

North Macedonia Health Advisory Services and Analytics (P172264) Assessment of Primary Health Care Capacity

INTRODUCTION AND CONTEXT

- 1. The Primary Health Care Capacity Assessment (governance; inputs; population health and facility management) is one of the four modules included in the Vital Signs Profile¹.** It complements the primary health care (PHC) assessment carried out in FY19, which did not go in-depth into the capacity aspect due to lack of quantitative data. The capacity assessment process relies on mixed methods and hence goes beyond quantitative data. It assesses whether the system has adequate inputs, including availability, distribution and functionality of facilities, equipment, drugs, information technology (IT) and human resources for PHC, and whether the system is well governed with good facility management and effective, proactive management of population health. The assessment aims to measure foundational capacities of PHC to inform the implementation of the Government's strategy for PHC 2019-2023.
- 2. This Advisory Services and Analytics (ASA) reports on the completed assessment process and presents an approach for addressing the key issues which are noted as requiring attention.** While the original intention of the ASA was to simply complete the assessment, early on in the process it became clear that there was a keen interest on the part of counterparts to explore potential World Bank financing which would help the country address, in a systematic way, the issues raised. The changing focus of the ASA resulted in an intensive discussion with counterparts on the key areas which would need to be addressed, in order to improve the PHC, informed by the assessment process. This resulted initially in the development of a high-level concept which was shared with the Ministry of Health (MOH), and, following the acceptance of this high-level concept by the Minister, led to the development of a plan to elaborate the potential intervention areas in more detail, with a view to jump-starting the process for the preparation of a new project once the Government formally requested one. A health project is included in the current (2019-2023) Country Partnership Framework.
- 3. An important development during the year was North Macedonia's quest for European Union (EU) membership, which had a number of twists and turns.** In April 2018, the European Commission recommended opening negotiations with North Macedonia, but on October 17, 2019, the European Council (EC) failed to reach a decision on opening such negotiations. Following the EC's decision, the Prime Minister announced early elections, which all political parties had agreed to hold on April 12, 2020. However, because of the COVID-19 pandemic, the political environment has changed; the country is being governed by a caretaker Government that is in place until the elections, which are postponed until further notice due to the COVID-19 state of emergency.² On March 30, 2020, the EC decided to open accession talks with North Macedonia.³ The ongoing situation of a caretaker government and COVID-19 meant that it was not possible to obtain the expected request for a World Bank financed project, and also limited the capacity of counterparts to focus on more detailed discussions originally expected as part of this ASA. Consequently, much of the additional work was done by the World Bank team, with the intent that the proposals developed would be discussed with counterparts as soon as the situation permitted. This will

¹ (<https://improvingphc.org/vital-signs-profiles>)

² <https://pretsedatel.mk/en/decreed-for-state-of-emergency-addressing-remarks-by-president-pendarovski/>.

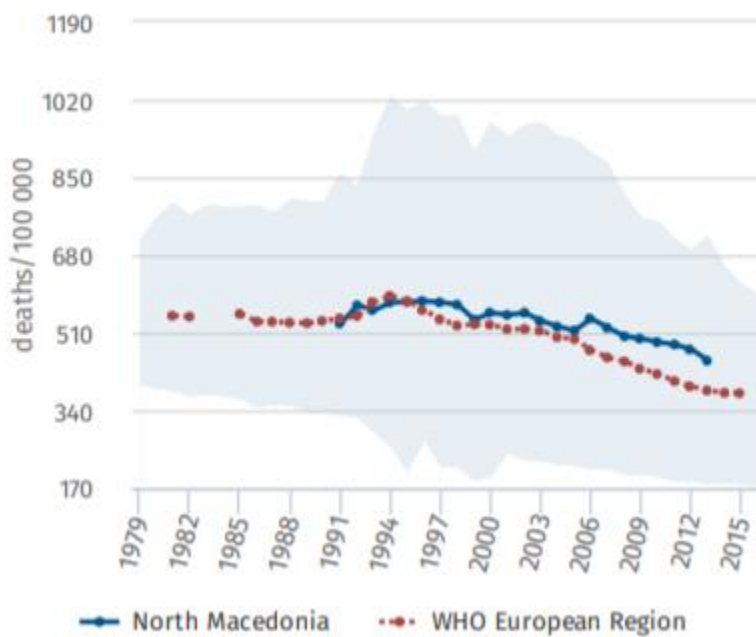
³ https://eeas.europa.eu/headquarters/headquarters-homepage/76696/accession-talks-albania-and-north-macedonia-and-eu%E2%80%99s-commitment-western-balkans_en.

now likely be early in the new fiscal year.

SECTOR CONTEXT AND PRIMARY HEALTH CARE ASSESSMENT

4. **Health outcomes in North Macedonia continue to be challenging, and noncommunicable diseases (NCDs) are an important risk factor.** Maternal mortality remains a challenge, and, since 2011, gains achieved in infant mortality have been reversed, with infant deaths rising from 9.0 to 10.7 per 1,000 births between 2011 and 2016 but decreasing to 8.7 in 2018. A large drop in vaccination rates has also been observed in North Macedonia in recent years. These trends are generally thought to be due to the fragmented PHC system and a shortage of patronage nurses who carry out immunizations and outreach, such as postnatal care. Life expectancy⁴ in North Macedonia is 4.2 years higher for women (77.6 years) than for men (73.6 years), mainly as a result of the growing incidence of NCDs, particularly cardiovascular diseases, which are due to poor diet, smoking, alcohol consumption, and sedentary lifestyles. These life expectancy figures are more than 3 years lower than the World Health Organization (WHO) EURO average for women, and 0.7 years lower for men. As shown in Figure 1 below, North Macedonia started out at the same level with other countries in the WHO European Region on age-standardized premature mortality rate among prime adult population for 4 major NCDs in the early 1990s. However, the country shows more modest progress in curbing the trend and lag behind the regional average in recent years.

