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Conference Abstract

## **A novel model for early forecasting of expected return of new innovative medical technologies in hospitals. Study case: telemedicine patient briefcase**

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### **Abstract**

**Introduction and aim:** There is a rising need for decision support in the process with development of innovative medical technologies (IMTs). Further, sound approaches for early forecasting of return on IMTs, coping with the uncertainty and flexibility inherent in IMTs, are lacking. Along with the challenging economic conditions for health care over the next years and the increasing focus on IMT, it is important to develop a new approach to the estimation of the expected long term return on IMTs early on in the process of technology development.

**Objective of PhD project:** to develop a model for early forecasting of expected returns for IMTs which can be used by hospitals to select IMTs that have a high probability of becoming economic feasible in the stage of routine use.

**Methods:** First, a systematic literature review identifies existing forecast models used on technologies in early phases. Second, qualitative interviews explore practices used in the industry (pharmaceutical, medical device) and by model developers from health services or academia.

Third, a forecast model for technologies in the pilot study phase is developed, drawing on the above output. Fourth, data from initial routine use of the telemedicine patient briefcase is used to test robustness and judge forecast performance of the model.

**Perspective:** A good forecast model of expected returns of new innovative medical technologies will add value to strategic development decisions in the health care sector in Denmark. Perhaps even be a competitive advantage for Danish hospitals in an increasingly globalized world.

### **Keywords**

**forecasting; return; innovative technologies; hospital**

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**PowerPoint presentation:**

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