

Health managers and leaders: harnessing the power of digital technologies

[Episode 1](#) of the webinar series
'Health Management in action: Fostering health systems' resilience'

Speakers

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The first episode of the webinar series *'Health Management in action: fostering health systems' resilience'* focused on digital technologies and data-driven innovations deployed by hospitals, with concrete case studies from Portugal. The speakers presented how healthcare providers can benefit from these technologies to improve their processes and what are the basic requirements to fully harness the potential of these tools.

Health management and digital technologies

The digitalisation of healthcare has been a consistent trend across European health systems for the past years. It has created opportunities for digital technology providers to develop new solutions and has positively impacted on healthcare providers' operational decision-making. Real-world data (RWD), AI-driven algorithms and other technologies can influence in several different ways how healthcare is delivered and care pathways are designed.

Thanks to electronic health records, hospitalisation as well as discharge can be predicted. **This impacts on hospital capacity and patient flows** and, consequently decisions related to triage, admissions, and discharge. **Digital technologies also help to better manage capacity and resources.** Algorithms can predict nurse absenteeism rates or the duration of surgeries which in return can lead to optimising operating room's schedules. By applying data-based automatised processes, **hospitals can reduce costs related to supply chain management.** With a real-time and accurate overview of stocks of equipments and consumables, it is easier to plan orders and estimate the necessary quantity, thus avoid wasting resources.

Furthermore, **the digital transformation can facilitate patient engagement in co-designing care pathways with healthcare professionals**, thus providing better care with higher patient satisfaction. This radically changes the relationship between healthcare providers and patients and can make hospitals reconsider how health services are managed.

Case study on digital technology application

Nowadays 30% of the world's data is generated by the healthcare sector; however, health data is not always processed, stored, or analysed in an efficient way that allows it to become evidence for actions. Each health system has data or information regarding care, medication, administration, and outcomes, but those are often kept in silos. **Data isolation undermines data value**; however, before integrating information, **data harmonisation is needed to make it comparable.**

There is an urgent need to **standardise the four steps of the data journey**: 1) data capture, 2) data harmonisation, 3) data analytics, and 4) real-world insights. An improvement is especially required in steps 1 and 2, and to a lesser extent in step 3. The data journey should be quick and scalable, but for this to happen **all four steps should be standardised in terms of processes and platforms**.

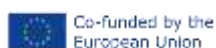
To tackle these challenges, some Portuguese hospitals implemented two data initiatives:

- The **Outcomes Network (CAT.PT-RWE)** to tackle **data isolation**. The aim is to collect and analyse outcomes of care in cataract surgery across 13 different Portuguese hospitals to (i) create insights into direct clinical care; (ii) provide a database for large-scale clinical research; (iii) educate about data handling. The World Economic Forum expressed appreciation for this initiative and the programme is now being scaled to other disease areas.
- The **European Health Data & Evidence Network (EHDEN)** to increase **data harmonisation**. It is the largest EU Data harmonisation programme aimed to building a federated data network allowing access to the data of 100 million EU citizens standardised into a common data model.

Digital technologies and data-driven innovation can immensely support healthcare providers and significantly redesign the way care is delivered and health is managed. The European Medicines Agency (EMA), through its European Medicines Regulatory Network, has set the vision to use Real-World Evidence and establish its value across the spectrum of regulatory use cases by 2025. This date is very near and the ambitions are high but the two Portuguese initiatives prove that things are moving in the right direction.

Take-home messages

- The digitalisation of healthcare has provided opportunities for all: technology providers who can put new and innovative solutions on the market; healthcare providers who can make data-driven operational decisions thanks to digital tools; and patients who can be more involved in the co-creation of their care pathways.
- Digital technologies can improve decision-making and planning in several areas including patients flow; staffing; scheduling; and supply chain management. They also bring a financial benefit with cost savings across departments.
- The standardisation of the data journey is a precondition to harnessing the full potential of data. It encompasses four steps: 1) collection 2) harmonisation 3) analysis 4) real-world insights of data.
- In Portugal, two initiatives for better data standardisation were launched: the Outcomes Network (CAT.PT-RWE) to tackle data isolation and the European Health Data & Evidence Network (EHDEN) to increase data harmonisation.



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