in the 2000s. Health reforms focused on introducing family medicine at the primary level and optimizing secondary and tertiary care (Cain et al. 2002; Hodgetts et al. 2020). Investments aimed to strengthen the gatekeeping function and reduce fragmentation between primary and other care—for example, registration with a PHC provider is now required for access. Furthermore, the family medicine team now includes a physician and one or two nurses in PHC centers (Hodgetts et al. 2020). Efforts were also made to increase the number of physicians (Tokalic' et al. 2021). Therefore, family medicine specialists increased, and the primary care system was rebuilt with support from development partners (Hodgetts et al. 2020).

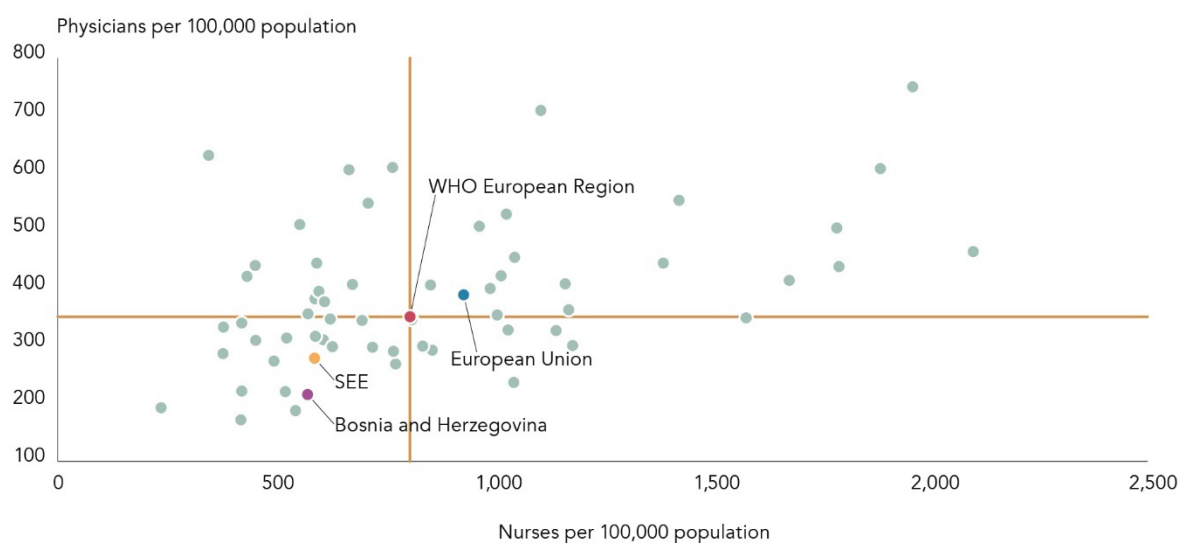
However, PHC remains underutilized. The PHC Performance Initiative—a partnership dedicated to transforming the global state of PHC, striving to help create a world where strong primary health care is the reality, not the exception, for every person, family, and community—recommends that effective PHC should be able to manage 80 percent of the population's health care visits. However, this standard is not the case in both the FBiH and the RS, reflecting the hospital-centric nature of the health systems.

Utilization patterns may reflect the gaps in regulating health care quality, particularly at the PHC level. QoC is not always routinely monitored and does not inform resource allocation decisions by the purchaser. In the FBiH, quality indicators have been defined and collected for seven years. However, only 50 percent of outpatient health centers and 60 percent of hospitals submit data. In the RS,

electronic data systems monitor the provision of NCD care. In both entities, quality performance does not inform provider contracting.

The supply of high-quality health care is also constrained by health worker density. BiH inherited health systems with depleted human resources, particularly physicians. Many health professionals left the country, and medical training was severely affected. In 1996, BiH had one-third of the prewar numbers of physicians, dentists, and pharmacists (Hodgetts et al. 2020; Tokalic' et al. 2021). Despite investments in family medicine and an increase in specialists, the overall numbers of physicians remain below the SEE average (Figure 2.10). The ratio of physicians to population was almost half the EU average in 2015 (216 versus 382 physicians per 100,000). Furthermore, the numbers of nurses are comparatively low compared to the EU average of 915 per 100,000 population.

Figure 2.10: Physicians per 100,000 Population, 2015

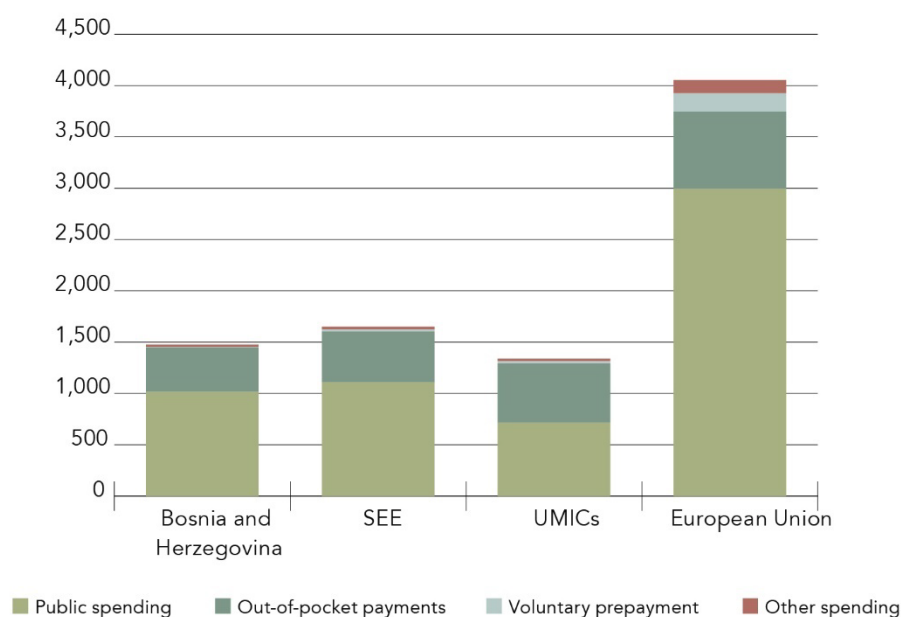


Source: WHO 2022.