Figure 1. Age-standardized Overall Premature Mortality Rate in People Aged 30-69 for 4 Major NCDs



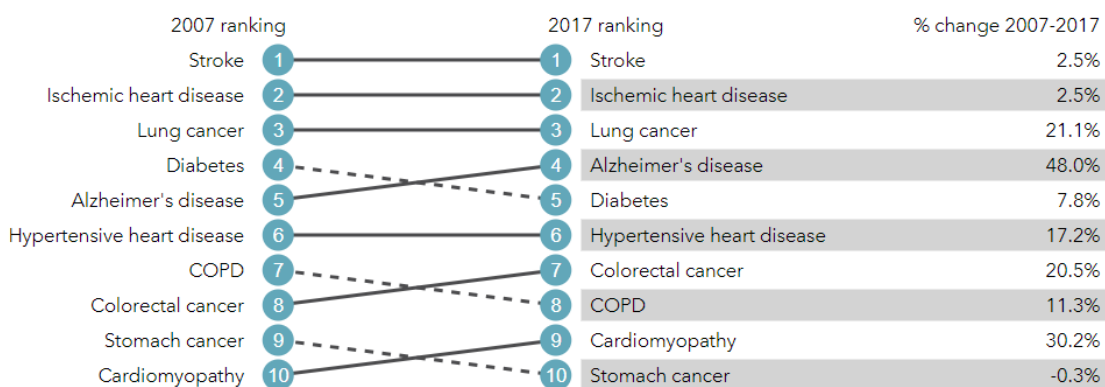
Source: European Mortality Database (<https://gateway.euro.who.int/en/datasets/>)

5. **The aging of North Macedonia's population has implications for health system organization and costs, and particularly on the PHC system.** The projected population growth is nearly zero, and estimates based on census data from destination countries (mostly Western European countries and North America)

⁴ <https://databank.worldbank.org/source/world-development-indicators#>.

suggest that more than 500,000 citizens reside abroad, which, at 24 percent of the current population, is one of the largest diasporas in the world as a percentage of the total population. Considering the small size of the workforce and the low birth rates, the loss of even a small number of workers affects the overall pool of skills in the economy. The United Nations Development Programme estimates that, by 2050, more than 1 in 3 Macedonians will be over 60 years old. Consequently, the NCD burden is increasing: NCDs account for 95.3 percent of all deaths in the country, and cerebrovascular diseases were the first cause of disability-adjusted life years (DALYs) in the country in 2016 (Institute for Health Metrics and Evaluation). Premature mortality from NCDs also tends to be higher in North Macedonia than among comparators⁵. Overall, above-average rates of amenable and preventable sickness and death may translate into large losses of productive life years, while prevention and disease control interventions are best delivered through the PHC system. As shown in Figure 2 below, NCDs (including cancer) account for all of the top 10 causes of death, and most of those, including lung and colorectal cancer, are amenable to prevention, screening and/or chronic disease management and control efforts.

Figure 2. Leading Causes of Death, 2007 vs 2017



Source: Institute of Health Metrics and Evaluation, <http://www.healthdata.org/macedonia>

6. **Despite the demographic and health challenges, total health expenditure as a percentage of Gross Domestic Product (GDP) experiences a consistent downward trend while the financial burden on the households remains higher than WHO European Region average (see Figures 3 and 4).** As shown, North Macedonia (then the Yugoslav Republic) used to spend 9-10 percent of its GDP on health, but the figure started decreasing in 2002-2003, and most recently has stayed around 6 percent. This is a big contrast to the regional average, which shows a steady increase. Although the decrease in the share of GDP spent on health can be explained partly by a strong GDP growth during the same period, comparing per capita spending on health with that of other countries in the WHO European Region shows that the country is at the lower end. With US\$851 purchasing power parity per capita in 2014, the country was nearly the lowest in the Central and Eastern European region, only ahead of Albania. Out-of-pocket expenditure, estimated at 37 percent of total health spending in 2014, was spent mostly on outpatient

⁵ In the PHC assessment, data on selected indicators were compared to a set of peer country groups, including countries from the same geographic region of the Western Balkans (WB6: Albania, Bosnia and Herzegovina, Kosovo, North Macedonia, Montenegro, and Serbia), European countries that have transitioned to become members of the EU (Small Transition Economies of Europe—STEE7: Bulgaria, Croatia, Estonia, Latvia, Lithuania, Slovak Republic, and Slovenia; STEE5: Estonia, Latvia, Lithuania, Slovak Republic and Slovenia), and countries within the same income group classification (Upper-Middle Income – UMI - countries).

drugs, private services, and informal payment.⁶

Figure 3. Total Health Expenditure as a Share of GDP

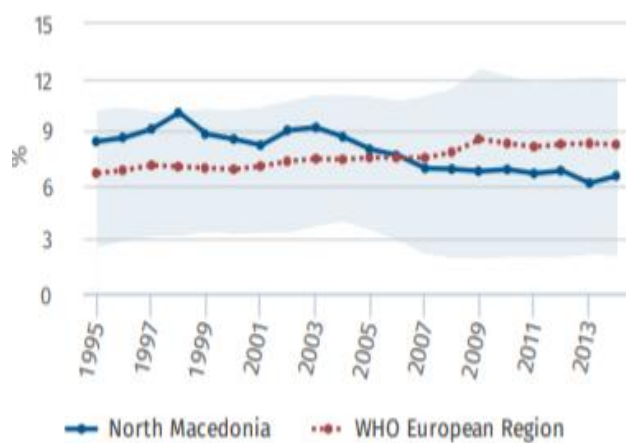
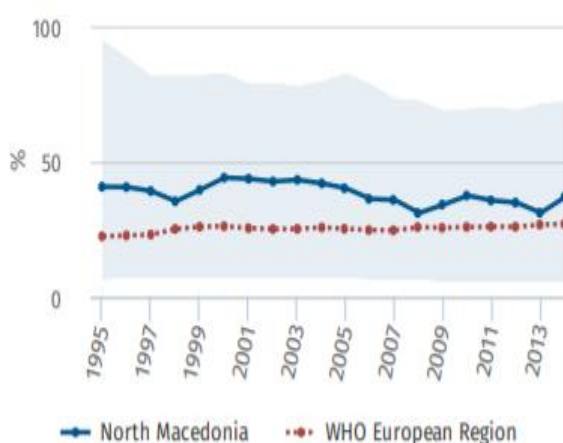


Figure 4. Out-of-pocket Expenditure as a Share of Total Health Expenditure



Source: European Health for All Databases (<https://gateway.euro.who.int/en/datasets/>)

7. **Health care delivery in North Macedonia is skewed toward hospital care, while the PHC system is underdeveloped.** North Macedonia lacks a strong PHC system, but it has an extensive network of hospitals (3.2 per 100,000 people on average), with 4.5 hospital beds per 1,000 population.⁷ There are discrepancies in the internal efficiency of hospitals, with significant variation in the average length of stay and unit costs for similar treatments across the country. While there are just under 3 beds per 1,000 population nationally, these beds are not well utilized, with overall bed occupancy rates under 60 percent. Despite this, hospitals consume 34.4 percent of Health Insurance Fund (HIF) financing for health services, while specialist physicians receive 32.3 percent.⁸ Only 29.1 percent is allocated to “primary care”, while 8.4 percent is paid to General Practitioners (GPs), down from 8.9 percent in 2017.

