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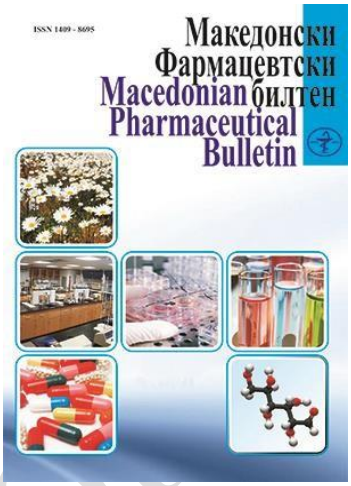

Title: Remodeling healthcare systems: moving from volume to value

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Remodeling healthcare systems: moving from volume to value

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Abstract

Healthcare systems globally are facing escalating pressures from different factors such as population ageing, non-communicable disease burden, and shortage of health care workforce underscoring the urgent need for innovative strategies to enhance efficiency and ensure long-term sustainability. Traditional reforms, focused on cost containment and isolated interventions, have failed to resolve structural inefficiencies in care delivery. Value-Based Healthcare is a transformative model that aligns health outcomes towards tailored patients need, but with sustainable cost and efficient control. By shifting the focus from service volume to measurable results, Value-Based Healthcare promotes integrated multidisciplinary care, transparent benchmarking, and payment models that reward quality. This paper outlines the core principles of Value-Based Healthcare, along with key actions and steps for its effective implementation within healthcare systems. Drawing on best-practice models from leading European healthcare institutions, priorities should include digital integration, coordinated policy action, and active stakeholder engagement to enable healthcare systems to deliver high-quality, patient-centered, and cost-effective care capable of meeting future demands.

Key words: Value-Based Healthcare (VBHC), health outcomes, integrated care practice, payment reform, digital transformation

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Introduction

The European Union (EU) is undergoing a profound demographic transformation that will redefine its socioeconomic landscape in the coming decades and impose unprecedented demands on healthcare and social services. As of 1 January 2024, 21.6% of the EU's population (449.3 million) was aged 65 or older, with just over three working-age individuals (15–64) available to support each senior (Eurostat, 2024; Darvas, 2024). In the same time there is an escalating burden of non-communicable diseases, which remain the leading cause of death and disability in the World Health Organization (WHO) European Region, causing 1.8 million avoidable deaths annually and costing an estimated US$ 514 billion each year (WHO/Europe, 2025). Moreover, workforce shortages have become a structural challenge, with a current deficit of around 1.2 million doctors, nurses, and midwives across EU countries and projections of up to 4.1 million by 2030 (European Parliament, 2025; OECD/European Commission, 2024).

Past and in some countries still ongoing reforms in health care systems have had limited focus on isolated aspects such as drug prices, the number of uninsured individuals, excessive administration, or limited use of information technology (Porter & Teisberg, 2006). This fragmented approach has produced only incremental, uncoordinated changes that, despite incorporating advanced technologies (e-records, AI, big data) and targeted improvements in clinical practice (evidence-based medicine, measurable process metrics), administration (process optimization), and organization (care coordinators, emergency clinics), still fail to address the fundamental structure of healthcare delivery (Porter, 2023).

From a strategic perspective, the core challenges facing healthcare systems fall into three categories: (1) the cost of insurance access, (2) standards of service coverage, and (3) the structure of care delivery. Of these, the delivery structure is the main driver of both quality and cost, for which systemic transformation rather than isolated actions is required for achieving long-term improvement (WHO, 2018).

The core weakness of modern healthcare systems is wrong conception of competition. Instead of fostering quality improvement, cost reduction, and innovation, competition remains centered on service volume rather than on creating greater value for patients (Porter & Teisberg, 2006). This distortion gives rise to significant and often

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inexplicable variations in both the quality and pricing of identical medical services, as it fails to reward best practices or eliminate inefficient providers. As a result, healthcare systems exhibit systemic underperformance and generate pervasive dissatisfaction among all stakeholders. Together, these demographic, epidemiological, and social trends underscore the urgent need for innovative strategies to enhance efficiency and ensure the long-term sustainability of healthcare systems (Baicker, 2008; Shrank et al., 2021).

Value as the foundation: a new model for quality and sustainable healthcare

Achieving meaningful progress demands rethinking the principles that define success in the health sector. This entails moving away from a "zero-sum" competition that prioritizes service volume toward a "positive-sum" competition driven by improved health outcomes, enhanced patient journey, and creating genuine value, all while maintaining effective cost control. This model shifts patients from passive recipients to active participants in their care, with competition among providers fostered through transparent measurement and comparison of clinical outcomes and patient-reported experiences (Porter & Teisberg, 2006). Standardized outcome metrics and integrated digital platforms enable real-time tracking, facilitate benchmarking across providers, reduce administrative burdens, and drive continuous quality improvement by stimulating clinical innovation, coordination and creative approaches to care delivery organization (WHO, 2018). Crucially, the model of Value-Based Healthcare (VBHC) enables rational resource allocation by directing investments toward interventions with demonstrated population-level impact and systematically rewarding quality rather than quantity. As a result, it reduces reliance on unnecessary and costly procedures, while reallocating freed resources to expand healthcare access equitably (Porter & Lee, 2013; WHO, 2020).

Redefining value in health systems

Value in healthcare is measured as the ratio between achieved health outcomes and total costs across the complete cycle of care for a specific medical condition (Porter & Teisberg, 2006). This focus on defined conditions (e.g., heart failure or diabetes) enables meaningful outcome comparisons, identification of best practices, and

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elimination of unnecessary interventions. Crucially, patients are central to value determination, assessed through both clinical outcomes and self-reported experiences, feedback, and quality of life (OECD & European Commission, 2024; WHO, 2020, 2025).

