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Conference Abstract

How to evaluate telemedicine projects in clinical practice?

Marie Birkemose, M.Sc. in Telemedicine and E-health, UiT The Arctic University of Norway, Tromsø, Norway

Gunnar Ellingsen, Prof. in Telemedicine and E-health, UiT The Arctic University of Norway, Tromsø, Norway

Correspondence to: **Marie Birkemose**, E-mail: mariebirkemose@gmail.com

Abstract

Purpose: Based on several studies [1, 2] questioning the usefulness of randomized controlled trial as evaluation method for innovative telemedicine projects, the objective of the study was to identify what alternative type of strategy there may be suitable for evaluating an innovative telemedicine project aiming for sustainable use in complex and heterogeneous healthcare work practices.

Context: The study was based on the evaluation of a Danish research project, evaluating various cross-sectoral collaboration forms for treatment of elderly acute ill medical patients. Instead of being admitted to the hospital the patients were treated at home or at an acute unit in a care centre. The primary outcome was the number of admissions within 7 days, depending on whether a medical specialist (intervention) or the general practitioners were responsible for the treatment. One of the treatment offers included that the municipal nurses had access to three telemedicine solutions; I) Sharing of telemonitored vital values between municipal nurses and a medical specialist; II) Video conferencing between municipal nurses and a medical specialist and; III) A hotline directly to the medical specialist. As the project developed, a gap between initial expectations and actual outcome appeared. This resulted in change of evaluation approach for the telemedicine intervention.

Methods: The telemedicine evaluation was carried through a narrative process analysis approach, where information system development was viewed as situated socio-technical change [3]. Data was collected through participant-observation, by reviewing relevant project documents and from qualitative semi-structured interviews. 11 informants in total were interviewed including users of the technology, project managers and the supplier of the technology.

Results/Discussion: The results showed that the development and implementation process had been complex and influenced by multi-dimensional elements, resulting in the shaping of the process being multifaceted. The study underscores that it is important to pay attention to which evaluation approach is chosen when one wants to generate valuable knowledge from an ongoing telemedicine project. The study illustrated that it is not applicable to evaluate an innovative telemedicine project through a rigorous randomized controlled trial design. Instead research methods exploring the underlying processes of the socio-technical interaction must be addressed, to view telemedicine interventions and achievements as a complex and ongoing process of trial and failure in natural settings, helping to learn from the success and failures.

Keywords

telemedicine; implementation; evaluation; randomized controlled trial; socio-technical

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