

# Achieving Croatia's Health Potential

PART 2



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*In our previous article we showed that, by reducing its disease burden through better prevention and treatment, Croatia could save 100,000 lives and add €9 billion to the country's annual GDP by 2040. We also introduced McKinsey's Health System of the Future framework as a way to capture this potential, and analyzed current health system metrics in Croatia in terms of health outcomes, patient satisfaction, and financial sustainability. In this article, we will present how these metrics could be improved at a relatively low cost that would improve well-being for Croatians, deliver substantial economic gains, and bring huge benefits for the entire society.*

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in Zagreb, and Paul Dinkin in London

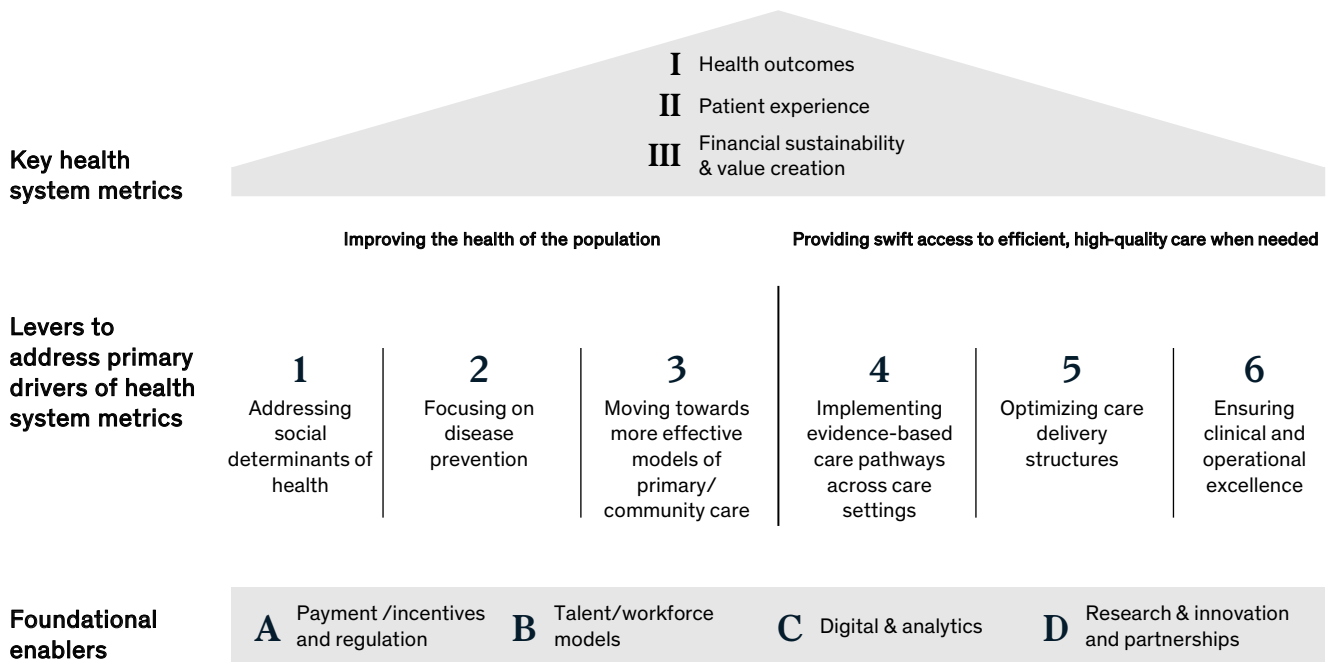
Based on extensive experience in the healthcare sector, McKinsey has developed the Health System of the Future framework, which could help healthcare leaders to move toward an optimized health system. This framework leverages recent technological solutions, medical and health-related insights, and operational best practices.

The key levers to improving population health in Croatia include addressing social determinants of health, focusing on disease prevention and health promotion, and moving towards more effective models of care. The levers for providing swift access to efficient, high-quality care when needed are implementing evidence-based care pathways, optimizing care delivery structures, and ensuring clinical and operational excellence.

Undergirding these six levers are four foundational enablers to unlock and sustain the change – incentives for healthcare providers that are aligned with healthcare priorities, improved workforce management models, digitalization and automation of processes, and more effective research and innovation approaches.