8. **As noted in the recent PHC Assessment⁹, large parts of the PHC system are currently in the private sector.** PHC in North Macedonia is being delivered to the population through GPs, dentists, gynecologists and some pediatricians that are all private. Pharmaceutical care (with prescription or not) is being delivered by private entities. However, patronage services, immunization, emergency services, as well as some outpatient specialist services are being provided by public providers. Both urban and rural areas are reasonably well covered with all primary health services. However, there are discrepancies, and in rural settings the choice of providers is usually limited. The financial burden of care provided is mostly covered by the publicly owned HIF, with different payment mechanisms for different services in the PHC sector: capitation payments to GPs, fee for service for outpatient specialist care, input-based payments for patronage, emergency and immunization services. Drugs issued on prescription are also covered by HIF if those are on the, so called, positive list. Such a situation in the PHC is the result of a partial privatization of entirely publicly owned PHC centers, pharmacies, and services those were providing.

⁶ Milevska Kostova N, Chichevalieva S, Ponce NA, van Ginneken E, Winkelmann J. The former Yugoslav Republic of Macedonia: Health system review. *Health Systems in Transition*, 2017; 19(3):1–160.

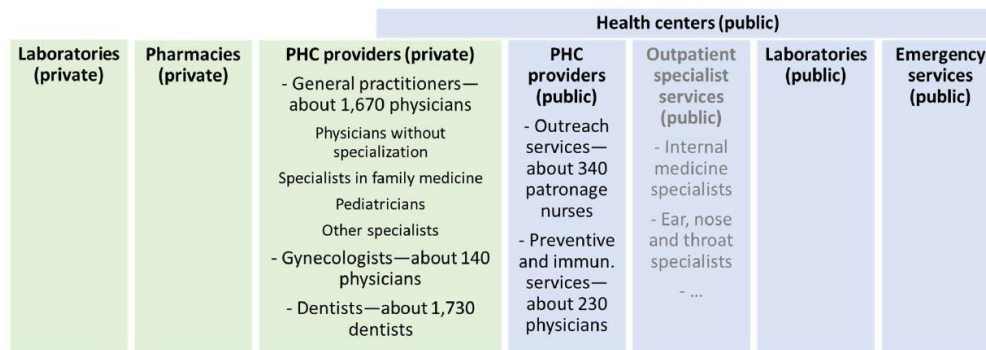
⁷ Analysis of Secondary and Tertiary Health Care System Effectiveness, European Union, April 2019, pp. 16, 22.

⁸ HIF Annual report, 2018, p. 55

⁹ The World Bank, *North Macedonia: Strengthening Primary Health Care to Sustain Improvements in Population Health*, May 28, 2019

Major reform of PHC in North Macedonia started in 2004, when pharmacies and dental clinics were privatized, i.e., were required to be registered as legal entities and sign contracts with the HIF. In 2005, GPs and gynecologists were required to follow suit; some specialists, e.g., some pediatricians, decided to also register as GPs. Even though their contractual arrangements had changed, some of these private PHC providers remained physically located in public health centers, resulting in little movement of care provision and in an overall preservation of the PHC system’s extensive accessibility. However, some PHC services remained the responsibility of the existing public health centers, including preventive and immunization services, and outreach services done by patronage nurses (see Figure 5).

Figure 5: North Macedonia’s Current PHC Service Delivery System



Source: Institute of Public Health, Health Map for 2016

9. **The payment system for PHC depends on the provider type.** Health professionals working in public health centers on preventive and immunization services are public employees and are paid fixed salaries. Private PHC providers—including GPs, gynecologists, and dentists—contract directly with the HIF, which distributes payments based on two elements: a fixed component (70% of the payment per capita), and a variable component (up to 30% of the payment per capita based on achievement of a number of indicators with standardized targets). Payments to private PHC providers are intended to cover salaries, wages and compensations for a team of one physician, a nurse (required) and possibly non-medical workers (optional); investments in infrastructure and medical equipment; and operating costs associated with the delivery of medical care (e.g., the procurement of consumables, utilities, transportation, infrastructure, and medical equipment maintenance). The payment per capita (i.e., the total potential payment) is adjusted with the age of the patient, with a higher payment per capita for children and the elderly in accordance with international best practice. In addition, the HIF guarantees a minimum payment to new private PHC providers who start practicing, as well as private PHC providers based in rural areas where the number of patients is very limited. On the other hand, there is no cap on the number of patients that a PHC provider can register, while an unreasonable number of patients can negatively affect the amount of time spent with each patient and the quality of care. In addition, the variable part of the payment is based on indicators and targets that appear inadequate for a number of reasons. First, these indicators, which are negotiated between the HIF and the Doctors’ Chamber periodically, are currently focused on cost-control measures rather than performance (e.g., the total amount of prescriptions rather than the right prescriptions), and on processes rather than the effective delivery of services (e.g., number of invitations to preventive screenings rather than services effectively delivered). In addition, the performance targets are set at unchallenging levels that do not actually incentivize improvements: an exceedingly high share of private PHC providers (86 percent of GPs, 91 percent of gynecologists, and 95 percent of dentists) fully achieve all targets and receive 100% of the variable part of the payment.

10. **An analysis conducted as part of the PHC Assessment concluded that, for citizens of North Macedonia, the access to drugs typically prescribed at the PHC level in other countries may not be adequate.** First, the number of drugs that are covered by the HIF is quite restricted as the list has not been updated since 2008. Modern cost-effective therapies are not included in the list and the list includes drugs for which it is now known that risks outweigh potential benefits. Only private PHC providers can issue prescriptions, and for a number of drugs a recommendation from a specialist is required—including drugs that are typically prescribed by PHC providers in other countries. Such prescription restrictions may lead to an underconsumption of PHC drugs, particularly among patients who live far from specialist services, and also result in unnecessary overuse of specialist services. International comparisons suggest that prescription restrictions are stricter in North Macedonia for over 60 drugs, including: insulin, statins, antidepressants, alpha and beta blocking agents, hydrocortisone, antithyroid preparations, morphine, some antiepileptics, some antipsychotics, and some anti-infectives. Waiving such restrictions would, of course, require ensuring that private PHC providers are adequately trained to prescribe these drugs.

11. **The performance of the PHC system leaves much room for improvement.** This can be observed in the prevalent pattern of outpatient specialist consultation and hospitalization for ambulatory sensitive conditions, which could be effectively prevented, diagnosed, and treated by a well-functioning PHC system. Specifically, in 2017, among patients diagnosed with angina pectoris or chronic obstructive pulmonary disease or hypertension, and registered with a primary care doctor, 88.5 percent, 31.8 percent, and 31.6 percent respectively ended up visiting outpatient specialists. These top 3 ambulatory care sensitive conditions together accounted for 64 percent of all hospitalizations of ambulatory care sensitive conditions in 2017.¹⁰

12. **The PHC Assessment highlighted a number of issues facing the PHC system which could explain shortcomings in performance outcomes, including:**