F. Health Financing

Total health spending in terms of gross domestic product (GDP) is high in BiH, but per capita spending is low. In 2019, BiH spent 9.0 percent of its GDP on health. Figure 2.11 shows that this was slightly below the average among EU countries (9.9 percent). In the same year, spending on health per capita amounted to US\$1,477 (in purchasing power parity [PPP] terms). This level was far below the SEE average (US\$2,207 PPP) but above the average of UMICs in the WHO European Region (US\$1,338 PPP). Additionally, as Table 2.1 shows, there are differences between the entities as a percentage of GDP.

Figure 2.11: Per Person Expenditure on Health, US\$ PPP



Source: WHO 2022.

Note: 2019 data.

SEE = Southeastern Europe; UMICs = Upper-middle-income countries in the WHO European Region.

Averages are unweighted.

Table 2.1: Health Expenditure as a percentage of GDP in BiH and Neighboring Territories and Countries, 2018–2020

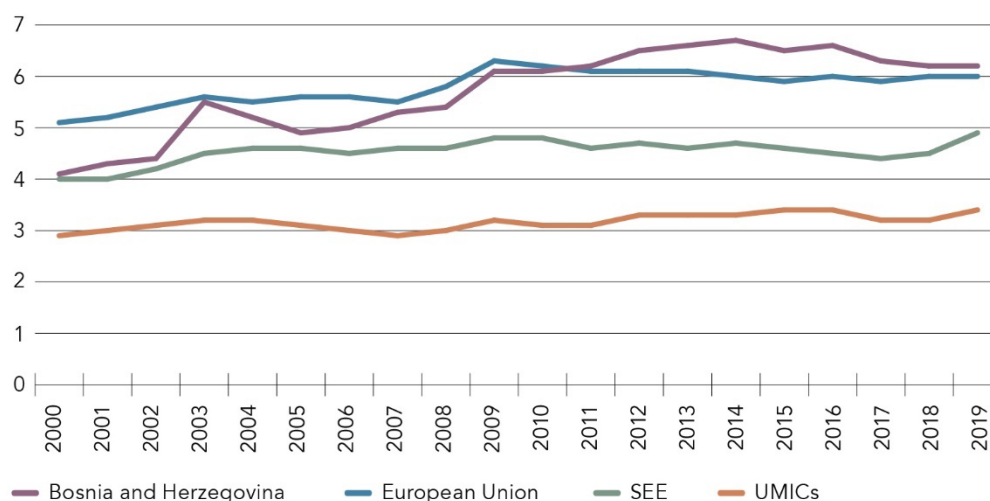
Country or entity	2018	2019	2020
Croatia	6.8	7.0	—
Serbia	8.5	8.7	—
Slovenia	8.3	8.5	—
Federation of BiH	8.17	8.5	9.4
Republika Srpska	11.2	11.3	13.3

Source: Authors' compilation from Republika Srpska Institute of Statistics (2019, 2021, 2022), Institute for Statistics for Federation of BiH (2023), and the World Development Indicators from the World Bank (2023).

Note: — = Not available

Public spending on health is among the highest in SEE. Public expenditure on health per capita more than tripled, from US\$330 PPP in 2000 to US\$1,015 PPP in 2019. As shown in Figure 2.12, this level was the third highest among SEE countries and above the average of UMICs in the WHO European Region. Public spending on health as a share of GDP also increased from 4.1 percent in 2000 to 6.2 percent in 2019, exceeding the EU average (6.0 percent). As a percentage of general government expenditure, government spending on health was 15 percent in 2019, equivalent to the average in the EU. But fiscal space for the health system is constrained by the accumulation of arrears at the facility and purchaser level, reflecting weaknesses in accountability.

Figure 2.12: Public Spending on Health as a share of GDP (Percent)



Source: WHO 2022.

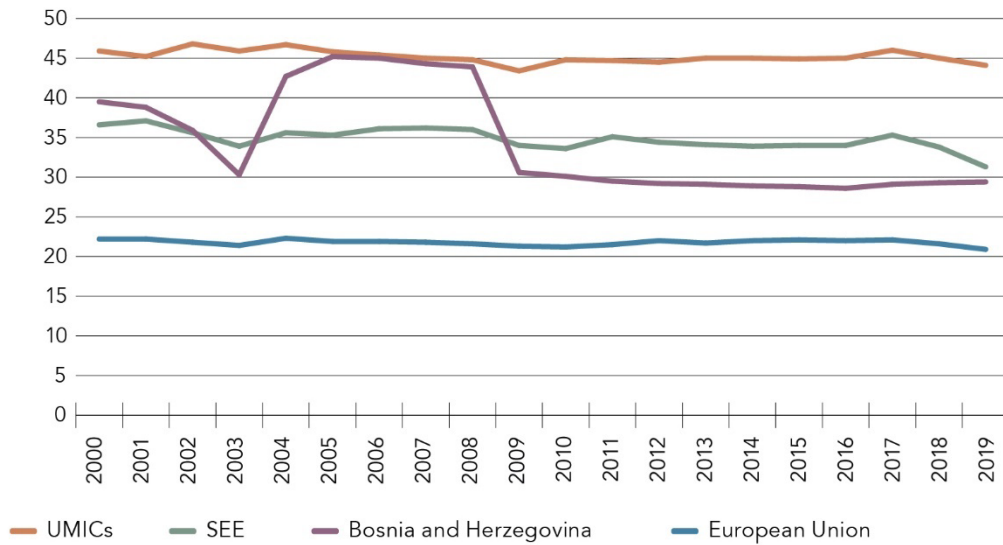
Notes: SEE = Southeastern Europe; UMICs = Upper-middle-income countries in the WHO European Region.

Averages are unweighted.

