DIGITAL TRANSFORMATION – OPPORTUNITIES AND CHALLENGES IN HEALTHCARE

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ABSTRACTS:

Digital transformation is defined as using digital technologies to transform businesses and services and replace traditional processes with digital technologies to improve, advance, or streamline working methods. The comprehensive transformation has been ongoing for decades. Still, using digital technologies in health care was no longer an option during the Pandemic when new ways of providing care and services were needed. The Pandemic touched patients and professionals and made the leaders focus more on security, privacy, and technology (KRAUS *et. al.,* 2021). This presentation aims to describe opportunities and challenges in digital transformation in health care by presenting the milestones in digital transformation using Finland as an example. Digital transformation is a complex and strategic process at the national level that encompasses healthcare service providers, technology enterprises, and regulators, not to mention expertise in standards and legislation. Finland launched the first eHealth strategy in 1995 to guide digital transformation, focusing on citizen-centered and seamless service structures. The Ministry of Social Affairs and Health has upgraded the strategy, and the implementation has been followed at the national level based on various development projects. The National Code Server, the core of all information systems in health and social care in Finland, was founded in 2007 (VEHKO, 2022). The Code Server was essential in establishing the KANTA system and supporting services (KANTA is a Finnish acronym meaning National Data Repository). The KANTA constitutes services for citizens, professionals, and system developers. MyKanta enables citizens to access their health data and prescriptions, view their laboratory test results, renew prescriptions, and make a living will. Professionals can access the Patient data repository and the client data archive for social welfare services, the Kanta medication list, and the summaries of critical health data. System developers have information about the Kanta architecture, specifications, and testing (KANTA SERVICES, 2023). The National Development Centre for Social Welfare and Health (THL) is following the use of KANTA services. For instance, the graphics of monthly numbers of sign-ins and persons visiting the national patient accessible health data (My Kanta Pages) or the use of ePrescriptions have given important information about the citizens' use of services during the Pandemic (VEHKO, 2022). The THL regularly monitors advances in digital transformation at the national level. One of the data collections focuses on professionals' and citizens' use of electronic tools and services in health and social care. This type of data collection started in 2010 when physicians, as the first group of professionals, assessed their opinions during that period using electronic health records. Later, nurses, practical nurses, and social workers participated in the data collection with the standardized tool. The results have been used

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for development at the service provider, system developer, and national levels. Citizens' feedback has been significant, especially when developing digital services and virtual care. The assessment material is available on the website (NATIONAL DEVELOPMENT CENTRE FOR SOCIAL WELFARE AND HEALTH, 2023). An essential form of providing virtual care at university hospitals in Finland is the brand Health Village, which was created as a joint development project. The platform offers services at three levels: 1) for all citizens, 2) patients, and 3) professionals. In 2023, 33 virtual hubs offer free information and support to citizens. The hubs provide services in various means, e.g., chats, chatbots, and symptom navigators. Further, there are over 140 digital care pathways for different patient groups. Digital care pathways also provide great possibilities for assessing the effectiveness and cost-effectiveness of health services and thus provide support for decision-making and management (NATIONAL DEVELOPMENT CENTRE FOR SOCIAL WELFARE AND HEALTH, 2023). Regarding following digital transformation at the national level, it is also important to benchmark the developments in other countries. The Nordic countries Denmark, Finland, Norway, and Sweden have a tradition of monitoring digital transformation in each country since 2012. The particular interest focuses on creating indicators for developing and implementing national health information systems. Further, observing the differences in e-health policies, architectures, and implementation of digital services makes a fruitful basis for benchmarking. Although the differences in the Nordic countries in digital transformation depend on implementation phases, e.g., the adoption of health portals, the results offer great possibilities for learning from each other (HEALTH VILLAGE, 2023). The progress related to digital transformation in each EU country can be tracked with the Digital Economy and Society Index (DESI), which summarizes indicators of Europe's digital performance and competitiveness. As a part of the program Shaping Europe's Digital Future, the EU has a tool where the indicators for human capital, connectivity, integration of digital technology, and digital public services can be explore (DESI, 2022). In conclusion, a concrete strategy of digitalization to guide the development actions for transformation will strengthen opportunities for success. Constant monitoring of digitized processes and their impacts creates challenges for data analyses and use for improvements. Benchmarking against units and peer organizations is challenging but commonly results in advisable outcomes.

Keywords: Health systems - Finland; Information and Health; Digital transformation; Technology.

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