- **The governance of the PHC system is weak, especially with regard to quality of care management,** more specifically: (a) comprehensive PHC policies are missing; (b) there is a lack of context-specific adaptation of standards of care; and (c) there are gaps in the available information and in the use of data for decisions, including very limited information on quality of care and a lack of capacity to analyze the data and translate these into policies. These constraints limit the potential of PHC to cater for the health needs of the population. For example, during the first half of 2018, PHC doctors referred 36 percent of consultations. A high referral rate is a symptom of low responsiveness and could also be due to the inability of PHC doctors to prescribe certain medicines, such as insulin or statins, or order specific diagnostic tests, such as endoscopies, magnetic resonance imaging or computed tomography scan.¹¹
- **Key inputs are facing sustained availability challenges,** including (a) access to publicly-financed drugs is restrained as the list of drugs is obsolete and has not been updated since 2008, and the need for repeated consultations to get prescriptions may act as a barrier to access; (b) access to PHC services is limited in small municipalities (some small municipalities are already facing a shortage of PHC services, which may worsen as a large share of PHC providers are approaching

¹⁰ *Primary health care organization, performance and quality in North Macedonia*, WHO (2019)

¹¹ *Ibid*

retirement age); and (c) PHC providers are poorly endowed with and/or make relatively little use of equipment to perform basic tests and lifesaving measures.

- **The service delivery system is fragmented, which means that:** (a) patients need to consult with multiple PHC providers to receive regular PHC services that are typically delivered by one PHC provider in other countries (e.g., preventive and immunization services, and patronage nurses of public health centers; private GPs; and private gynecologists); (b) patients also need to consult with specialists to receive regular PHC services; and (c) various PHC providers are not well coordinated with public providers in health centers which are not yet connected to the *MojTermin/eHealth* system, which further hinders communication and collaboration with private PHC providers.
- **The payment system does not provide incentives for improvements in performance,** which means that: (a) the private PHC provider payment system focuses mostly on cost control measures (for example, the ceiling on the total amount of drugs that can be prescribed by each private PHC provider may help contain pharmaceutical expenditure, however it is not adequate to incentivize optimal prescribing); (b) the variable portion of private PHC provider payments is based on unchallenging targets; and (c) the number of registered patients per private PHC provider is unlimited. Despite the reduction in the payment per capita as the number of registered patients increase, private PHC providers could potentially enroll as many patients as they like, which may be detrimental to the quality of care and their ability to actively manage their patients.

13. **The PHC Assessment made a number of specific recommendations for improving the system in the areas of financing, governance, inputs and service delivery.** These recommendations include:

- **Financing:**
 - (a) adjust the payment system (variable 30 percent) to incentivize improvements in performance. Payments should further focus on the appropriateness of services, including prescribing the right drugs to the right patients, and on the services that are actually delivered, with a focus on prevention services. Realistic targets should be negotiated periodically with PHC providers to make sure that these targets can spur tangible improvements in performance; and
 - (b) set a cap on the size of the patient roster per PHC provider. This could be based on international best practices.
- **Governance:**
 - (a) strengthen institutional capacity for oversight and monitoring of PHC. This would require:
 - (i) the definition of a vision regarding PHC;
 - (ii) the development of clinical guidelines and care pathways adapted to the local context;
 - (iii) capacity strengthening in terms of data analysis; and
 - (iv) the adaptation of the PHC model for disadvantaged and/or rural areas (which could include mobile units, or the development of a different payment system).
 - (b) strengthen the quality management function. This would include:
 - (i) the clear definition of the mandates of the existing institutions; and
 - (ii) capacity building of the existing institutions.

- **Inputs:**
 - (a) ensure the sustained generation and retention of human resources in health (there will be a need to maintain the generation of a high number of medical doctors who practice in the country, and to increase the number of nurses);
 - (b) harmonize the level of training for doctors working in PHC. This would require:
 - (i) determining the specific needs for training of individual doctors (there will be a need to assess the knowledge and skills of existing PHC providers and target specific training to their needs);
 - (ii) setting a deadline for—subsidized—retraining for all PHC providers;
 - (iii) strengthening the capacity of training and retraining institutions; and
 - (iv) developing rotations of PHC providers in secondary hospitals to build collaboration and trust across levels of care.
 - (c) expand the training of nurses to take over additional responsibilities (those responsibilities could include outreach activities, basic care, and counselling).

- **Service delivery:**
 - (a) strengthen the capacity of PHC providers to manage cases. This would require:
 - (i) developing decision support tools to implement care pathways, which could be integrated within the *MojTermin*/eHealth system as PHC providers enter information about patients and diagnoses, or built into mobile phone apps;
 - (ii) expanding the list of drugs that can be prescribed at the PHC level, especially for the treatment of chronic conditions; and
 - (iii) extending the validity of prescriptions for long-term treatments.
 - (b) integrating PHC services to promote a stronger focus on the person. This could include:
 - (i) integrating preventive services and immunization services into the scope of responsibilities of private PHC providers;
 - (ii) incorporating private gynecologists into the regular private PHC sector;
 - (iii) incentivizing group practices (co-located or virtual), where GPs share rosters of patients and resources under a single contract with the HIF; and
 - (iv) expanding the scope of work of nurses and patronage nurses and including outreach services within the group practices.

14. **The PHC Performance Initiative¹² Vital Signs Profile (VSP) process identified specific areas which require attention in order to improve overall PHC system performance**, including governance and management, priority setting and adjusting to public health needs, the PHC health workforce (including quality assurance, workforce competence and the effective use of community health workers), population health management, and health facility organization and management. The summary documents from this process are included in Annex 1.

15. **In terms of methodology, the VSP follows a standardized approach and looks systematically at the following aspects of PHC:**

- **Financing** – to understand how much PHC is prioritized within the health budget, how much is being spent on PHC, and how much is being provided by the Government or other sources;
- **Capacity (governance; inputs; population health and facility management)** – to assess whether the system has adequate inputs, including availability, distribution and functionality of facilities,

¹² *Primary Health Care Progression Model Assessment: North Macedonia (draft, October 2019)*

equipment, drugs, IT and human resources for PHC; and whether the system is well governed, with good facility management and effective, proactive management of population health;

- **Performance (access, quality, service coverage)** – to measure whether the system delivers primary care that is accessible (minimal financial and geographical barriers) and of good quality (accurate and appropriate diagnosis, treatment and follow-up for patient-centered, coordinated, continuous, and comprehensive care), with extensive effective coverage of essential services; and
- **Outcomes and equity** – to understand whether the system generates better health outcomes, quality of services and access to care for all segments of the population, including the most vulnerable.

