



# Digitalising Slovenia's healthcare system

Digitalising health systems involves introducing a cultural change, but the work is worthwhile – and Slovenia is a prime example, now with a healthcare system that's gone from fragmented digital support to comprehensive integration

Interview with Kerstin Vesna Petrič, head, Office for Cooperation with WHO, and Alenka Kolar, director-general, Directorate for the Digitalization in Healthcare, Ministry of Health Slovenia, and Hajdi Kosednar, eHealth Manager, Centre for Healthcare Informatics, Public Health Institute of Slovenia

The digitalisation of health systems is about introducing a cultural change: it requires political determination, strong leadership, the engagement of different stakeholders, a good plan and effective communication to ensure acceptance and consensus. Apart from sufficient investments, governance is crucial for implementation. To sustain the change, long-term adjustments based on monitoring and evaluation are needed, as is ownership of the change.

In Slovenia, it took us quite some time to meet these criteria. After years of fragmented and project-based approaches, the digital transformation in health care has become a key political priority. We have started on a journey that will increase the accessibility of high-quality services for our patients, reduce the administrative burden on health workers and speed up development in many fields of health care, as well as shift from fragmented digital support to its comprehensive integration in health care.

Our general success in implementing innovative eHealth

solutions in Slovenia was recognised by the European Commission. The Digital Economy and Society Index Report placed Slovenia in sixth place in eHealth Services for 2017.

For this article I have engaged in a conversation with two of my colleagues, Alenka Kolar and Hajdi Kosednar.

**What are the key advances Slovenia has made in accelerating and integrating the use of digital technologies in health care?**

**Alenka Kolar:** To accelerate the digital transformation in health care, leadership is important. We created a new directorate within the ministry of health to be responsible for digitalisation. For the sake of transparency, ownership and a coordinated approach, we developed a new digitalisation strategy based on a well-organised process and involved all stakeholders. In addition, comprehensive legislation has been presented to parliament this year to create a digital environment that would focus primarily on the patient and their needs. One of the goals of this new legislation is to ensure that health data is recorded

only once and is owned by the patient. Such a goal requires digitalisation based on appropriate organisation, knowledgeable professionals and empowered patients – which are often neglected. Investing in health experts to order to understand the advantages of digital technologies and investing in patients to use digital solutions offers new possibilities for a healthy society.

**Hajdi Kosednar:** It is also important to understand that every step matters in digitalisation. In 2008, the ministry launched a digitalisation project to create a core platform for Slovenian eHealth for exchanging and sharing electronic health records. It was one of the largest national projects in information and communications technologies in Slovenian history and was co-financed through the European Social Fund. The National Institute of Public Health assumed the management of the eHealth project solutions in 2015, including ePrescription, eAppointment and the Central Register of Patient Data. It was important to get the project's strategic goals right. Important goals of the project included, of course, access to data in general, as well as the ability and active role of citizens in accessing and using their health data for the benefit of their own health and improving access to health services for those most vulnerable.

#### What can other countries learn from Slovenia?

**AK:** The Covid-19 crisis has made it clear that digital health information, available to the right professional at the right time, is the foundation of a patient's health and well-being. Digital solutions should not replace authentic human contact, but many activities are strictly administrative and bureaucratic and should be digitalised with a goal to improve secure and reliable access to all key patient information for all health providers. It is important for good clinical management to have all the patient's medical information in one place, especially where the patient freely chooses a doctor anywhere in the country or even across borders.

**HK:** All the eHealth solutions in Slovenia are being implemented at the national level. Residents have a health insurance card, with a patient identifier for the use of eHealth

solutions. Slovenia has established a centralised national eHealth system that includes a central platform for exchanging electronic health records. All public and private healthcare providers are obliged to participate, and all authorised healthcare professionals can access the data at any point of care. Patients can access their eHealth data safely via web portal and mobile application, by means of electronic identification. Slovenian eHealth assures the exchange of data irrespective of various information technology solutions used by different healthcare providers. Patients have access to all their data processed on the national platform, including patient summaries, ePrescriptions and a variety of healthcare documentation (such as discharge letters and specialist's reports). Parents can access the data on behalf of their children.

#### What results has Slovenia achieved so far, and what challenges and tasks lie ahead?

**HK:** The most important achievement is the coverage of the entire population. No patient is left behind. A great example is the implementation of the European Union's Digital COVID Certificate. Standardising data models and technical specifications enables the interoperability of diverse and multi-vendor clinical information systems. However, the development and deployment of new services is constrained by the severe shortage of human resources. Many projects and initiatives cannot be implemented due to limited capacities and there are no specialised experts in digital health. We have a critical need for expertise in developing clinical data models and applications.

**AK:** We want to solve the lack of ICT staff through a unified data flow, comparable advanced technology and pooling of knowledge. Above all, digitalisation must have adequate financing (approximately 5% of the health service's funding). Investments must be planned and must be made quickly, to take advantage of rapidly developing IT. We must work towards unifying the data structures that are entering the central system. This will improve both the quality of medical treatment and the performance of public health institutions. ■

#### KERSTIN VESNA PETRIČ

Kerstin Vesna Petrič is head of the Office for Cooperation with the World Health Organization at the Ministry of Health of Slovenia. She was previously Slovenia's director-general of public health (2019–2022) and head of the Division for Health Promotion and Prevention of Noncommunicable Diseases (2004–2019). From 1998 to 2004 she served as WHO Liaison Officer. She was a member of the WHO Standing Committee of the Regional Committee for Europe from 2016 to 2019. She has been on the WHO's executive board since 2021, and became chair in May 2022.



#### ALENKA KOLAR

Alenka Kolar became head of information technology at the Ljubljana Institute of Oncology in May 2022 and director-general of the Directorate for Digitalization in Healthcare in Slovenia's Ministry of Health in July 2022. She has served on the board of the University Medical Centre Ljubljana. She has managed the Metrology Laboratory at the Metrology Office, worked in the automotive industry in quality assurance, learned quality and traceability in a pharmaceutical company, worked in a private IT development company and was executive director of information and communications technologies at an energy distribution company.



#### HAJDI KOSEDNAR

Hajdi Kosednar is a member of the eHealth group at Slovenia's National Institute of Public Health, involved in managing national healthcare digital solutions. She is responsible for national eReferral and eAppointment solutions and the Service Desk for eHealth Solutions. She actively participated in the eHAction project (Joint Action supporting the eHealth Network), and is a member of the Service Desk group within the eHealth Digital Service Infrastructure.

