Editorial

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Although information and communication technologies (ICT) have been used in the healthcare sector for many years, the expectations and hopes regarding the added value of their use are still very high. Traditional applications mainly digitized analogue documents to improve the consistency, traceability, as well as the exchangeability of medical documentation in a health care facility. Digital representation of care processes by means of workflow systems is another traditional focus. However, the demanding demographic situation as well as the increasing technological capabilities re-vitalize the research in the health ICT. This led to the brand term "Digital Health" which seems to gradually replace the well-known term "eHealth" [1]. This editorial aims to reflect on this evolution and to underpin main changes. The special issue is also a tribute to the newly founded special interest group "Digital Health" of the German Informatics Society (GI e.V.).

Looking at the health care related research in the IS research basket (e. g., ISR, MISQ, JMIS, JIT, ISJ, JSIS, EJIS, JAIS), we found that out of 800 articles only 50 explicitly use the term „Digital Health". These results illustrate that this term is rarely used in the literature. More frequently, we found Health Information Technology (HIT) as a similar term as well as specific technological themes such as Health Information Exchange (HIE), Clinical Decision Support Systems (CDSS), and Electronic Health Records (EHR). We deduced that the term Digital Health currently serves as a collective term to encapsulate various research streams investigating the implementation and utilization of digital solutions in healthcare.

In their meaning, eHealth or Digital Health go far beyond the provision of electronic tools and services. They emphasize the deep transformational momentum of being ubiquitously connected, analyzed and informed regarding the personal vital signs and their developments. Closely linked to the general movement of the digital transformation [2], the concept of Digital Health radically disrupts the stereotype of separated health care organizations independently providing medical care to patients. It directs the now obsolete institution-centered view to a citizen-centered view, facilitates preventive and post-treatment approaches complementing the previous strong focus on curative ones, and establishes the home environment as a major place of care. The deep and continuously increasing integration of digital technologies into our everyday lives, e. g. by mobile solutions, will revolutionize our view on health care. Quantifying one's health status will increasingly not solely be applicable within health care institutions but also to other organizations such as, for example, direct-to-consumer genetic testing providers [3]. It will rather become an ongoing task helping to predict, maintain or improve the quality of life, both for individuals and society. As we are at the starting point of this transformation this special issue provides a forum to present current findings in the field of Digital Health.

The intention for this special issue was to collect interesting research papers that illustrates the thematic variety, and the interdisciplinarity of this field. Furthermore, our purpose was to catch-up current trends and cutting-edge topics such as the introduction of artificial intelligence into home-based rehabilitation. The selection of papers also underlines the plurality of methods in this field.

This special issue contains seven peer reviewed papers. The contribution of Becker and colleagues addresses the ongoing merging of medical devices and medical software. This phenomenon is discussed against the background of recent updates of the medical devices act. Pobiruchin and colleagues tackle another important topic with their article "Your Data is Gold – Data Donation for Better Healthcare?". This debate is closely linked to initiatives such as the "Medical Informatics Initiative" or projects such as Smart4Health (smart4health.eu), which aim to conduct in-depth analyses on the basis of existing health care data to improve the understanding of symptom complexes and interventions.

Neumann and colleagues focus on strategies to encourage behavioral changes in patients and thereby, ele-

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vate patient empowerment. Stegmann questions whether interoperability is actually a more technical question or rather than an economic challenge. A lack of interoperability is often seen as one of the central barriers for the development and implementation of digital health solutions. Kowatsch and his co-authors widen the view by investigating evaluation criteria and implementation barriers for Digital Health innovations by mapping them to the MOST framework. Therewith, they provide guidance for the development process of Digital Health innovations.

A more operative scheme is addressed by the contribution of Mozgovoy and Mettler who analyzed access strategies to ICT for electronic Human Resource Management. Last but not least we include a contribution of Philipp and colleagues that is based on an implementation project showing how machine-learning approaches can be used for home-based rehabilitation.

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Prof. Dr. Ali Sunyaev is Professor for Computer Science at the Department of Economics and Management, Karlsruhe Institute of Technology, Germany. His research work accounts for the multifaceted use contexts of digital technologies with research on human behaviour affecting IT applications and vice versa. Together with Hannes Schlieter, Rüdiger Breitschwerdt and Martin Sedlmyar, Ali is Founder and Spokesperson of the “Digital Health” section in the German Informatics Society.

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