There is an overreliance on employment-related contributions to raise public spending. For example, in 2019, mandatory employment-related contributions were responsible for financing 68 percent of public funding (WHO 2022). In addition to the employed and their dependents, the mandatory health insurance systems cover other groups. Those covered include children, pensioners, farmers, persons insured on the grounds of occupational diseases and work-related injuries, persons with war-related disabilities, refugees and displaced persons, persons receiving social benefits, the unemployed, students registered with the Employment Bureau, and foreign nationals insured on the grounds of bilateral agreements. However, formally employed persons represent only one-third of the insured. Therefore, the high contribution rates discourage formal employment and negatively affect the financial sustainability of the country's health and social security systems (WHO 2021).

As a share of total health expenditure, out-of-pocket payment (OOP) spending has decreased and is close to the SEE average. OOP spending on health accounted for 29.4 percent of overall health spending in 2019 (see Figure 2.13). This level is close to the SEE average (30.7 percent) but above the EU average (20.9 percent). OOP spending has fallen steadily from a high of 45 percent in 2005, and voluntary health insurance represents only about 1 percent of private expenditure. Direct payments for medicines and medical products constitute the largest share of OOP, followed by spending on specialized ambulatory and hospital treatments. Informal OOP is most common for hospital and specialized care (BiH 2012; Vujičić 2017; Slipicevic and Malicbegovic 2012).

Figure 2.13: OOP Payments as a share (Percent) of Current Health Spending

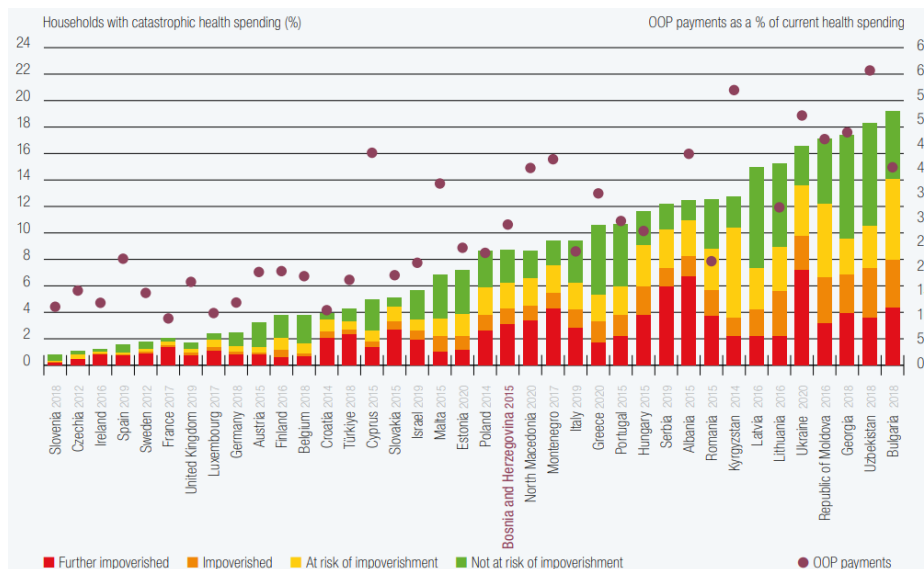


Source: WHO 2022.

Notes: UMICs = Upper-middle-income countries in the WHO European Region; SEE = Southeastern Europe. Averages are unweighted.

OOP expenditure leads to catastrophic health spending, particularly for poor households. This challenge is primarily driven by outpatient medicines, diagnostic tests, and inpatient care payments. About 8.2 percent of the BiH population spent above 10 percent of total household expenditure on health in 2015 (WHO 2022). In the same year, 8.1 percent of households in the FBiH and 9.9 percent in the RS experienced catastrophic spending (Voncina et al. 2022). Figure 2.14 shows that this is below catastrophic spending levels in other countries in the WHO European Region, but above neighboring countries such as Croatia and Slovenia.

Figure 2.14: Catastrophic Health Spending by the Risk of Impoverishment and OOP Payments



Source: WHO 2022.

Notes: A household is impoverished if its total spending falls below the poverty line after OOP payments; further impoverished if its total spending is below the poverty line before OOP payments.

payments; and at risk of impoverishment if its total spending after OOP payments comes within 120 percent of the poverty line. The poverty line used here is a relative line reflecting basic needs (food, housing, utilities).

The data on out-of-pocket (OOP) payments are for the same year as the data on catastrophic health spending.

Resource pooling across health insurance funds is limited in FBiH. With legal responsibilities for health care insurance devolved to entities and cantons, there are 13 HIFs. In the FBiH, each of the 10 cantons has an HIF. Additionally, about 10 percent of each canton's revenues are pooled in the Federal Health Insurance and Reinsurance Fund. This fund was established in 2002 to enhance equity through redistributive capacity via purchasing high-cost medicines for tertiary care and new therapies in cancer care (Guzvic et al. 2018). In FBiH, due to the decentralized system, insured persons are limited to the services covered in their entity or canton of health insurance registration. However, the Federal Fund is attempting to reduce the inequities created.

The RS runs a centralized HIF, with full solidarity. However, this government-mandated health insurance, with revenues pooled centrally through a single HIF, has proved to be limited and unsustainable largely due to the narrow revenue base, insufficient cross-subsidization, and wider demographic and macroeconomic constraints that affect resource allocation. Whereas the RS government regularly transfers funds for financing health care for special categories of population and patients,⁸ they are largely insufficient relative to the needs. In 2020, the funds transferred by the government to the HIF amounted to 20.75 percent of total HIF revenue in the year (The Supreme Office for Republika Srpska Public Sector Auditing 2021).

Benefits for the uninsured are limited, and entitlements vary by administrative unit. In the RS, about a quarter of people registered with a primary care provider were not covered by mandatory health insurance in 2020. Uninsured people are only entitled to emergency care. However, those with selected health conditions such as cancer, diabetes, and epilepsy are eligible for full benefits (Voncina et al. 2022). In the FBiH, the insurance rate is considerably higher (87 percent). However, coverage rates vary across cantons, from 84 percent of the population in the Herzegovina-Neretva Canton to 100 percent in Sarajevo Canton. In the FBiH, children below 18 without insurance are entitled to full benefits. In addition, adults without insurance coverage can obtain specific services, including emergency care, pregnancy services, treatment of severe mental illness, and chronic diseases. In May 2020, health insurance coverage was extended in both entities to all uninsured residents for the duration of the COVID-19 pandemic (Voncina et al. 2022). It is important to note that these additional benefits for the uninsured are financed from the mandatory health insurance without providing additional resources.

