

Executive summary

Health lags far behind other sectors in harnessing the potential of data and digital technology, missing the opportunity to save a significant number of lives and billions of dollars.

A digital transformation is urgently needed and long overdue at a time of increasing pressure on health systems and budgets. This means ensuring access to the right information by the right people at the right time. The results will be safer, better and more efficient health systems and healthier populations.

Building people-centred, efficient and sustainable health systems

A digital transformation can help meet the changing needs of patients and the public. It can serve as a catalyst for a team-based approach to deliver quality and co-ordinated health services. This is particularly important with ageing populations, a growing chronic disease burden and rising expenditure.

People want to take greater control of their health. In 2017, 3.7 billion health-related smartphone apps were downloaded globally, up from 1.7 billion in 2013. The proportion of adults seeking health information online more than doubled between 2007 and 2017.

But while the majority of OECD countries (70%) say they are implementing ways for people to access their health data electronically, fewer than half (43%) include the ability for patients to interact with their own health records. In addition, such facilities are under-used by those who stand to benefit the most from them.

Intelligent use of data and digital technology improves the safety and quality of care, helps address unmet health need and makes accessing services easier. It supports more informed health system stewardship and policy making. It also assists researchers to develop safer and better treatments, and enables more effective disease prevention and public health, resulting in healthier and more productive populations.

Health systems are plagued by a significant waste of resources. Unnecessary practices, duplication and other inefficiencies mean that around a fifth of health care expenditure in OECD countries (around USD 1.3 trillion annually) is not used to generate better health, and sometimes even harms health. A digital transformation also offers ways to reduce this waste, improving health, saving money and freeing up resources towards more productive ends.

Health can learn from how other sectors were transformed

Other sectors such as education, banking and finance, the media and aviation have been far better at harnessing the opportunities of digital technology to deliver improvements, efficiencies and consumer surpluses.

The transformation in these sectors did not come about by simply digitising existing practices. It required an overhaul of organisational structures, business models and institutions. It relied on fundamental changes to cultures, habits and attitudes. Reform on this scale also needed considerable investment.

In contrast, health systems remain ‘data rich but information poor’. Many opportunities to improve the health of individuals and communities remain untapped. The available data and technologies are sufficient, but are insufficiently implemented and used. This is primarily a legacy of institutions, forged in the pre-digital era, that are static and resistant to change. The potential of digital technology has, in fact, highlighted the need to urgently address some long-standing problems such as fragmentation and silo mentality, which get in the way of important reforms.

Investment plays an important role. Countries typically spend less than 5% of health budgets on managing data and information – a much smaller share than other sectors, and paltry for an industry where accurate, reliable and timely information is so critical to success.

As it stands, only a minority of OECD countries are establishing the requirements for digital transformation of their health systems. Denmark, Estonia, Finland, Israel, Lithuania, New Zealand, Norway and Sweden, for example, are making good progress. However, even the frontrunners have a long way to go. Systematic re-purposing of routine data for analysis and knowledge-creation, in particular, remain a major challenge.

A digital transformation requires policy action and leadership

The main barriers to building digital health systems of the 21st century are not technological. They are institutional and organisational. Progress depends on an enabling policy environment. This means resolute action by governments on three main fronts:

1. *An overarching digital strategy.* All countries that are on track to harness the opportunities of digitalisation have this in common. While strategies are many, few are comprehensive and include a consolidated vision, plan and policy framework. Ideally, a strategy will also align with a broader, cross-sectoral digital strategy.
2. *Strengthening governance of health data.* Governance enables data and digital technologies to be put to productive use, while ensuring security and respect for individual privacy. Legal barriers and a lack of trust among patients, the public, data custodians and other stakeholders in the use and protection of data are all major hindrances, as is the lack of agreement on data standards and exchange formats both within and across countries. The *Recommendation of the OECD Council on Health Data Governance*, welcomed by Health Ministers in 2017, sets out the mechanisms to achieve these requirements.
3. *Building institutional and operational capacity.* This includes equipping and preparing the workforce to harness the opportunities of digital technology. It includes empowering the public – especially people with complex needs – to take advantage. It also means putting in place the systems and institutional arrangements that enable efficient linkage and analysis of data. This requires an enabling policy environment so that key actors can not only access data and extract knowledge from them, but can then use this knowledge to effect change and advance policy objectives.

A digital transformation is a complex, system-wide change that requires leadership as well as sustained investment. However, investment need not be in hardware or infrastructure. The most pressing areas include building human capital and expertise, adapting processes and workflows, and modernising policy and governance frameworks. It also means reshaping fundamental policy settings such as payment models, which influence incentives and behaviour across a health system.

Increasing, and in some cases simply re-orienting, current levels of resources to these areas will pay off. The direct health and economic benefits of a digital transformation across OECD health systems would approach USD 600 billion annually – roughly the Gross Domestic Product (GDP) of Poland and around 8% of OECD health expenditure. Even doubling what health systems currently invest in managing data and information would still deliver a three-fold return.

Digital transformation offers great opportunities to build highly effective, efficient and people-centred health systems. Grasping these opportunities requires strong political will and bold policies. Further delay is costly for both health outcomes and health budgets. It is time to bring health into the 21st century.



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