## Setting up a healthcare system of the future could unlock potential and improve key health system metrics.

How to achieve “the health system of the future”



## Six Key Levers to improve Croatia's healthcare metrics

**1. Addressing the social determinants of health** refers to tackling the non-medical factors that impact the health and well-being of individuals and populations – including income, education, employment, living conditions, and social support. For example, higher income is generally correlated with better reported health. In Croatia, the gap between high- and low-income people in share of those reporting good health is the fifth-largest in the EU27+UK - for both men and women. Additionally, much lower share of low-income Croatians are reporting good health than their counterparts elsewhere in the EU. Education can also be a factor, although in Croatia the picture is more complicated. There is a significant gap between reported good health between highly-educated and less-educated people, for both men and women. However, looking at life expectancy, we found that while less-educated men do have five years shorter life expectancy than their highly-educated counterparts, for women this difference was less than one year.

Effective interventions could include support for those with low income, the unemployed, and retirees, to ameliorate income-related disparities in health outcomes, as well as health literacy programs, academic enrichment, and early-childhood support in case of education-related differences. Such policies help not only by directly addressing the problems stemming from these determinants, such as low income limiting the access to care, but also by impacting their behavioral risk factors. For example, lack of access to healthy or varied food (due to poverty) or low health awareness (due to limited education) can often lead to dietary risks.

**2. Focusing on disease prevention as well as health promotion and management** could improve health outcomes and minimize suffering while saving money and resources. As mentioned in the earlier article, more than 70 percent of health gains from reduced disease burden could come from prevention-based interventions. Prevention can include environmental, social and behavioral interventions that create health gains by impacting risks that lead to root causes of disease, such as dietary risks leading to high blood sugar. It also includes interventions aimed at health promotion and health management that focus on detecting and managing causes before they turn into diseases, as well as on early diagnosis and treatment of diseases. The former could capture 38 percent of these total potential gains, while the latter could contribute another 34 percent. These interventions are also very cost-effective compared to treatments.

Croatia already spends more of its healthcare budget on preventive measures than most of its peers – around five percent – but could consider refocusing and reprioritizing its preventive activities to maximize these gains. This could be done by concentrating on key risk factors such as high blood pressure, dietary risks, and smoking tobacco – which are the three largest contributors to both mortality and ill-health in Croatia, and where Croatia does poorly relative to its EU peers.



# Prevention efforts could focus on key risk factors in Croatia when it comes to mortality and health gains (DALYs).

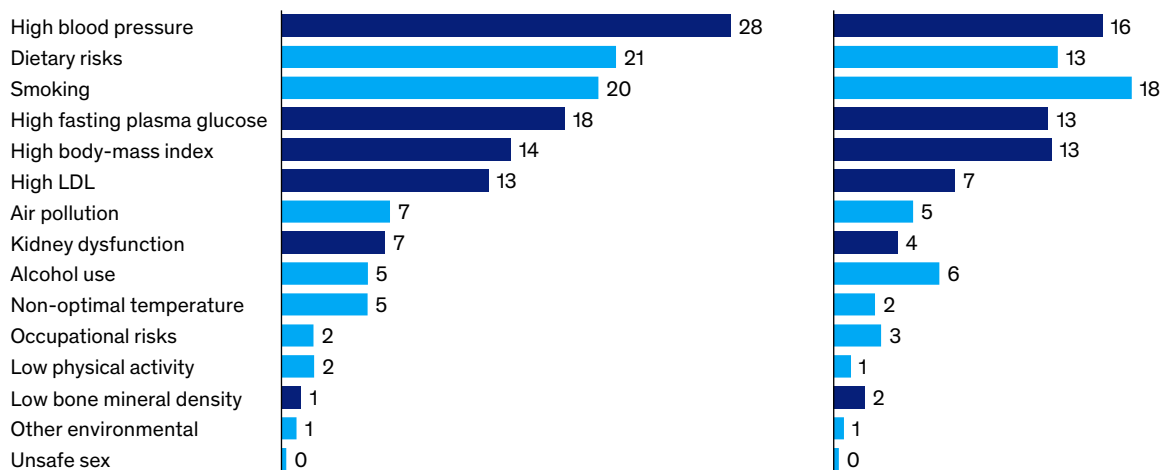
Key risk factors

■ Environmental, social, and behavioral interventions  
■ Health promotion and management