The range of services covered for the insured is comprehensive, and includes PHC, specialized outpatient care, inpatient services, and medicines, including for NCDs (Mathauer et al. 2016). Services that are not covered by health insurance are listed in both entities. Physician consultations and hospital treatments in the RS are subject to fixed copayments. However, therapies, rehabilitation, diagnostics, and outpatient prescription medicines require percentage-based cost-sharing. A ceiling for copayment per service is set at KM⁹ 370 (approximately €190), and about 50 percent of the population is exempted from user charges based on income, health status, and age (Voncina et al. 2022).

The FBiH established a minimum service package to be provided in all cantons. There is also a list of complex services and expensive medicines financed by the Federation's Health Insurance and Reinsurance Fund. The level of other benefits varies across cantons. Some cantons offer additional

⁸ These include dialysis patients, war invalids and members of families of killed soldiers, refugees and displaced persons, and transfer of funds from COVID-19 Compensation Fund of RS.

⁹ KM: Bosnia-Herzegovina Convertible Mark, the official currency.

services, whereas others do not guarantee access to the minimum service package. Outpatient care, specialist services, medical products, diagnostic tests, dental consultations, and treatment are subject to fixed copayments. In contrast, outpatient medicines are subject to fixed, percentage, and reference pricing copayments (Voncina et al. 2022). User charges and exemptions vary across cantons.

BiH implements mixed payment methods at the primary and hospital levels. In the FBiH, the dominant payment method for hospitals is a prospective budget. However, the Federal Health Insurance and Reinsurance Fund pays for almost all services via fee-for-service (FFS). Some cantonal HIFs also pay for selected services via FFS—for example, radiology. Cantons fund PHC facilities via line-item budgets or age-adjusted capitation, with higher weightings for younger children and the aged. Where the latter is used, the private sector is also contracted in small proportions, as in Tuzla, Herzegovina-Neretva, and Zenica-Doboj Cantons. On the other hand, in RS, health centers for family medicine (FM) services are paid according to the number of established FM teams with a defined number of registered users. Gynecology and pediatrics services are paid according to the unadjusted capitation model. Outpatient care provided by specialist practices and hospitals is financed through a capped FFS model.¹⁰ Hospital care is financed through the mixed model, which includes the diagnostic-related group (DRG) payment model, FFS service, and prospective a budget payment model for inpatient rehabilitation services. As in FBiH—although there are different models of financing health care facilities—frontline health workers in publicly owned health facilities and in some privately owned facilities in the RS are paid by salary.

There are limited incentives for health workers to provide high-quality NCD care. Payment by capitation rewards cost-saving through prevention, including for NCDs. In Herzegovina-Neretva and Zenica-Doboj Cantons, the HIF provides bonuses for attaining coverage targets, such as mammography screening. No payments are linked to quality, improved preventive care coverage, better chronic disease management, or patient outcomes. However, within the scope of the HSIP, the RS and FBiH have committed to undertaking provider payment reforms, including the introduction of P4P to promote high-quality care for NCDs.

G. Design Implications

From the preceding analysis and stakeholder consultations, several implications can be drawn for the design of payment incentives for high-quality NCD care. The design features proposed in the next chapter draw on these.

- 1. Changes in the payment mix should contribute to tackling challenges in the health sector.** These constraints include a high NCD burden, hospital-centric care, gaps in the quality of care, limited accountability for results, and underfunding. Ideally, payment reforms should facilitate broader health systems' transformation. There is a clear rationale for introducing P4P to boost provider revenue and enhance accountability, linked to improved NCD care, primary care, and quality. As the entities' health systems are different in organization as well as in regulatory framework, a differentiated approach to P4P implementation will be required. Therefore, this approach paper serves as a framework for informing detailed elaboration of entity-specific implementation methodology.
- 2. The complex administrative and health system structure implies payment reforms should be tailored at the entity and cantonal levels for the FBiH.** For example, the maturity and complexity of provider payment mixes vary from input-based and mixed payments to output-based reimbursements. Furthermore, inadequate data system development and use constrain the readiness to monitor and govern payment reforms. The ownership of facilities will also inform the institutional arrangements for implementing various reforms.

¹⁰ Capped budget for the hospital outpatient specialist services based on the relative value of the points designated for the specific services.

3. **The primary purchaser will play a significant role in the implementation of P4P.** The strategic purchasing function of the HIF should align resource allocations with health systems' goals, including payment methods. However, these objectives may not align with the provider's incentives. Stakeholders noted that public providers focus on financial sustainability and less on coverage, quality, and patient outcomes. But, as the managers of facilities are accountable to the HIF, their incentives can be aligned with patient-centered goals via contracts.
4. **The role of the service users should shift from passive consumption to active engagement.** Hence, per the 2017 experts' meeting in Durham, United Kingdom¹¹, the proposal for payment reforms should explore and define the potential use of citizen engagement in the transformation of health systems.

¹¹ Convened by WHO between 12 and 13 July 2017, the meeting focused on leading health system transformation to the next level.

III. Payment Methodology

This chapter presents broad directions for implementing P4P in each entity, as the entity governments will make the final decision on reform directions. The chapter first defines the objectives for introducing P4P and the quality aspects to be rewarded. Then, it describes an approach to evaluate achieved quality targets, define potential incentive recipients, and outline reporting requirements and time lines. Also, risk adjustments for the objective rewarding of health professionals are described.

A. Objectives

Improving the management of chronic NCDs is the main objective of introducing the P4P mechanism in BiH. The P4P model aims to enable a health facility to receive additional funds for the agreed-upon quality of the provided services and to use the funds to incentivize staff by providing them with salary top-ups in defined proportions.

