Evaluating the role of m-health interventions in patient empowerment

A study protocol focusing on management of chronic diseases such as diabetes

Norwegian Centre for **E-health Research** Omid Saadatfard¹, Anne Granstrøm Ekeland^{1,2}, David Wiljer^{3,4}, Meghan Bradway^{1,2}, Eirik Årsand^{1,2}

¹Norwegian Centre for E-health Research, University Hospital of North Norway (UNN), Tromsø, Norway ²UiT – The Arctic University of Norway, Department of Clinical Medicine, Tromsø, Norway ³University Health Network (UHN), Toronto, Canada ⁴University of Toronto (UofT), Department of Psychiatry; Institute of Health Policy, Management and Evaluation (IHPME), Toronto, Canada

Background and aims:

results identified a gap in healthcare evaluation for understanding and measuring empowerment as patient- reported outcomes for chronic conditions such as diabetes [6]. Feedback from patients who use m-health tools for managing their chronic conditions confirmed the influence of m-health on empowerment related outcomes such as health literacy, information seeking behaviour and higher awareness of their health condition.

Mobile health (m-health) promotes a patientcentred model for healthcare service delivery by making patient care ubiquitous and independent of providers. Our overall aim is to develop a framework for evaluating patient empowerment related outcomes of m-health interventions.

Methods:

Literature reviews and patient interviews were conducted to understand how the empowerment process is explained and its outcomes measured in evaluation of healthcare information systems and in disciplines such as patient education, social work, behavioural science and socioeconomic development, [1,2,3,4,5] are some examples of the reviewed literature. The outcomes of reviews and interviews were 121 used to build the 81 foundation of our study, which has two phases. In the first phase, we will use inductive exploratory methods to generate a conceptual model to understand which factors influence the patient empowerment process in m-health. In the second phase, we will assess the utility of this conceptual model in evaluation of empowerment related outcomes by measuring the validity and reliability of instru-

Conclusion:

Our study will inform the development of a needed framework and tools for evaluating the empowerment related outcomes of m-health interventions. We are currently seeking funding for this study, and welcome potential partners to contact us for discussing collaboration opportunities. **References:** 1. Samoocha D, Bruinvels DJ, Elbers NA, Anema JR, van der Beek AJ. Effectiveness of web-based interventions on patient empowerment: a systematic review and meta-analysis. Journal of medical Internet research. 2010;12(2):e23. 2. Anderson RM, Funnell MM, Fitzgerald JT, Marrero DG. The Diabetes Empowerment Scale: a measure of psychosocial self-efficacy. Diabetes care. 2000 Jun 1;23(6):739-43. 3. Speer PW, Peterson NA. Psychometric properties of an empowerment scale: Testing cognitive, emotional, and behavioral domains. Social Work Research. 2000 Jun 1;24(2):109-18.

ments developed based on our model in an m-health evaluation study.

Results:

ehealthresearch.no

Literature reviews showed that current m-health evaluation studies have little focus on empowerment related outcomes. The

- 4. Menon, S. T. (1999). Psychological Empowerment: Definition, Measurement, and Validation. Canadian Journal of **Behavioural Science**,
- 5. Alsop R, Heinsohn N. Measuring empowerment in practice: Structuring analysis and framing indicators. World Bank policy research working paper. 2005 Feb(3510). 6. McAllister M, Dunn G, Payne K, Davies L, Todd C. Patient empowerment: the need to consider it as a measurable patient-reported outcome for chronic conditions. BMC health services research. 2012 Jun 13;12(1):157.

For more information, please contact: Eirik Årsand, tel +47 992 43 592, e-mail: eirik.arsand@ehealthresearch.no