16. **The VSP includes data from a number of data sources.** The *Financing* indicators were developed based on the National Health Accounts, using the SHA2011 methodology. The access indicators under the *Performance* domain were derived from the EUROSTAT database (2018), the quality indicators from *MojTermin* data (2018) and from a standardized survey of Quality and Costs of Primary Care in Europe (QUALICOPC, 2015), and the service coverage indicators from the PHC-related indicators included in the service coverage index used by WHO to monitor progress on universal health coverage-UHC (Global Monitoring Report on UHC, 2019). The *Equity in Access* index was calculated from EUROSTAT data (2018); the Equity in Coverage and Equity in Outcome indexes will be incorporated as soon as data from the recent Multi-indicator Cluster Survey (MICS) (2018) is validated. The scores for the *Capacity* domain were based on a mixed methods assessment (PHC Progression Model) of 33 measures and scores were agreed upon by members of the Steering Committee for this work, which comprised of representatives of various stakeholders, whose contribution is greatly appreciated, and which included the United Nations Children’s Fund, the Association of Family Medicine Specialists and General Practitioners, the Doctors’ Chamber, the Sector for Primary and Preventative Health Care of the MOH, WHO, the MOH, and the World Bank.

17. **During discussions with the Minister of Health, several complementary areas were identified which needed to be further developed to better support PHC and the effective integration of PHC and higher level services.** Specific areas mentioned included emergency medical services (EMS), improved pharmaceutical policies and management, and digital health systems. These areas were highlighted due to both perceived issues with the areas themselves and their importance to the effective operation of the PHC system. Moreover, EMS in particular will become increasingly important as the demographics of the PHC workforce continues to change (37 percent of GPs are currently 55+ years of age), and potential policy and organizational changes may allow redeployment of physicians from the EMS system to the PHC system.

18. **EMS capacity is limited and could better support an integrated health care system.** A recent World Bank assessment of the EMS system¹³ found that, compared to other countries with established EMS systems (e.g., in Europe and North America), North Macedonia has more ambulances, and fewer calls per capita. Actual calls represent about 60 percent of the number that would be expected nationally, reflecting either a lack of trust in, or knowledge of, the EMS system. In either case, it places an undue burden on the PHC system, which is often closest to where accidents and emergencies are taking place. There are also issues regarding the overall control of the EMS system, the lack of communication and dispatch systems, and the age of vehicles and equipment, although the quantity of staff and their level of training of staff appear to be good. While PHC practices are supposed to provide services to patients after hours (nights and weekends), the EMS system, which is under Health Centers, currently provides the majority of this care. In addition, an efficient and effective referral and emergency system would ensure

¹³ *North Macedonia Emergency Medical Services Rapid Assessment Report*, World Bank, April 30, 2019.

that patients with emergency conditions are brought to the most appropriate level of care in the first instance, if they are picked up by the EMS system, and that patients who show up at PHC facilities with conditions that cannot be safely handled or treated at that level of care can be transported to a higher level of care with appropriate treatment en route.

19. **Prescription drugs are critical for supporting PHC service delivery, but increasing costs threaten to crowd out fiscal space for PHC.** Between 2016 and 2018, prescription drug costs increased 7.5 percent (EUR 3.2 million), while the number of prescriptions increased by 6.0 percent, to 11.4 prescriptions per capita. Appropriate use (rational prescribing) and cost/quality control with respect to prescriptions are critical success factors for developing an effective PHC system. The recent Public Finance Review states: *“Potential efficiency gains in the existing system are concentrated in the areas of provider payments at the primary health care level, the planning of specialist services, and pharmaceuticals”*.¹⁴ The PHC Assessment notes that while consultations with PHC providers do not require copayments, drugs that are prescribed at the PHC level may require out-of-pocket (OOP) payments. The country’s information systems do not allow for computing estimates of OOP payments for drugs. However, reimbursements of drugs that are prescribed at the PHC level and are delivered by private pharmacies are subject to a monthly cap. Anecdotal evidence, and observations during field visits conducted as part of the PHC Assessment, suggest that the monthly caps are often reached before the end of the month, which confirms that the delivery of drugs actually requires OOP payments. These factors all suggest that addressing prescription drug policies are a critical factor in achieving overall PHC reform.

20. **There has been significant progress in improving digital health information systems over the past several years, with ongoing enhancements to the national digital health and electronic health record system (MojTermin).** A recent rapid assessment¹⁵ of the MojTermin system found that it is functioning well, with ongoing improvements being implemented by a motivated team of local developers within the MOH. However, the assessment also highlighted a number of areas of potential improvement, including the integration of this system with the HIF information system, improved decision support capabilities, and the development of standards for the production of PHC performance indicators. The last area has taken on special significance in view of the agreement between the Doctor’s Chamber and the HIF to increase the proportion of PHC physician compensation to be based on doctor performance and an expansion of the list of indicators.

C. Options Considered for Intervention Approaches

21. **In examining intervention approaches, three main options were considered:**

- (a) **a narrowly focused approach which would only consider interventions related to the PHC system itself** – in this approach, any interventions would need to have a specific impact on the PHC system in order to be considered. While this would be useful to help address some of the issues identified within the PHC system, it would not specifically address linkages between the PHC system and the broader health care system and therefore may not optimize the role of PHC within that system. This may lead to sub-optimal results;
- (b) **a broad system-wide health system reform approach which would attempt to address key issues in not just PHC, but in hospitals, public health and health financing as well** – such an approach would necessarily have to focus on a more limited set of interventions in PHC, in

¹⁴ *Public Finance Review: FYR Macedonia*, World Bank, July 2018, p. 155.

¹⁵ *North Macedonia Digital Health System Assessment Report*, World Bank, May 29, 2019.

order to allow interventions in other parts of the health system to be addressed as well. These types of approaches have been tried in the past with mixed results, and they may result in the exclusion of important aspects of PHC reform and could therefore result in a more limited impact in terms of increasing the effectiveness and functioning of the PHC system. In addition, other development partners, including the EU, have conducted analyses of secondary care and are continuing to provide support to the Government on those areas. While the World Bank has been coordinating and engaging in the dialogue with partners to ensure consistency of messages, it may be more strategic to continue this synergistic approach in providing support to the government;

- (c) **a slightly expanded approach which would include interventions both in the area of PHC and a limited set of interventions which are considered essential to improving overall PHC system performance** – in this approach, the majority of the interventions would be focused on the PHC system, with a more limited set of interventions in other critical areas, such as EMS, pharmaceuticals and digital health information systems to support PHC. The World Bank technical work has been focused on those areas and has looked at those systematically over the past two years.

22. **The third option is being recommended for the specific interventions of any World Bank financed project.** Considering the pros and cons of each option, it was determined that the slightly expanded approach, which would keep a primary focus on PHC and its relationship to other parts of the health system, would be preferable at this point in time.

RECOMMENDED INTERVENTIONS

A. Objective of Recommended Interventions

23. **The objective of the recommended interventions is to increase the utilization and quality of PHC services and to facilitate complementary reforms which improve PHC system performance.** This objective addresses several aspects that are critical to improvements in the sector, including increased utilization of PHC services by the population in general, and high-risk groups in particular (with emphasis on detection and management of NCDs); improvements in the quality of PHC services, through objective measures which will be collected in the electronic health record and reported to the HIF as part of the performance incentive program; and complementary reforms in terms of better controls of the costs and quality of pharmaceuticals, more rational prescribing practices (especially for PHC), and improvements in the continuum of care through effective linkages with other levels of care.