B. Measurement

In both entities, P4P may be linked to structural, process, and outcome indicators of QoC. Examples of structural quality indicators include the adequacy of facilities and equipment, staffing ratios, qualifications of medical staff, and administrative structures. Process indicators may assess whether actions indicating high-quality care are undertaken during service provision, such as adherence to guidelines. Outcome indicators may measure whether health care services have achieved the desired results, including a lower probability of preventable complications of NCDs and higher patient satisfaction.

A formal methodology for the measurement of QoC for P4P will be adopted in each entity and participating canton.

The proposed indicators of QoC will be drawn from existing systems and differ by service delivery level. The following considerations will inform indicator selection. First, the indicator's significance for monitoring the prevention and management of NCDs, given the disease burden. Second, the choice will be informed by the ability to track these indicators using the existing information system. Hence the starting point will be performance measures routinely collected at PHC and hospital level and reported to AKAZ and ASKVA for the FBiH and the RS, respectively. Third, the indicators selected should be within the control of providers. Fourth, the considered indicators may increase beyond the pilot phase, such as to other service areas, including gynecology and pediatrics.

C. Incentives

Given the low levels of provider remuneration, no penalties will be imposed. Instead, bonuses will be given and linked to performance against the selected indicators. This approach of providing rewards (instead of punishments) is consistent with evidence from other countries, including France's Remuneration for Public Health Objectives program (Pomey et al. 2019). Per the formalized payment methodology, points will be assigned to the provider's performance on each target. Higher points may be awarded to indicators for which the QoC is particularly low. Then, the monetary value will be calculated following a predetermined formula. This value will be determined through negotiations between provider associations and the HIF, aiming to be sufficiently attractive to incentivize performance while remaining within the available budget. The targets can be progressively increased when the payment mechanism has become widely accepted, per Caley et al. (2014). In addition, nonmonetary incentives for performance will be instituted through the routine publication of provider results and benchmarking with facilities in the same administrative area. Table 3.1 and Box 3.1 provide further details of the factors mentioned.

Table 3.1: Illustrative List of Indicators at the Primary Care Level, Targets, and Awarded Points

Indicators to be rewarded	Points	Target (%)
Structure indicators:		
Proportion of clinical staff who completed training in quality and safety of health services	3	50–100
Complete, accurate, and timely reporting to AKAZ and ASKVA	3	60–100
Process indicators:		
Percentage of registered male and female patients older than 50 years who, in the preceding 24 months have a record of a faecal occult blood test.	5	80–100
Percentage of registered female patients ages 50 to 70 who, in the preceding 24 months, have a record of mammography	4	60–100
Percentage of patients with hypertension who, in the preceding 12 months, have a record of blood pressure reading	5	50–100
Outcome indicators:		
Proportion of patients who report being satisfied with the care received	5	80–100

Source: Authors' own compilation.

Note: AKAZ = Agency for Quality and Accreditation in Healthcare (FBiH); ASKVA = Agency for Certification, Accreditation, and Health Care Improvement.

Box 3.1: Formula for the Calculation of Achieved Points

The target range in the illustration is set such that achievement below the minimum yields 0 points, and reaching the upper bound yields full points. Achievement above the minimum is then calculated on a sliding scale. For example, the formula can be, as follows:

$$I_{\min} < I < I_{\max}: \quad \text{Points} = \frac{I - I_{\min}}{I_{\max} - I_{\min}} \times X \dots\dots\dots (\text{Eq. 1})$$

$$I \leq I_{\min}: \quad \text{Points} = 0$$

$$I \geq I_{\max}: \quad \text{Points} = X, \text{ where } X \text{ equals the total awarded points for the indicator}$$

Therefore, if a provider reports 75 percent performance for "The proportion of clinical staff who completed training in quality and safety of health services," then the points obtained = 1.5, that is

$$\frac{75 - 50}{100 - 50} \times 3$$

Source: Authors' own compilation.

D. Adjustments

Risk adjustments account for variation in difficulty in achieving results due to the catchment population profile. For example, it is envisaged that there will be adjustment of calculated monetary value using measures of the relative prevalence of chronic diseases and demand for care, as illustrated in Box 3.2. These proposals also reflect available data. The factors considered in adjustments may be modified in later phases and tailored to each entity or canton.

Box 3.2: Potential Adjustments of Achieved Monetary Value

The Registered User Index (RUI) is the number of registered users in the family medicine team divided by the national average number of registered users. For example, for the year 2022, the

average number of patients is 1,600. Therefore, if the number of registered users in the respective team is 1,800 patients, then the RUI is $1,800/1,600 = 1.12$.

The Prevalence of Disease Factor (PDF) is the prevalence in the population managed by the team divided by the national average disease prevalence for a particular chronic disease. For example, the national average prevalence of hypertension is 15 percent. Therefore, if the value in the population managed by the team is 20 percent, the PDF for hypertension will be $20/15 = 1.33$.

Consider a scenario where the preadjustment points are 12, and each is valued at KM100. Then, following these adjustments, the bonus for hypertension would be, as follows:

Unadjusted P4P payment = Points Achieved x KM100

= $12 \times 100 = \text{KM}1,200$

Adjusted P4P payment = Points Achieved x KM100 x RUI x PDF

= $12 \times 100 \times 1.12 \times 1.33 = \text{KM}1,787.52$

Source: Authors' own compilation.

E. Recipients

The incentive payments will be directed toward health professionals in the family medicine teams. This design choice is motivated by the international experience, which shows that targeting incentives to providers is more effective than focusing on institutions (Eijkenaar 2013). Furthermore, the efficient provision of NCD prevention and control services is a focus of the P4P model in BiH. This objective will result from collaborative work in the family medicine team. Eligible providers will be in PHC centers or private family medicine facilities contracted to meet the required performance targets. As the indicators expand to new service areas, the incentive recipients will shift accordingly to include pediatricians, gynecologists, and support staff. Within the team, bonuses will be allocated based on the payment categories described in the Law on Salaries of Persons Employed in Public Health Facilities in RS or Collective Agreement in FBiH. Hence, more senior staff will receive higher proportional bonuses. This approach is consistent with norms in the medical profession.

