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Short communication

Value-based healthcare in North Macedonia: challenges and first steps toward implementation

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Introduction

European healthcare systems are increasingly challenged by population ageing, the growing burden of chronic diseases, rising healthcare expenditures and workforce shortages. These pressures have accelerated the transition from traditional volume-based models toward Value-Based Healthcare (VBHC), an approach focused on maximizing patient outcomes relative to healthcare resources (European University Hospital Alliance, 2024). VBHC extends beyond cost containment by promoting patient-centered care, standardized outcome measurement and reimbursement models linked to health outcomes. Porter and Teisberg in 2006 defined value as the health outcomes per dollar spent, while the Institute for Healthcare Improvement expanded this vision through the Triple Aim, emphasizing better population health, enhanced patient experience, and lower costs of care. Successful implementation requires integrated care pathways, routine measurement of outcomes and costs, digital infrastructure and payment systems that reward value rather than service volume (Porter and Teisberg, 2006). Although North Macedonia has introduced several important reforms in health system, including diagnosis-related group reimbursement, national e-health services and improvements in health financing, important structural barriers continue to limit the transition toward VBHC. This short communication summarizes the current state of the healthcare system in North Macedonia and highlights the main priorities for future VBHC implementation based on previously published evidence.

Materials and methods

This short communication is based on a previously published narrative review evaluating Value-Based Healthcare implementation in selected European countries and the readiness of the healthcare system in North Macedonia. Evidence from peer-reviewed literature and national and international policy documents was synthesized to identify major challenges, existing reforms and implementation priorities relevant to the adoption of VBHC.

Results and discussion

Several European countries have successfully incorporated VBHC principles into routine healthcare delivery. Experiences from the Netherlands, Germany and Spain demonstrate that standardized outcome measurement, multidisciplinary care, patient-reported outcomes and value-oriented reimbursement can improve both

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quality of care and healthcare efficiency. Similar pilot initiatives implemented in Slovenia and Bulgaria indicate that these principles are also applicable in healthcare systems with organizational characteristics comparable to North Macedonia (Douglas et al., 2025). North Macedonia has established several important prerequisites for VBHC through reforms in financing, digitalization and healthcare organization. Nevertheless, the transition toward VBHC remains constrained by low public healthcare financing, high out-of-pocket expenditure, underutilization of primary care, fragmented service delivery, incomplete data integration and limited use of routine health information for outcome monitoring and strategic decision-making (Grozdanova et al., 2025).

In 2021, total health expenditure accounted for 8.5% of GDP, while public funding covered only 54.5% of total health expenditure. At the same time, out-of-pocket payments reached 41.7%, substantially exceeding the EU average of 15.0%, thereby placing a considerable financial burden on households and limiting equitable access to healthcare. Although the "*My Appointment*" platform integrates referrals, appointments and electronic medical records from public healthcare institutions, interoperability between public and private providers remains limited, standardized outcome measurement is not routinely implemented, and available health data are insufficiently utilized for healthcare planning and quality improvement. Building on these findings, future VBHC implementation should focus on strengthening public investment in healthcare, reducing the burden of out-of-pocket payments, reinforcing multidisciplinary primary care, expanding interoperable digital infrastructure and establishing standardized outcome measurement to support benchmarking and evidence-informed decision-making (Milevska Kostova et al., 2024).

In addition to structural and financial reforms, education and stakeholder engagement represent key prerequisites for the successful implementation of Value-Based Healthcare. As an important first step toward raising awareness and strengthening understanding of VBHC principles, the American Chamber of Commerce in North Macedonia (AmCham) organized a national educational workshop on Value-Based Healthcare in November 2025, bringing together representatives from academia, including the Faculty of Pharmacy, Ss. Cyril and Methodius University in Skopje, healthcare institutions, regulatory authorities, industry and other key healthcare stakeholders. In parallel, the Faculty of Pharmacy, Ss. Cyril and Methodius University in Skopje, introduced VBHC as part of the revised undergraduate curriculum within the course Social Pharmacy and Public Health starting from the 2025/2026 academic year.

These activities represent important initial steps toward raising awareness, strengthening professional competencies and creating a culture supportive of value-based healthcare

Conclusion

The implementation of Value-Based Healthcare offers an important opportunity to improve healthcare quality, efficiency and patient outcomes in North Macedonia. Achieving this goal will require sustained health system reforms supported by standardized outcome measurement, sustainable financing, continued education and stakeholder engagement.

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