## Top 15 key risk factors<sup>1</sup> by impact<sup>2</sup>

Percentage of total deaths per 100,000 inhabitants, for Croatia, 2019

Percentage of total DALYs for Croatia, 2019



1. Sums up to more than 100%, as many deaths have multiple contributing risk factors

2. Several other risk factors that are in Top15 risks by DALYs, but not Top15 by deaths, and representing 0.5% DALYs total, were left of the chart for simplicity.

Source: Global Burden of Disease Study 2019; IHME

**3. Moving towards more effective models of primary and community care** is essential to improving the population's health, as these often play a leading role in many prevention efforts, especially in health promotion and management. As the front line of the healthcare system, they are also the first point of access to proper care and treatment pathways. Setting up effective primary and community care entails mobilizing multiple stakeholders within the healthcare sector and community to deliver patient-centric care through the support of virtual, ambulatory, and home-based care models.

Assuring high-quality primary and community care is based on three key pillars: proactive care, rapid access to care, and support with care transition. Proactive care involves innovation across the care pathway, including patient-centric individualized care plans, multidisciplinary teams (MDTs), scheduled follow-ups, and forecasting of upcoming care needs on population level. Rapid access to proper care can be ensured by leveraging MDTs to provide quick triage of patients, by facilitating access to acute primary care—including via digital consultations, and by including diagnostic and specialist care as part of community care. Successful care transition combines discharge support, via early assessment and discharging of patients overseen by a care navigator, with provision of intermediate care in a patient's home or a community hospital facility.

**4. Implementing evidence-based care pathways** can help decide on the right pathway of care and intervention at the right time for each patient. They could be developed by leveraging differences in existing pathways across the healthcare network and the associated data to determine which approaches result in the best outcomes. Codification, standardization, and widespread adoption of such uniform evidence-based care pathways can result in better health outcomes, including by

