COPD in primary care
Exploring conditions for implementation of evidence-based interventions and eHealth

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Akademisk avhandling

som med vederbörligt tillstånd av Rektor vid Umeå universitet för avläggande av medicine doktorsexamen framläggs till offentligt förvar i Aulan, Vårdvetarhuset, fredagen den 9 november, kl. 09:00. Avhandlingen kommer att försvaras på svenska.

Fakultetsopponent: Professor Lisa Skär, Institutionen för hälsa, Blekinge Tekniska Högskola, Karlskrona, Sverige.

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People with chronic obstructive pulmonary disease (COPD) have low access to evidence-based interventions and electronic health (eHealth) has been seen as promising for increased access. The aim of this thesis is to explore the conditions for implementation of evidence-based COPD interventions and the use of eHealth in primary care. The thesis is based on four papers. Healthcare professionals, people with COPD, their relatives, senior managers representing primary care centres and external researchers participated in qualitative interviews and focus group discussions, as well as questionnaires. Qualitative, quantitative and mixed methods were used to analyse the material (papers I, II and IV). Articles about telehealth for people with COPD were collected in a systematic review, analysed with a meta-analysis (paper III).

The healthcare organisation is fragmented with few resources and COPD care takes low priority. The driven, responsible and ambitious healthcare professionals wish to provide empowering COPD interventions through interprofessional collaboration, but are inhibited by their limited knowledge of and experience with COPD as well as the non-compliant organization. People with COPD have limited knowledge and struggle with stigma, while they try to accept and manage their disease. The attitudes and support of healthcare professionals’ in the interactions are essential. For people with COPD, this can take different paths: either enhancing confidence with empowering support or coping with disempowering stigma and threat.

eHealth solutions such as telehealth, have been used to provide interventions to people with COPD through phone calls, websites or mobile phones, in combination with exercise training and/or education. They show a significant effect on physical activity level, but not on physical capacity and dyspnoea. The intended users report that, to be useful and relevant in clinical practice, an eHealth tool should be reinforcing existing support structures and fit with current routines and contexts. According to the participants, it need to create a sense of commitment in the users and information about self-management strategies, such as how-to videos are valuable. The participants regard eHealth as providing knowledge and support for self-management.

In conclusion, there is a need for implementation of clinical guidelines for COPD in primary care. Several actions are needed to facilitate this implementation. COPD management in primary care need higher priority and more resources. Physiotherapists should be included in COPD management and healthcare professionals need further training. The use of eHealth can facilitate implementation and user involvement in the development process is essential. These findings may guide implementation processes in primary care, as well as the development of eHealth tools for people with COPD or other long-term conditions.

**Keywords**
Chronic obstructive pulmonary disease, primary care, eHealth, implementation, user involvement, systematic review, grounded theory, qualitative content analysis, mixed methods, meta-analysis