Unlike traditional models that measure success by service volume or percentage of Gross Domestic Product, the value-based strategy defines success through actual patient benefit per invested cost, prioritizing effectiveness over expenditure minimization (Baicker, 2008; WHO, 2018). Cost-control approaches focused on short-term savings, which lead to long-term losses, are replaced by strategies covering the patient's full cycle of care: from diagnosis through rehabilitation and relapse prevention (Cutler, 2010; Hampson et al., 2023). Rather than selecting inexpensive but incompletely effective interventions, this model requires systematic outcome tracking and coordinated collaboration among all health system participants across the entire care continuum (Porter & Teisberg, 2006; Shrank et al., 2021). This implies collective accountability for clinical outcomes and resource utilization, representing a radical yet essential shift from today's fragmented healthcare paradigm (Ciulla et al., 2023).

Value-based healthcare

Driving value through outcome-based competition

Outcome-based competition represents a self-reinforcing process where competition on measurable outcomes drives continuous improvement in both care quality and resource utilization, ultimately delivering patient value (Teisberg, 2020). This approach establishes three critical mechanisms. Firstly, evidence-based reputation systems that replace institutional prestige with transparent outcome metrics including risk-adjusted clinical results and patient-reported data enabling cross-provider benchmarking. In addition, the establishment of integrated practice units (IPUs) that coordinate complete cycles of care across multidisciplinary teams for specific conditions, ensuring shared accountability and needs-based resource allocation. Lastly, value-aligned reimbursement models that transition from fee-for-service to bundled payments and pay-for-performance programs tied to long-term outcomes, generating systemic efficiencies through reduced unnecessary interventions, duplicate diagnostics, and preventable hospitalizations (Ciulla et al., 2023; Cutler, 2010; Shrank et al., 2021; WHO, 2018).

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Synergy between quality and cost

VBHC demonstrates that improving quality and reducing costs can be mutually reinforcing. Evidence- oriented practices such as timely medication use, adoption of less invasive procedures, and eliminating inefficiencies like misdiagnoses and unnecessary repeats reduce the estimated 30% of expenditures lost to poorly coordinated care. (OECD & European Commission, 2024; Shrank et al., 2021). Realizing this requires: (1) outcome-based competition, (2) full digital integration of system participants, (3) payment models tied to achieved outcomes, and (4) interdisciplinary training (Porter & Teisberg, 2006; WHO 2018, 2020). When implemented cohesively, these elements create patient-centered care systems where quality enhancements automatically optimize resource utilization. The result is sustainable delivery of high-quality care while maintaining maximum cost control at every operational level (Ciulla, 2023; Cutler, 2010). Notably, healthcare improvements do not necessarily have to rely on expensive technologies, as optimal use of existing tools like Electronic Health Records often yields greater efficiency gains. This applies particularly to chronic disease management, where early detection and patient education can substantially reduce long-term costs (OECD & European Commission, 2024;WHO, 2020).

Implementation of value-based healthcare model

Implementation of VBHC model faces substantial barriers, including fee-for-service incentives, fragmented care delivery, insufficient interoperability between health information systems, and limited availability of standardized outcome data. Addressing these obstacles requires a structured, evidence-based roadmap capable of guiding reform in a stepwise manner. The fundamental concept of VBHC was established by Porter and Teisberg in 2006, and following its successful implementation in leading European healthcare institutions, a handbook containing the Implementation Matrix was developed. This matrix translates proven strategies into locally adaptable action plans, ensuring that the transformation process remains outcome-driven while responsive to contextual realities (EIT Health, 2020, Porter & Lee, 2013).

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Conclusion

By shifting the focus from volume-based service to measurable results that matter to patients, VBHC creates an environment where quality and cost-efficiency are aligned to achieve lasting health system transformation. The overview of VBHC presented in this paper demonstrates that successful implementation requires overcoming structural, cultural, and technological barriers through coordinated policy action, evidence-based frameworks, and strong stakeholder engagement. Investment in digital interoperability, standardized outcome measurement, and integrated care delivery models are critical for achieving this vision.

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Резиме

Ремоделирање на здравствените системи: премин од обем кон вредност

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Клучни зборови: вредносно-базирана здравствена заштита (VBHC), здравствени исходи, интегрирана грижа, платежна реформа, дигитална трансформација

Здравствените системи на глобално ниво се соочуваат со зголемени притисоци од различни фактори, како што се стареењето на популацијата, товарот од незаразни болести и недостиг на здравствена работна сила, што ја нагласува итната потреба од иновативни стратегии за подобрување на ефикасноста и обезбедување на долгорочна одржливост. Традиционалните реформи, фокусирани на намалување на трошоците и изолирани интервенции, не успеаја да ги решат структурните неефикасности во обезбедуввањето на здравствената грижа. Вредносно-базираната здравствена заштита претставува трансформативен модел кој ги усогласува здравствените исходи со специфичните потреби на пациентите, но со одржливи трошоци и ефикасна контрола. Со пренасочување на фокусот од обем на услуги кон мерливи резултати, вредносно-базираната здравствена заштита поттикнува интегрирана мултидисциплинарна грижа, транспарентно споредување и модели на плаќање што ја наградуваат квалитетната грижа. Овој труд ги опишува основните принципи на вредносно-базираната здравствена заштита, заедно со клучните активности и чекори за нејзина ефикасна имплементација во здравствените системи. Потпирајќи се на најдобрите практики од водечки европски здравствени институции, приоритетите треба да вклучуваат дигитална интеграција, координирани политички акции и активна вклученост на засегнатите страни со цел

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здравствените системи да обезбедат висококвалитетна, пациент-центрирана и трошок-ефективна нега, способна да ги исполни идните потреби.

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