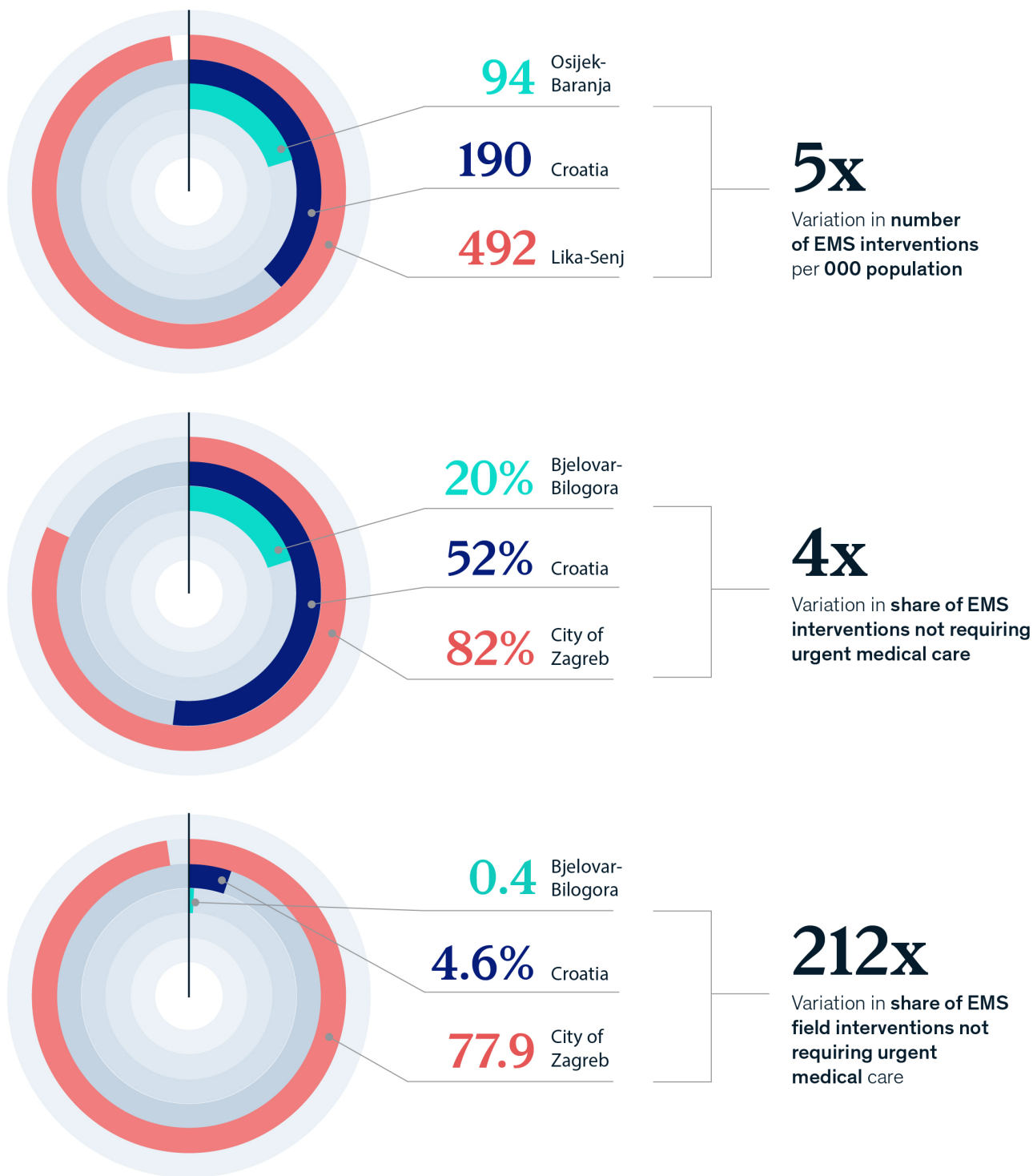
reducing mistakes resulting from ad hoc care decisions, facilitating transparency and control of best practices via KPIs, and stimulating the generation of further evidence to improve care. It can also contribute to improved cost-effectiveness by reducing duplication or unnecessary interventions, as well as reparative treatments and longer hospital stays due to mistakes in clinical decisions.

Croatia's provision of emergency care exemplifies the challenges of limited adoption of evidence-based care pathways. More than 50 percent of all emergency medical services (EMS) interventions in Croatia did not require urgent care – with a fourfold variation at the inter-county level further indicating a lack of uniform evidence-based care pathways. The problem is even more evident in a twelvefold inter-county variation in unnecessary EMS interventions per capita - going up to over 200 times for unnecessary EMS field interventions. To illustrate the capacity challenges this can create—had the share of unnecessary EMS field interventions in the City of Zagreb been at the national average, it would have resulted almost 50,000 fewer EMS team deployments in 2019 alone.

# Croatia has large county-level variations in frequency of EMS interventions, and share of non-urgent cases treated.

Evidence-based care pathways - urgent care pathways

## Emergency Medical Services (EMS) interventions by county, 2019



**5. Optimizing care delivery structures** allows interventions to be delivered in settings that maximize the impact and value of the healthcare being provided. For instance, rare-but-complex cases could be consolidated in certain center-of-excellence hospitals, allowing medical professionals to develop deep expertise and master complex procedures that have a long learning curve. On the other hand, some mental health cases could be better addressed in an intermediate setting rather than an acute hospital ward.

Low-cost care settings (such as home or long-term care), leveraging new medical technology solutions, could also be encouraged for all care that does not intrinsically require clinical settings. Croatia is already making progress in delivering low-cost, at-home care using telemedicine. The country has 166 active telemedicine centers, providing services in radiology, cardiology, transfusion medicine, hemodialysis, and neurology. Over the past decade, the number of telemedicine visits grew from just over 1,000 in 2011 to almost 117,000 in 2021.

**6. Ensuring clinical and operational excellence** is key to achieve care delivery of consistently high quality, while remaining operationally efficient, across every setting. This requires, at the very least, satisfying the minimum clinical standards for patient safety and service quality, which could be enforced by a national-level commission. For example, looking at the adoption of patient safety culture practices in hospital processes, there is some evidence that Croatia's public hospitals have relatively insufficient reporting of mistakes, lack of accountability and feedback-driven improvements, a strict top-down hierarchy in decision-making, and insular operations.