F. Periodicity

The reporting period will be annual or biannual to reduce the administrative burden. This time line accounts for the time needed to enter the data electronically in the facility, analysis by AKAZ and ASKVA, adjustments, and any disputes of assessed amounts.

The proposed P4P design elements account for lessons from behavioral economics (Dixit and Skeath 2015; Cartwright 2018; Thaler and Sunstein 2009; Thaler and Ganser 2015). First, the design seeks to use a series of small incentives across multiple indicators rather than one significant incentive. Second, it proposes to introduce a series of absolute thresholds, which is better than one absolute threshold. Third, the 6–12-month period aims to reduce the lag between the care and receipt of incentives to increase the behavioral response. Fourth, it acknowledges the negative psychological response from penalties and will provide bonuses instead. Fifth, the design of the incentive plan is simplified to increase the behavioral response. Sixth, incentive payments have been decoupled from usual reimbursement.

In conclusion, bonus size and form matter. Limited precedent exists in other countries as a benchmark to clarify that the proposed bonus equivalent to 1.2 percent of the total wage is a sufficient incentive (Navathe et al. 2019). There is also paucity of empirical research on the influence of incentive

size (Eijkenaar 2013). Given the substantial heterogeneity in the design of P4P schemes, a recent systematic literature review found that incentive design is not adequately reported on in the literature (Kovacs et al. 2020). However, what is not in doubt is the fact that decoupling incentive payments from base payments as much as possible—that is, ensuring performance-related payments are supplemental to base payments—improves P4P scheme performance. Drawing on the Mental Accounting theory (Thaler 1985), it therefore follows that individuals value bonus payments more highly if they are not coupled with their usual salary and are viewed as a separate and additional income category. While some effective P4P programs have had bonus sizes in the abovementioned ranges, there is need for periodic reevaluation and updating, as necessary.

IV. Enabling Environment

Implementing P4P requires robust data systems, appropriate institutional arrangements, and significant financial and other resource investments. Hence this chapter reviews the capacity of the health information systems to monitor the QoC. It discusses the proposed institutional arrangements, the proposed role of each stakeholder, and the mechanisms for their engagement. It concludes with reflections on the costs and the time line for phasing in P4P.

A. Data Systems

A functional health information system is essential to the successful implementation of P4P. In the FBiH, five out of the ten cantons have an information system that can be used to monitor services electronically and efficiently. However, modules will need to be added to cover the QoC indicators. In the other cantons, investments will be required to establish electronic information systems. The availability of a functioning health information system can inform the phasing-in approach. Payment in the second year of the reform will require that teams can enter information in the first year.

The Integrated Health Care Information System (IZIS) has been introduced in public and private facilities with a HIF contract in the RS. Over 95 percent of PHC centers use the same electronic health system. Private facilities with HIF contracts use the IZIS or establish a means for data transfer and reporting on provided services. The IZIS can support the monitoring of a few QoC indicators. The largest primary center, with 120 family medicine teams, uses a system to track a broader scope of measures.

The World Bank Health Systems Enhancement Project has supported health information capacity in the FBiH and the RS. Under the project, most public facilities received information technology (IT) equipment and Internet access to operate the installed electronic health records applications. Data can therefore be reported, accepted, and analyzed in real time. No significant hardware investments are necessary, but there is a need to add modules for the QoC indicators and to invest in software to support data collection in five cantons in the FBiH.

B. Stakeholder Engagement

Systematically engaging stakeholders is essential for this complex reform's successful implementation and appropriate design. In the FBiH, it is envisaged that the MoH will coordinate with the HIFs, Public Health Institutes (PHIs), and AKAZ to operationalize P4P. In the RS, the equivalent institutions are MoHSW, HIF, and ASKVA. The PHIs, health professionals' chambers and unions, private provider representatives, and patients' associations are also important stakeholders. An important change from the status quo would be to involve patients in the design.

Some peculiarities should be considered in engaging stakeholders. For example, health professional chambers and unions are significant players in health worker regulations. In the FBiH, they represent the interests of their members in contracts with the HIF, protect citizens' rights to good health care, and provide expert opinions in constructing regulations that affect the health professions. Therefore, consulting and building support in these groups will be paramount for successful reform implementation. Patients are a group often neglected in designing policies and programs. Involving them, in this case, can inform QoC indicator selection, adjustments, and other design elements that reflect their preferences. Health facility managers will likely view this reform favorably as they have limited tools to incentivize better performance. There is also a need for training and capacity-building on aspects related to their roles in the P4P reform. Table 4.1 maps stakeholder type and the main areas for building their capacity.

Table 4.1: Stakeholder Type and Main Capacity-Building Needs

Stakeholder type	Main areas for capacity-building
Ministry responsible for health	<ul style="list-style-type: none"> • Strategic planning regarding the quality of health care • Design of policy of quality • Monitoring and evaluation of P4P from the legal point of view • Adaptation of enabling legal framework
HIFs	<ul style="list-style-type: none"> • Governance, transparency, and accountability • Measurement of health QoC • Understanding motivation • Administration of contracting • Public procurement of health services • Monitoring and evaluation • Outsourcing (using external contractors) in designing a set of indicators and for monitoring and evaluation • Benchmarking of providers
Health professionals	<ul style="list-style-type: none"> • Understanding P4P, including advantages and disadvantages
Professionals' chambers and unions	<ul style="list-style-type: none"> • Understanding P4P • The role of chambers and unions in improvement of quality of health care

Source: Authors' own compilation.

Notes: P4P = Payment for performance; HIFs = Health Insurance Funds; QoC = Quality of care.

