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COPD MANAGEMENT

Exploring conditions for, and experiences of, evidence-based care and eHealth

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Akademisk avhandling

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Abstract
Chronic obstructive pulmonary disease (COPD) is one of the leading causes of morbidity and premature death worldwide. It is a systemic disease that affects the whole person, although dyspnea is the most prominent symptom. A common extrapulmonary manifestation of the disease is quadriceps dysfunction affecting everyday life. To evaluate and offer appropriate treatment of quadriceps dysfunction, reference values and equations are needed. Moreover, a key part of COPD management is pulmonary rehabilitation, however, we need to develop new ways of informing and supporting diagnosed persons. One way is via eHealth, although tools must be evaluated so that they contribute to health care in a functional way.
Aim: The overall objective of this thesis is to explore the conditions for, and perspectives of, evidence-based care and eHealth in COPD management for people with COPD and health care professionals (HCPs), respectively. This aim is twofold. Firstly, to explore experiences, interactions, and context of using eHealth tools. Secondly, to develop reference values and equations for quadriceps function.
Method: Papers I - III are based on individual interviews analyzed with qualitative research methods in which an eHealth tool, the COPD Web, is evaluated. Paper IV is based on an international multicenter data collection analyzed with quantitative research methods.
Results: Paper I: Level of motivation, comfortability with IT tools, and health literacy seem to affect the usage of an eHealth tool over time. Level of usage and time affect perceived gained benefits from the tool. **Paper II:** Using the eHealth tool provided knowledge support for HCPs and might improve the quality of care for people with COPD. There are still some barriers to successful implementation in daily practice. **Paper III:** Having or perceiving a certain amount of control seems vital to maintaining or increasing physical activity when having COPD and using an eHealth tool. **Paper IV:** For people without COPD, age, sex, height, and BMI explained 50–70% of the variance of quadriceps properties. Also, findings suggested construct validity of the reference equations in people with COPD.
Conclusion: The COPD Web supports both people with COPD and HCPs. It might be apt to screen people with COPD for health literacy before deciding on PR strategies. To implement new tools in the health care setting, time, support, and education are needed. Construct validity was found for the reference equations, and the developed reference values and equations will make further tailoring of the treatment regime for the individual possible.

Keywords
COPD, eHealth, eHealth tool, hinders, facilitators, physical activity level, reference equations, quadriceps function, strength, endurance, power

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