Going beyond minimum standards, Croatia could look into reducing unwarranted inter-county variations, such as in mortality levels. Lika-Senj and Sisak-Moslavina counties have mortality rates 1.4 to 3.1 times higher than the best-performing counties for the most common causes of death. Similarly, while Croatia's average length of stay (ALOS) and bed utilization rates for acute curative care are very close to the EU average, there is significant variation between counties.

Adopting the latest approaches, treatments, and practices in care delivery can also improve patient experience, outcomes, and recovery, as well as reduce overall costs and capacity pressures. For instance, increasing same-day treatment rates can improve patient experience as well as reduce ALOS. While Croatia has surpassed the EU27+UK average for same-day treatment rates for procedures such as tonsil removal and deblocking of clogged heart arteries, it considerably lags in some other common surgeries—despite their high potential for same-day treatment based on existing technologies, as evidenced by best performers.



## Four Foundational Enablers to unlock and sustain change

**A. Incentives, payment models, and regulation.** Selecting the right payment mechanism for healthcare providers is key to aligning the provider's incentives with national healthcare strategy objectives. Each incentive mechanism can help prioritize, or even deprioritize, different healthcare system objectives. These include stronger prevention, better coordination of care delivery, higher quality and relevance of provided care, improved access to care, and financial sustainability. Refining the incentive structure and assuring that the behavior of healthcare providers contributes to achieving national health objectives and targets could be embedded in the regulatory framework.

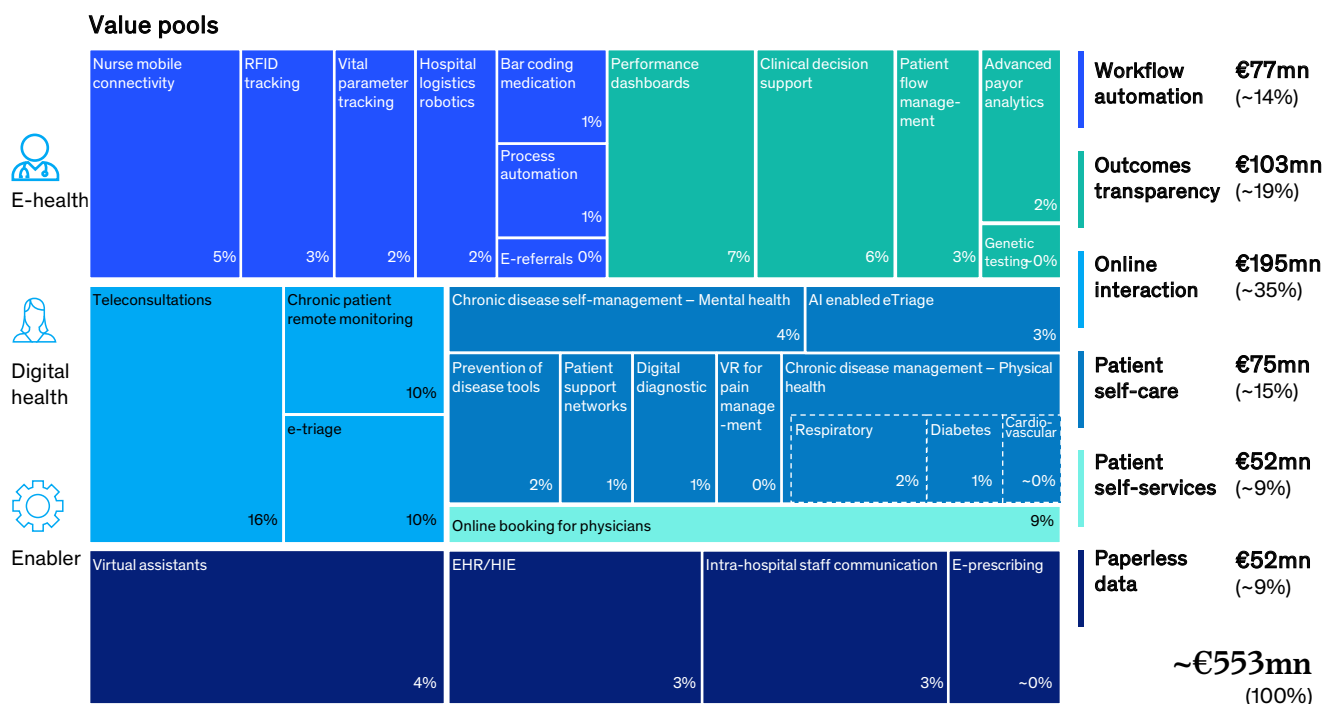
**B. Talent workforce models.** Croatia's healthcare system is facing rising staff shortages due to higher salaries abroad, and an aging primary-care workforce, even as future healthcare needs are likely to require different skill sets. Unfilled vacancies already equal about 15 percent of the existing workforce of primary care doctors, with more than a quarter of the total cohort reaching retirement age in the next five years. The problem is even worse in nursing, which has an over 40 percent gap between projected needs and current workforce, with more than 35 percent of the current cohort reaching retirement age in the next five years. The number of prospective nurses in training is less than 10 percent of what is needed to close the current gap and replenish attrition.