During design and implementation, ongoing communication with stakeholders will be necessary. While the investment project imposes a time line for adopting and implementing P4P, it is crucial to leave sufficient time for broad stakeholder consultations to generate acceptance for this reform. Furthermore, channels for grievance redress from providers and patients should be established as part of the regulation and infrastructure for the program. Transparency is also essential, and stakeholders need to be informed in advance of implementation of reforms and to be able to access information on P4P when and as required. To accommodate the different categories of stakeholders, and to ensure effective communication (including feedback) and general buy-in, consultations should adopt different approaches such as focus group discussions, workshops, seminars, key informant interviews, roundtables, surveys, electronic media, social media, and awareness campaigns.

C. Stakeholder Roles

In each entity, it is envisaged that a coordination committee with senior officials from the health authorities, HIF, and quality agencies will be set up. The coordination group will guide and endorse aspects of the methodology for P4P before formal procedures are adopted by the relevant authorities. Before the program launch, it is anticipated that the committee may meet twice a month. Simultaneously, technical working groups may be established for different aspects of P4P implementation. The working groups should include representatives of the key stakeholder groups identified above. These groups, which will be responsible for elements of the methodology and regulatory framework, will have clear objectives and milestones, may be advised by international experts, and will report to the coordination committee.

The concept of P4P requires that a health facility operates as a budget holder with significant autonomy. This status would imply the ability to receive funds and decide on the inputs needed to deliver the contractually agreed services. There should also be flexibility in using funds to absorb ex post payments that may vary, depending on a provider's ability to meet the agreed-upon outcome goals. In contrast, under traditional input-based budgeting, allocations are subject to the annual budget law, enforced with varying degrees of rigidity and detail.

The roles of other stakeholders to enable P4P implementation and design are outlined below.

Ministries responsible for health:

- Secure the participation of all relevant stakeholders in program development.
- Explore the need to amend the health law regulations and, if required, prepare the changes, and submit the laws to the respective entity Parliaments.
- Initiate and coordinate negotiations with union representatives for changes in the special Collective Agreement for health care required for introducing the P4P program.
- Develop the rulebooks needed for the implementation of the P4P scheme.
- Ascertain the cost of the P4P program.

HIFs:

- Assign staff to manage the P4P program.
- Explore the need to amend the Law on Health Care Insurance.
- Revise the rulebook for contracting health financing to allow for P4P for NCD care.
- Review the financial plan and introduce budget lines to finance P4P for NCD care.
- The FBIH adapts the "agreed methodology" for contracting to facilitate P4P implementation.
- Determine the amounts linked to points in the P4P formula.
- Initiate health information system changes, including algorithms for estimating incentives.
- Monitor and evaluate P4P, including performing data quality audits.

Quality agencies:

- Propose indicators for monitoring QoC within the P4P framework.
- Prepare conditions for data transfer from health information systems to calculate incentives.
- Coordinate the measuring of QoC.
- Establish grievance and redress system to receive and respond to grievances expressed on provider performance.

PHI:

- Design the NCD prevention and control program for the entities.
- Provide data on the prevalence of NCDs to inform risk adjustments.
- Monitor the impact of P4P on NCDs.

Professional Groups (chambers, unions, associations):

- Participate in and provide input for the design of the P4P program.
- Organize informative campaigns to prepare health professionals for the P4P program and organize events to gather opinions on the agenda.
- Report information on the indicators within the payment system.

D. Regulatory Framework

The introduction of the P4P model requires changes in health legislation. In the RS, the Laws on Health Care and Mandatory Health Insurance will define the institutional roles of the health institutions related to the P4P model (see Table 4.2). The Law on Salaries of Persons Employed in Public Health Facilities should be amended to allow for additional payment based on performance. Also, the respective regulations that describe and authorize the P4P methodology will be developed. Data-sharing procedures and QoC indicators are defined in the *Rulebook on Quality Indicators, Manner of Monitoring and Evaluation of Quality and Safety of Health Care in Health Care Facilities*. This rule book may require changes during the P4P introduction.

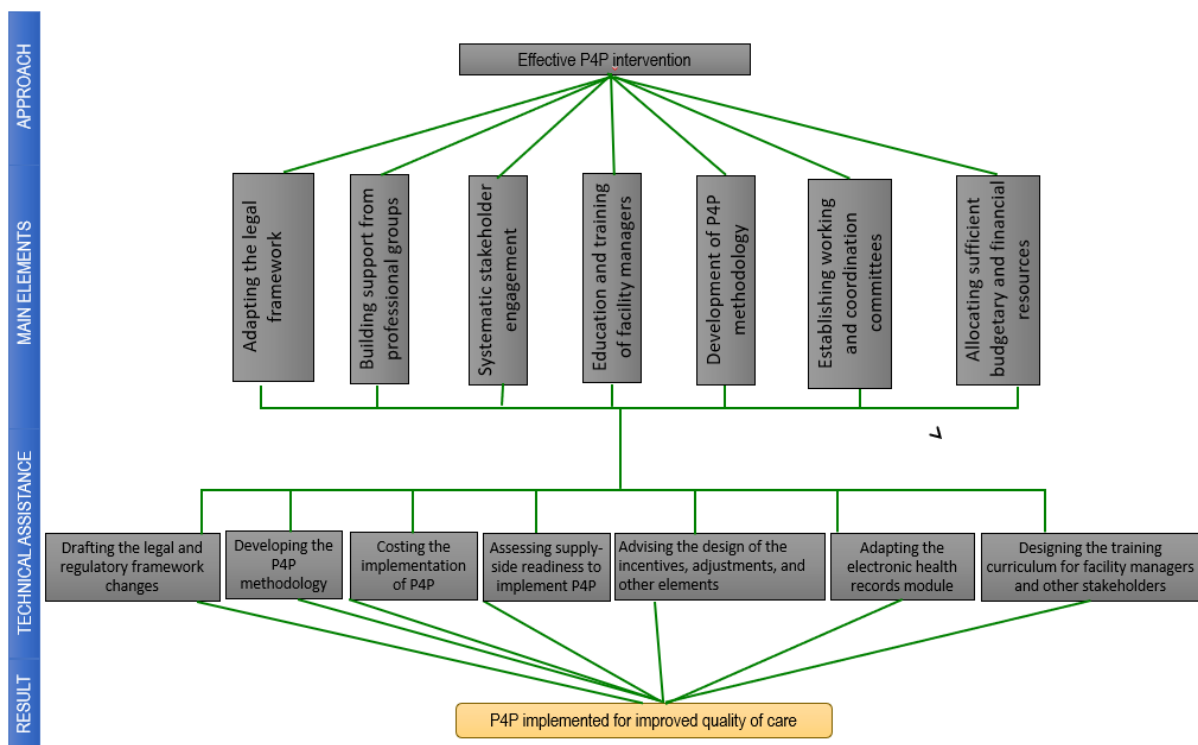
Table 4.2: Relevant Regulatory Framework in RS

