CONFERENCE SUPPLEMENT EDITORIAL

Making sense of changing health landscapes- new demands for research and evaluations

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Imagining a health care system without ICT is impossible in today's world. The question is no longer so much how to disseminate telemedicine and e-health technologies in the health care sector, but how to use the technology to achieve the best benefit for the patients. As practical challenges and new opportunities in e-health emerge continually, research interest in this field grows apace.

We are proud to host the 2016 European Telemedicine Conference (ETC16) and its scientific track. The track received 76 submissions, of which 46 were selected for oral and poster presentations. As chairs for the scientific committee, we think the presentations span important topics for the e-health and telemedicine field. After 20 years of research and experience we know much about factors that enable and inhibit the spread and implementation of e-health and telemedicine, but there are still important aspects that need more knowledge and research. New technologies spring forward at an unprecedented pace, affecting the delivery of health care, while at the same time patients adopt new technologies for coping with their disease and well-being at home. In particular, there is large hope and interest in the use and processing of large data that can enable decision support for both providers and patients. Home and connected care are thought to be central enablers for providing care for elderly and chronic patients at home, thereby improving quality of life, lower expenditure and ease pressure on the health care system. For all parts of health care, but particularly in mental care, understanding the relationships between patients, providers and authorities is important such that effective and patient-centric services can be designed. We need to understand how all these trends and more change the delivery of care at the same time as we ensure the benefit and safety of patients.

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The *patient's healthcare* is the emerging principle behind the politics of health care in Norway; aligning it with other European and international health policies aiming for patient centred rather than provider centric health care systems. Norway has taken important measures to improve governance and structure to the e-health field, in particular by establishing a separate Directorate of e-health. The development is guided by the vision of "One citizen – one health record" as formulated in a 2012 government whitepaper with universal political support. The Norwegian Centre for E-health Research, which co-hosts this year's ETC, is a newly established independent research institution whose mission is to support a knowledge-based development in the field.

The field of telemedicine and e-health has been characterized by many small-scale solutions that with honourable exceptions have failed to achieve wide spread adoption. Nevertheless, it is time we shift our research interest away from questions of dissemination in clinical settings alone. Research will need to include more nuanced approaches to benefit realisation that also centres on the patient and his or her decisions in everyday life. Today, health and e-health are inseparable. To ensure the most effective use of ICT solutions for patients, care providers and the benefit of society we need studies that follow the complete process of implementing technology, as this plays out in various health care settings. Implementation studies and process evaluations that can contribute to our understanding of variations in outcome and help illuminate cultural and social differences in health will become increasingly important.

The topic of difference will be highlighted in this year's opening key note, "Telemedicine: Past achievements and future promises", to be presented by Sally Wyatt, Professor of Digital Cultures in Development at Maastricht University in The Netherlands. Wyatt's point of departure is that telemedicine can mean different things, at different times to different groups. Changing meanings affect how we think about the role of technology in the provision of healthcare and health information. Telemedicine challenges notions of 'the clinic', and especially relations between patients and healthcare professionals. It also challenges assumptions underlying state-funded healthcare, by introducing new forms of individual and collective responsibility that cross national borders. Wyatt will explore these questions drawing on recent developments in, amongst others, genetic testing and the quantified self.

The varied scientific programme reflects the multidisciplinary field of telemedicine and e-health, covering a wide range of topics and research approaches. Two contributions share this year's prize of best paper: Monica Strand, Deede Gammon and Lillian Sofie Eng's abstract "An Internet-based collaboration tool for personal recovery: How did service users and providers address and align expectations about collaborating through the tool?" reports from a study of an interactive Internet intervention designed to facilitate personal recovery processes. Their findings illuminate how patients and providers may have different expectations to digital communication tools, but that actively

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addressing expectations and reaching agreements of how to collaborate can have a positive effect on
the experienced benefit of the intervention.

Ioanna Sokoreli, Daniele De Massari, Steffen Pauws, Jarno Riistama, Gert-Jan de Vries, Ewout
Steyerberg, Amanda Crundall-Goode, Kevin Goode, Riet Dierck, John Cleland and Andrew Clark
submitted the abstract "Effectiveness of telehealth for heart failure management in routine practice. "
Their topic is telemonitoring at home, and they report from a study where effects on re-admissions to
hospital amongst patients with heart failure were assessed after 90 days and one year. They found
that there were fewer unplanned readmissions among the patients who received telehealth. Further,
they argue that for telemonitoring to achieve the greatest value it is important to identify the patients
who are most likely to have the greatest benefit, using systematic risk assessment tools.

To round off ETC16 key note speaker Professor Brian McKinstry will give a talk on "Telehealth- hype,
hubris and hope". McKinstry poses some critical questions to the existing evidence behind telehealth
versus the government hype, and the fitness for purpose of current methods of evaluation in our field.
He is concerned with the need to shift decision support away from clinicians and over to the patients
themselves, and how telehealth can contribute in the development towards a patient centric health
care system.

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