

## Research on social and health informatics focuses on various aspects of the Finnish Information Strategy for social and health care

The goal of the Finnish Information Strategy for Social and Health care is to support both the renewal of social and health care and citizens' activity in the maintenance of their wellbeing by improving information management and increasing e-services.

There are already many social and healthcare e-services available. The role of citizen has become more active. Citizens can already access their own electronic prescriptions and part of the patient information through the Omakanta website. There are also various electronic web services available, such as Terveystyökalu, which was developed together with experts and patients.

The opinions of patients about the usefulness and ease of use of electronic services in special medical care are described in the article by Kivekäs et al. According to the results of the study, the participants were motivated to monitor their wellbeing based on their experiences with such services. According to the participants the electronic services were easily accessible and they were eager to use the services. However elderly respondents were doubtful of their IT skills. According to the study, participants' perceptions of the usefulness and ease of use of electronic services are significant predictors of the participants' attitudes towards them as well as intentions to use such services.

There are plenty of different devices to monitor people's physical activity. The validity of the devices must also be evaluated to ensure that the results they produce are reliable in monitoring the physical activity of the citizens. Tam et al. has evaluated the validity of devices for monitoring physical activity. According to the study, these devices are valid for monitoring physical activity.

Various technological solutions for fall risk assessment in daily life are described and evaluated by Immonen et al. Sensor-based solutions should also be integrated into the Finnish national Kanta Personal Health Record in a secure manner.

According to the the Finnish Information Strategy for Social and Health care, customer and patient information must be available to professionals and customers regardless of changes in organizational structures, services and information systems.

Information systems have already been extensively used in special medical care, primary health care and social work, although changes in information systems are taking place. Based on the data collected by the National Institute of Health and Welfare Jormainen et al. have analysed market shares of EHR data systems used in public primary health care (health centres) and hospitals as well as market shares of social care information systems in 2017. According to the studies both EHR data systems' markets and social care client system markets were highly concentrated in 2017.

The latest technology and analytics solutions help to organize services and to develop care paths. The article by Hautala et al. describes future health technology opportunities for non-urgent emergency care tasks. Based on the study the care paths of patients can be improved and developed. In the future different kinds of remote meters enable faster use of home measurement results and with new technological solutions information will be more easily accessible.

New innovations in health care must also be assessed. Kvaern et al. describe a model and guidelines for evaluating health care innovations to support decision-making by leaders. The model and guide has been developed as a Nordic co-operation.

Both the exchange of information between the professionals in one service provider and between service providers require the use of common concepts. Citizens' mobility also require cross-border exchange of information. The article by Mäkelä-Bengs et al. outlines the use of reference terminology at European Union level. Research purpose was to compare SNOMED CT to two alternative terminology scenarios, a UMLS termi-

nology set and a value set of national codes. The Finns took part in the evaluation of UMLS terminology. According to the results, the concept and term coverage of UMLS terminology was low or moderate. The reasons are mainly due to the quality of translations of patient records and the international codes used in UMLS (ICD 10, ATC, LOINC). According to the study, SNOMED CT terminology should also be evaluated in Finland before its implementation.

The article by Kuusisto et al. describes the development and piloting of the information content of an electronic multidisciplinary discharge checklist. According to the study the most development needs of the discharge checklist focus on including the customer and patient perspective and the checklist's technical performance in the electronic health record.

Professionals' knowledge, skills and competence is a prerequisite for the development of electronic services. Ahonen et al. have validated a measurement tool to evaluate the competence of students at University of Applied Sciences (UAS) in the development of digital health and social care services. Teachers do not require the same level of expertise as stated by international recommendations. The validation of the measurement

tool will be continued by studying the views of the teachers of University of Applied Sciences at national level on the need for competence of students at the Bachelor level.

Information security is also a key factor in the development of healthcare services. According to the Health care and cyber threats review by Norri-Sederholm et al., health care heads the top 5 list of cyber-attack targets. The review describes actual cyber threats, cyber vulnerabilities, and cyber-attacks covering different dimensions of the cyber world. Protection against cyber threats is needed. Each organization is responsible of taking care of their cyber security, increasing awareness of cyber security and educating staff.

According to studies published in this issue, citizens use more electronic services and are motivated to monitor their own well-being. The studies highlight the need to store citizens own measurement results into national information services and the challenge to use unified concepts and terms for the exchange of information across national borders.

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