B. Key Results of Recommended Interventions

24. **The indicators proposed for assessing the results of the recommended interventions** address NCD prevention and control (Indicators i and ii), the availability of a technical base for providing quality care (Indicator iii), improvements in rational prescribing (Indicator iv), and EMS system improvements (Indicator v and vi) which will help improve the continuity of care and the referral system. They are as follows:

- i. Increased percent of primary health care patients aged 45+ screened for hypertension
- ii. Increased percent of diabetes patients whose A1C is under control through regular testing
- iii. Improved adherence to guidelines in PHC facilities

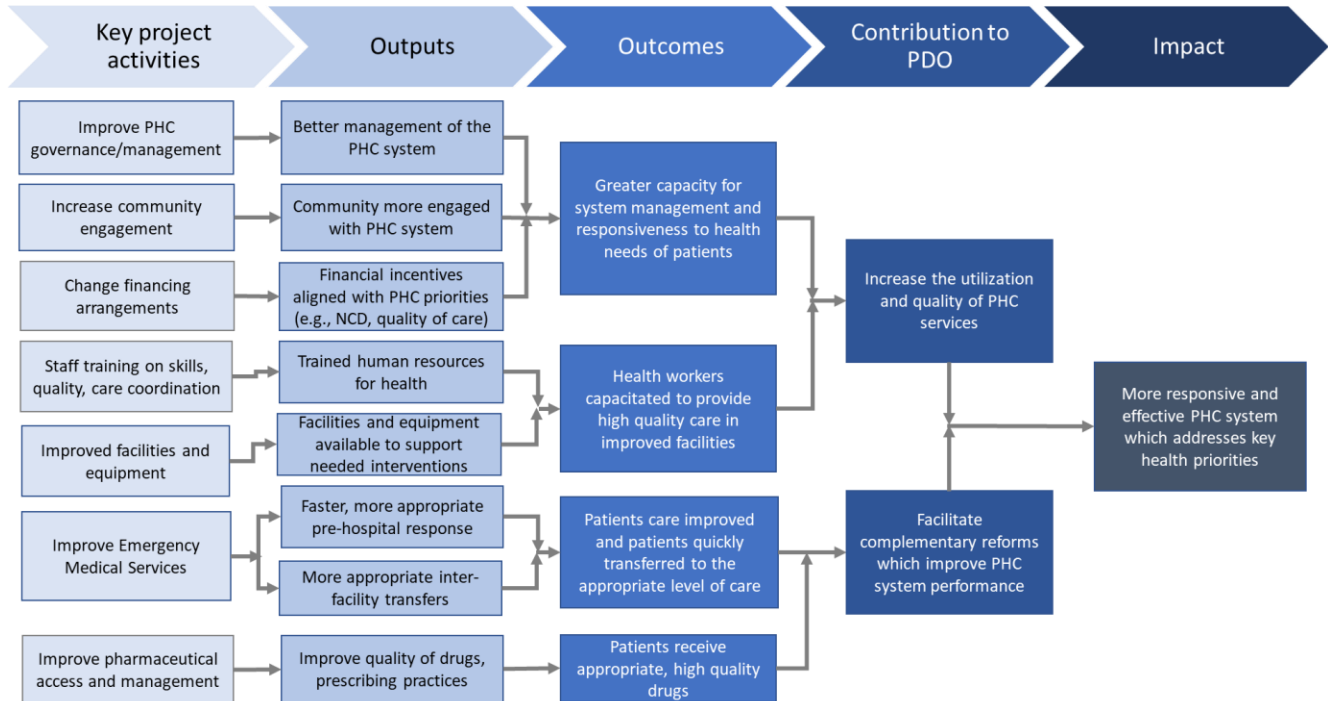
- iv. Increase in the percent of PHC physicians who have minimum equipment requirements
- v. Decline in the ratio of antibiotic prescriptions per 1,000 patients
- vi. Decline in the regional variation in EMS teams

RECOMMENDED INTERVENTION AREAS

A. Concept of Recommended Approach

25. The overall concept of the recommended approach is to focus on a series of interventions which will address the major deficiencies in North Macedonia’s PHC system, while also strengthening the complementary aspects of the system related to pharmaceutical management and prescribing, information systems and EMS. The intent is to more fully situate PHC within the overall health system so that it can play a more central role in the prevention, detection and control of most NCDs, as well as serve as the initial point of contact for the vast majority of patient encounters, acting as a ‘gatekeeper’ to higher-cost clinical care. At the same time – recognizing the upcoming changes to the HIF payment mechanism – the approach would seek to improve key quality indicators, both as a result of the incentive value of the provider payment changes and by ensuring that PHC physicians have the technical and knowledge base needed to provide high quality care. The below illustration shows the theory of change (see Figure 6) underlying the interventions, which is followed by the interventions which are recommended. These interventions include policy/reform-oriented activities, as well as a number of specific investments.

Figure 6. Theory of Change



PHC Governance, Management, and Financing

26. This group of interventions would provide technical assistance, training and other inputs to improve the strategic approach, regulatory framework, governance, management and financing of the PHC system.

27. Policy/reform-oriented activities would include phased interventions aimed at strengthening the institutional capacity for oversight and monitoring of the PHC system, including the PHC oversight function in the MOH; developing a strategic approach on the vision, roles and services that the integrated PHC system is to be providing; strengthening regulatory capacity to formalize necessary changes and align those with the agreed strategic vision; developing appropriate scopes of practice for PHC physicians and nurses; and, implementing governance and management arrangements at the facility level. This would include structures/approaches for the oversight of private PHC practices in public health facilities (concessionaires), the promotion of patient-centered care, and enhanced community engagement. Efforts would also be made to strengthen the stewardship function in the MOH with respect to PHC with an emphasis on public-private relationships in the provision of care at the PHC level. Another important set of activities would support improved management of PHC facilities through revised governance structures (including incentives for group practice arrangements), and effective planning (including masterplans and facility business plans), budgeting and management information systems and data analytics. A final important set of activities in this group of interventions would require working with the HIF and other stakeholders to support the revision of the PHC financing arrangements to improve incentives for better performance, providing care in rural and remote areas, and providing high quality care using agreed and transparent metrics.

28. The key investment-oriented activities in this area would include training in new governance and management arrangements and supporting providers and PHC system management with additional management expertise to build institutional capacity during the transition process to allow them to get used to the new stewardship, oversight and monitoring functions of health authorities.

PHC Quality and Service Delivery Capacity

29. This group of interventions would provide technical assistance, training, software, equipment and limited civil works (renovations) to improve the quality, knowledge and technical base of PHC to improve the overall level and quality of service delivery.