Croatia could take several steps toward alleviating these challenges, starting by implementing strategic workforce planning, including assessing long-term critical capabilities and identifying current and expected gaps in workforce and skills with respect to these capabilities. Croatia could also increase the medical staff pipeline, especially for deficient roles and capabilities, by securing accessible and affordable education and training along with flexible qualification pathways. Further efforts could be made to keep the existing workforce happy and motivated through better pay, benefits, promotion opportunities, and a positive and safe work environment. Finally, providers could consider adopting flexible operating models to optimize staff allocation and utilization, as well as balance the workload, based on demand planning using advanced analytics.

**C. Digital and analytics.** Digital and analytics capabilities are becoming fundamental to quality healthcare – through the growing adoption of big data, real-time analytics, automation, connectivity, telehealth and remote monitoring throughout the healthcare system. Combining patient-centric approaches with automation improves patient experience, clinical outcomes, and provider efficiency. Big data enables real-time analytics of care methods for patients, better demand forecast, and boosts medical research, while automation improves patient experience, clinical outcomes, and provider efficiency. Connectivity can enable patient co-management, in scheduling appointments and care searches, while telemedicine allows patients and clinicians to interact remotely. Remote monitoring with sensors can track patients' vitals and medication adherence.

While Croatia has made considerable progress in digitalizing healthcare processes, there are other specific untapped value pools from digitalization – in e-health, digital health, and digital enablers— that could contribute up to €550 million in annual savings for public healthcare. These value pools span workflow automation, outcomes transparency, online interaction, patient self-care, patient self-services, and paperless data. Croatia also has the opportunity to redesign the patient journey to include convenient and digitally connected solutions at all points, promoting patient-centric models of care delivery with more personalized approach, greater support and retention, as well as fewer unnecessary visits to healthcare providers.

# Value pools in the public health system can be tapped via maximum digitization to create ~€550mn value for Croatia.



Note: Rounded figures may result in slight deviations

**D. Research and innovation through partnerships.** Croatia's scientific output in healthcare research fails to match its R&D funding, even though its spend on health-related R&D as a proportion of GDP is above the European average. Compared to its EU peers, Croatia has fewer health-related scientific publications per capita and less citations per publication. Croatia could boost its research and innovation, through international collaborative partnerships with leading institutions, to capture more value potential from new approaches and treatments.

