

Piloting the Norwegian version of the “The Measuring Instrument for Determinants of Innovations” (MIDI) - a new instrument for implementation of innovations in health care

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Introduction

Some of the future challenges of the municipal health care services can be met through increased use of welfare technology and service innovation. There is little research about the implementation of welfare technology and Health Information Technology, regarding aspects as organisational change, incentives, liability issues, user's competences and skills, structure and work process issues. Fleuren, Wiefferink and Paulussen (2004) introduced an overview of 50 determinants that may facilitate or impede innovations in health care. The list has since been used in 8 studies which were combined into a meta-analysis that has been discussed with 22 implementation experts, resulting in “The Measuring Instrument for Determinants of Innovations” (MIDI). The MIDI consists of 29 determinants that 'predict' successful implementation separately and in combination (Fleuren, Paulussen, Dommelen and Buuren, 2014). The Science Centre Health and Technology's research group at Buskerud and Vestfold University College has identified the MIDI as a possible useful tool in our implementation research. The purpose of this study was 1) to contribute to the further development of the MIDI and in order to do so, 2) to develop a Norwegian version of the MIDI.

Materials and Methods

We got permission from Dr Fleuren to use the MIDI and contribute to the further development of the instrument, which is formed as a questionnaire. The MIDI was translated from English (JD) and Dutch (HE) into Norwegian. The two translations were compared and modified into a single questionnaire. The Norwegian MIDI was piloted in *the Digital Night Surveillance project* in January 2014. The innovation which the MIDI referred to was in this case digital night surveillance technology implemented in 5 municipalities. The respondents were instructed to write down comments as they worked their way through the questionnaire, and were then invited to comment and discuss each question (item) and the alternatives per question in a group discussion. This resulted in an adjusted version which was piloted in the evaluation of the *LEAN education program* in the Health-, social- and care sector in Drammen, during spring 2014. The innovation which the MIDI referred to was in this case the new, LEAN way of working (i.e., service innovation). The respondents were invited to write down comments. The adjusted MIDI is currently being sent to all the employees involved in the Digital Night Surveillance project. The instrument will be translated back into the original languages by July 2014, in order to ensure that the Norwegian version is compatible with the original versions.

Results

The initial feedback from the night shift nurses and health care workers in the Digital night surveillance project (n=19) resulted in rephrasing of some of the questions (items) and the alternative responses. The group also identified parts of the innovation that should be included when the questionnaire is used in their project, but was overall satisfied with the perceived relevance of the MIDI. The feedback from the LEAN group consisting of coordinating nurses and managers of nursing homes and home care services (n=25) did not result in changes to the questionnaire, but made it clear that additional information/material was needed. The remaining results will be available in August.

Discussion

The MIDI questionnaire is intended for research on intermediary users of an innovation and their perceptions based on expectations or on experience with the innovation or components of the innovation. Preliminary results show that the MIDI covers determinants within 4 categories (the innovation, the user, the organisation and the related governance) that are relevant to the employees of the municipal health and care service when implementing welfare technology and service innovation, which is a new setting for the use of the MIDI. Furthermore, we have piloted, made adjustments and finally suggested a Norwegian version of the MIDI that will be used in ongoing research projects and made available to other researchers. The data will contribute to a larger dataset that can form the basis for cut-off values in the further development of the instrument.

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References

- Fleuren M, Wiefferink K, Paulussen T. Determinants of innovation within health care organizations. Literature review and Delphi study. *Int J Qual Health Care* 2004; Volume 16, Number 2: pp. 107–123
- Fleuren M, Paulussen T, Dommelen P v, Buuren S v. Towards a measurement instrument for determinants of innovations. *Int J Qual Health Care* 2014. doi: 10.1093/intqhc/mzu060