30. Policy/reform-oriented activities would include strengthening quality management, including the development of clinical pathways, establishing key quality metrics, and developing guidelines for care coordination, patient management and engagement.

31. Investment-oriented activities would focus on improvements in the training and qualifications of PHC staff (both physicians and nurses, including PHC nurses, patronage nurses and midwives); improved access and utilization of health information for care coordination (including with higher levels of care); clinical decision support and more effective patient management and engagement, with particular emphasis on (a) NCD and chronic disease prevention and management; (b) care for the elderly and those with disabilities; (c) mental health services; and (d) maternal, neonatal and child care. A final set of activities would improve the technical base of PHC facilities with facility renovation (based on the PHC master plan and facility business plans), improved diagnostic, screening and therapeutic equipment, as well as the capacity to provide mobile and outreach services.

Emergency Medical Services

32. This group of interventions would provide technical assistance, training, software, equipment, vehicles and limited civil works (renovations) to improve the scope, distribution and quality of EMS services to complement PHC service delivery and facilitate referral to higher levels of care.

33. The key policy/reform related activities would include the development of an overall vision for EMS in North Macedonia and the creation of a lead agency for EMS (governance, management and operational structures), as well as a clear definition of the relationship between EMS and PHC in the provision of services that will be very important in improving the actual patient experience in both levels of care. It would also support the development of specific standards for (a) the ratio of ambulances per million population at the national level; (b) the geographic distribution of ambulances at the sub-national level; and (c) capital upgrading and replacement strategies.

34. On the investment side, one set of activities would support the development of computer-aided priority dispatch capability and automated patient record with appropriate linkages to the broader digital health system, as well as development and/or strengthening of communication linkages with other emergency services (police and fire), while a second set would seek to improve the technical base of the EMS system, including vehicles, equipment, ambulance facilities and the training/qualifications of EMS staff.

Pharmaceutical Access and Management

35. The final group of interventions would provide technical assistance, training, software, and equipment needed to improve the access to high quality pharmaceuticals, especially for PHC, and effective management of the drug supply in North Macedonia, with particular attention to the control of falsified medicines.

36. Activities related to policy/reforms would include support in developing an improved regulatory framework for pharmaceuticals, with specific attention to the areas of improved drug tracking to reduce falsified drug distribution, registration/market authorization, pharmacovigilance, procurement and pricing (as well as reference pricing), and help to facilitate the appropriate role of PHC in the rational prescribing and monitoring of pharmaceuticals to patients, including those with chronic conditions and NCDs. This would include reviewing policies on the types of drugs that PHC providers can prescribe and adjusting to the extent possible.

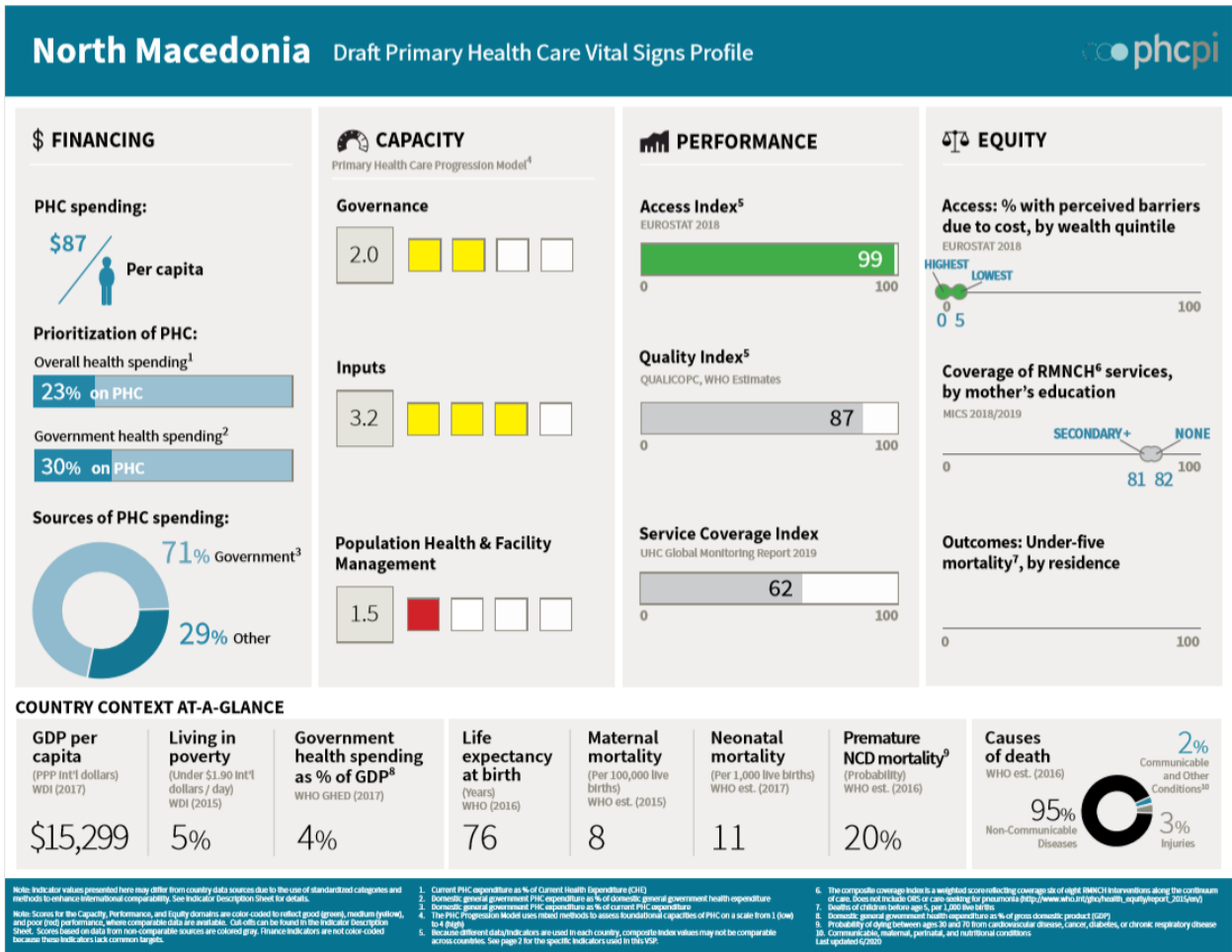
37. The legal provisions related to the identification and authentication of individual medicine packs will be based on The Commission Delegated Regulation (EU) 2016/161 of 2 October 2015 supplementing Directive 2001/83/EC of the European Parliament and of the Council by laying down detailed rules for the safety features appearing on the packaging of medicinal products for human use. This Regulation sets out a system where the identification and the authentication of medicinal products is guaranteed by an end-to-end verification of all medicinal products bearing the safety features, supplemented by the verification by wholesalers of certain medicinal products at higher risk of falsification. The verification of the authenticity of a unique identifier should be performed by comparing that unique identifier with the legitimate unique identifiers stored in a repositories system.