## Achieving the Health System of the Future

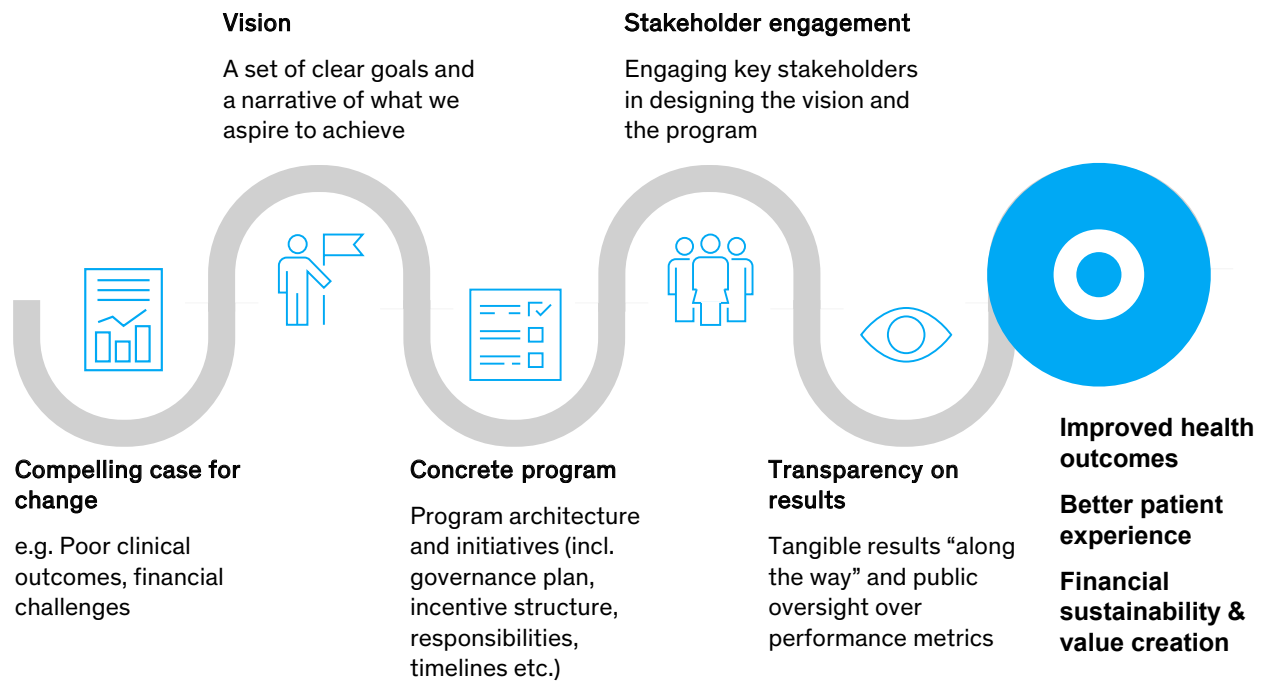
Achieving effective and lasting change can be hard, particularly for healthcare systems as they are often highly-regulated, risk-averse, fragmented, and involve complex chains of delivery involving many stakeholders with frequently misaligned incentives. They are also often siloed, with a focus on specialties as opposed to patient journeys or health outcomes.

Still, the COVID-19 pandemic also demonstrated that such systems can react quickly, with increased focus on prevention, faster adoption of innovation in digital and analytics-based solutions such as telemedicine, increased flexibility in the deployment of healthcare workers and medical assets, accelerated R&D and dissemination process, as well as rapid adoption of the best practices in each step of the care pathway.

Based on McKinsey's extensive experience with transformations, including those of healthcare systems and providers, there are several key lessons from successful and sustained healthcare reforms. Changing healthcare requires a compelling case for change, clear vision, concrete program, active stakeholder engagement, and public transparency.

# Changing healthcare requires a compelling case for change, vision, concrete program, stakeholder engagement, and transparency.

Health systems are complex, fragmented, and incentives are often misaligned



Source: McKinsey analysis

Healthcare leaders and decision makers should clearly communicate the case for proposed changes, anchored in facts and relevant to key stakeholders, while presenting a vision and a narrative with clear objectives for quality and access. Once this buy-in has been obtained, the next step is to translate the vision into a concrete change plan with a precise program architecture, governance, and roadmap, as well as detailed initiatives based on key value-creation drivers. Any blueprint for redesigning and improving a healthcare system needs to clearly outline how each of its four key functions — provider, payor, regulatory, and improvement— would interact under the new model, what role they would play, and how this could further the chosen goals. Actively soliciting the input and involvement of key stakeholders throughout the process can help achieve alignment on hard facts and better understanding of the priorities, challenges, and potential solutions, as well as ensure stakeholders’ buy-in and support. Finally, transparency on progress and performance metrics, as well as some tangible early achievements, are important to secure continued public support.

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