Institutional roles	
1	Law on Health Care
2	Law on Mandatory Health Insurance
Data sharing	
1.	<i>Rule Book on Quality Indicators, Manner of Monitoring and Evaluation of Quality and Safety of Health Care in Health Care Facilities</i>
Payment Methodology	
1	Law on Salaries of Persons Employed in Public Health Facilities
2.	<i>Rule Book on the Basis for Contracting and Financing of Health Care Facilities</i>

Source: Authors' own compilation.

In the FBiH, the Law on Health Care Insurance defines the methodology for contracting, which will need to be amended to incorporate P4P as an option, with a provision to tailor to local peculiarities. The state-level Law on Public Procurement would need amendments that define the obligations for health services, including transparency, corruption prevention, and maximizing value for public money. The Labor Law and Collective Agreements, specifically Article 75, will need revision to allow health care institutions to use new payment methods for health care workers. Figure 4.1 illustrates the complementary nature of the prerequisites for P4P, including the legal framework, stakeholder engagement, education and training, and defining a clear methodology as well as the attendant technical assistance that will be needed.

Figure 4.1: The Prerequisites for an Effective Intervention



Source: Authors' own compilation.

Note: P4P = Payment for performance.

E. Budgetary Needs

There will be costs associated with technical assistance to launch reforms. Figure 4.2 identifies some of the technical assistance needs thus far. Support for these may be provided under the HSIP, the Multi-Donor Trust Fund (MDTF), and annual MoH budgets, among other financing options. During implementation, the entity Ministries of Health will be responsible for defining the costs of the scheme and the required budgetary allocations. It is anticipated that the main cost drivers for the second year of implementation will be the bonuses for achieved performance targets in the first year. The upper band of incentive costs will be influenced partly by the uptake among providers, the proportion that achieve the set targets, and the percentage of providers' income to be covered by P4P. For example, assuming that 25 percent of teams will deserve a reward capped at 8 percent of the salary, the bonus may be equivalent to 1.2 percent of the total wage for health workers. No adjustments are made for the changes in health worker cadres involved in the scheme. This amount would be about €11 million annually or 3 percent of the total contracted amount between HIFs and PHC health providers. A more precise estimation can inform additional transfers to the HIFs to cover P4P bonuses. It is important to note that P4P has potential to reduce predictability of facility budgets and introduce new costs for verification of results. This is likely to be moderate given digital monitoring systems.

Public facilities may also need to invest in supply-side readiness to deliver the services outlined under the QoC indicators. These costs would not apply to private providers. Minor investments in IT hardware may be required. However, there will be a need to procure support to introduce changes in electronic health records. As part of the rollout strategy, this road map envisages nimble rapid-fire tests. This approach aims to improve design through rapid learning, iteration, and scaling-up the improved P4P program, thereby expanding reach. During the implementation, quick cost-effectiveness evaluations can inform incentive levels (Pandya et al. 2020). These lessons can then be the basis for estimating future resource needs.

F. Rollout Time Line

The implementation time line starts in the first quarter of 2024 and is aligned with the launch of the HSIP¹². Legal amendments and data systems harmonization will precede the P4P pilot. The main phases in the implementation of P4P in the FBiH and the RS are shown in Table 4.3.

¹² Implementation is envisaged to start in December 2023.

Table 4.3: Time Line for Implementation of P4P Scheme

Phase	2024				2025				2026				2027			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Model development: This includes consultations, design, supply-side readiness, and legal changes.																
Pilot implementation: This includes pilot design and implementation in selected facilities or administrative units.																
Pilot evaluation: This involves pilot monitoring and evaluation to identify prescale-up lessons.																
Model adjustment: This involves rapidly testing remedies to identified challenges and adapting.																
Scale-up: This involves the canton or entity-wide implementation of the tested and refined model.																

Source: Authors' own compilation.

Note: P4P = Payment for performance.

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This report outlines a strategic approach to introduce pay-for-performance (P4P) incentives for improved noncommunicable disease (NCD) care in Republika Srpska (RS) and the Federation of Bosnia and Herzegovina (FBiH). Developed under the context of the Functional Review of Health Systems' Performance Program financed by the European Union and implemented by the World Bank Group, it intends to provide initial framework for methodological documents to be supported by the Health Systems Improvement Project (HSIP), focusing on evidence-based, technically sound, and politically feasible strategies. Participatorily developed, the report synthesizes global lessons and analyzes the policy environment in RS and FBiH. It proposes key design features, addressing strategic opportunities and operational challenges. Behavioral economics insights and political economy factors inform the approach, identifying key levers, opportunities, and challenges affecting P4P implementation capacity. To enhance NCD care quality, the report recommends changes in the provider payment mix, tailored reforms at entity and cantonal levels, and active service user engagement. Emphasizing the importance of linking payment incentives to performance, the proposed design spans dimensions such as performance measures, basis of payment, payment attributes, recipient of payment, and targeted outcomes. An enabling environment is deemed critical. Relatedly, effective implementation requires robust data systems, stakeholder engagement, adapted legal frameworks, and suitable institutional arrangements. Technical assistance and budgetary support needs are identified. It is expected that P4P implementation will enhance NCD care coverage and quality, thereby improving health outcomes and overall health system performance in RS and FBiH.

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