38. Investment related activities would include the training of regulators, MOH staff, and health providers; developing systems for drug tracking consistent with EU standards; and developing systems for drug utilization monitoring and feedback.

NEXT STEPS

39. A crucial next step would be obtaining a formal request from the Minister of Finance for a new World Bank financed health project, including an indicative amount. The timing of this request would largely depend on the schedule for the planned election and the formation of a new government.
40. Following the receipt of a formal request, the next step would include continuing discussions with the MOH and other stakeholders on the recommended approach, including discussion of a concept note. This process could only begin once the MOH is able to focus on issues other than COVID-19; given the recent increase in the numbers of COVID-19 cases, this may well be into the next fiscal year.
41. Once the MOH and other stakeholders have had an opportunity to review and consider the recommended approach, adjustments to the draft Project Concept Note would be made and a formal concept review would take place. This would be followed by the regular project preparation process. The substantial amount of preparatory work that has already been carried out suggests that this process could be completed within a relatively short period (six to nine months) of time.

Annex 1 – Vital Signs Profile



NORTH MACEDONIA	SCORE
GOVERNANCE	2.0
Governance and Leadership	2.0
Measure 1: Primary health care policies (1/2)	■ ■ ■ ■
Measure 2: Primary health care policies (2/2)	■ ■ ■ ■
Measure 3: Quality management infrastructure	■ ■ ■ ■
Measure 4: Social accountability (1/2)	■ ■ ■ ■
Measure 5: Social accountability (2/2)	■ ■ ■ ■
Adjustment to Population Health Needs	2.0
Measure 6: Surveillance	■ ■ ■ ■
Measure 7: Priority setting	■ ■ ■ ■
Measure 8: Innovation and learning	■ ■ ■ ■
INPUTS	3.2
Drugs and Supplies	4.0
Measure 9: Stock-out of essential medicines	■ ■ ■ ■
Measure 10: Basic equipment availability	■ ■ ■ ■
Measure 11: Diagnostic supplies	■ ■ ■ ■
Facility Infrastructure	3.3
Measure 12: Facility distribution	■ ■ ■ ■
Measure 13: Facility amenities	■ ■ ■ ■
Measure 14: Standard safety precautions and equipment	■ ■ ■ ■
Information Systems	3.7
Measure 15: Civil Registration and Vital Statistics	■ ■ ■ ■
Measure 16: Health Management Information Systems	■ ■ ■ ■
Measure 17: Personal care records	■ ■ ■ ■
Workforce	1.8
Measure 18: Workforce density and distribution	■ ■ ■ ■
Measure 19: Quality assurance of primary health care workforce	■ ■ ■ ■
Measure 20: Primary health care workforce competencies	■ ■ ■ ■
Measure 21: Community health workers	■ ■ ■ ■
Funds	3.3
Measure 22: Facility budgets	■ ■ ■ ■
Measure 23: Financial Management Information System	■ ■ ■ ■
Measure 24: Salary payment	■ ■ ■ ■
POPULATION HEALTH AND FACILITY MANAGEMENT	1.5
Population Health Management	2.0
Measure 25: Local priority setting	■ ■ ■ ■
Measure 26: Community engagement	■ ■ ■ ■
Measure 27: Empanelment	■ ■ ■ ■
Measure 28: Proactive population outreach	■ ■ ■ ■
Facility Organization and Management	1.0
Measure 29: Team-based care organization	■ ■ ■ ■
Measure 30: Facility management capability and leadership	■ ■ ■ ■
Measure 31: Information system use	■ ■ ■ ■
Measure 32: Performance measurement and management (1/2)	■ ■ ■ ■
Measure 33: Performance measurement and management (2/2)	■ ■ ■ ■

NORTH MACEDONIA	SCORE	PERCENTAGE	SOURCE	YEAR
ACCESS	99			
Financial				
Perceived access barriers due to cost*		2%	EUROSTAT	2018
Geographic				
Perceived access barriers due to distance*		0%	EUROSTAT	2018
QUALITY	88			
Comprehensiveness				
<i>No recent indicator available from international or national data sources</i>				
Continuity				
DTP3 dropout rate*		6%	WHO Estimates	2017
Treatment success rate for new TB cases		88%	TB surveillance and monitoring report in Europe	2019
Person-Centeredness				
Patient understands what the provider said		89%	QUALICOPC	2015
Provider checked for comorbidities		67%	QUALICOPC	2015
Provider availability				
Sufficient visit length		94%	QUALICOPC	2015
Sufficient opening hours		81%	QUALICOPC	2015
Home visits available		88%	QUALICOPC	2015
Off hours care availability		76%	QUALICOPC	2015
Provider Competence				
<i>No recent indicator available from international or national data sources</i>				
Safety				
Adequate waste disposal: gloves		95%		
Adequate waste disposal: syringes		93%		
Other				
Percentage of consultations by GPs with referral to a specialist ²		31%	WB Calculations using MojTermin data	2018
Percentage of patients diagnosed with an ACSC requiring hospitalization for that condition at least once in 2017 ⁴		2%	Primary health care organization, performance and quality in North Macedonia	2019
SERVICE COVERAGE	62			
Reproductive, Maternal, Newborn and Child Health				
Demand for family planning satisfied with modern methods		30%	UHC Global Monitoring Report	2019
Antenatal care coverage (4+ visits)		94%	UHC Global Monitoring Report	2019
Coverage of DTP3 immunization		91%	UHC Global Monitoring Report	2019
Care-seeking for suspected child pneumonia		93%	UHC Global Monitoring Report	2019
Infectious diseases				
Tuberculosis cases detected and treated with success		70%	UHC Global Monitoring Report	2019
People living with HIV receiving anti-retroviral treatment		49%	UHC Global Monitoring Report	2019
Children under 5 with diarrhea receiving ORS		44%	WHO estimate	2015
Non-Communicable Diseases (NCDs)				
% of population with normal blood pressure***		100%	UHC Global Monitoring Report	2019
Cervical cancer screening		8%	IPH Report on population health in Republic of Macedonia	2017

*Indicators where lower values are preferable were transformed before inclusion in the index. The modified indicator was defined as 100-X, where X is the original percentage shown in this table. **Country-specific (proxy) indicator, used in absence of globally comparable survey data. ***Percentage of adult population with normal blood pressure is based on age-standardized estimates. These distributions are rescaled to provide finer resolution before inclusion in the index. Rescaled Indicator = (X-50)/(100-50)*100, where X is the prevalence of normal blood pressure. For more details see Tracking UHC: 2017 Global Monitoring Report. Note: Summary scores for the domains of Access, Quality, and Coverage are calculated by taking the average of indicator values within each subdomain, and then taking the average across subdomain scores. † Not included in the calculation of the Index.