FUNNKe – A Norwegian Large Scale Implementation Project

Experiences From the Implementing Process in the Light of the Normalization Process Theory

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***Abstract*—The paper presents a case study describing and analyzing a large scale implementation project taking the sociological model Normalization Process Theory (NPT) into consideration. Two of the authors of the article are also managers of the implementation project, and the article summarizes the experiences made in the project period. NPT can help understand the challenges the implementation project met in the last phase of the project period. The NPT focus on what people actually do and how they work, aligns with the experiences made in the project. Although partners say they will start implementing e-health technology, it does not necessarily mean they will start the work immediately. An implementation project must plan for this and adapt the implementation strategy accordingly.**

Keywords; ***implementation; large scale implementation project; electronic exchange of health information; electronic messaging; e-health; Normalization Process Theory.***

I. INTRODUCTION

FUNNKe is a large-scale implementation project in the health region of Northern Norway. The project period was 2010 - 2014. The main objective of FUNNKe was to establish electronic exchange of health information in all sectors of the health service delivery in the region. By electronic exchange of health information, we mean electronic messaging. Such messages include referrals, discharge summaries, requisitions, test results and dialogue-based messaging between health personnel. The project supports all levels of the health sector - general practitioners (GPs), community care and nursing homes, and hospitals - in taking electronic messaging in use.

We will address certain elements of the processes of implementation and discuss empirical experiences in the light of the Normalization Process Theory (NPT) [3].

The project reached its goal within the planned project period. We did however meet some challenges in the last period of the project. Many of the small municipalities were reluctant to implement electronic messaging, and the project had to spend quite an amount of time persuading and teaching the local ICT- and health personnel.

NPT can help us understand the challenges met in the last phase of the project period. NPT focuses on the work that individuals and groups have to do for a new technology or practice to become embedded and sustained in routine practice. The paper is structured as follows: First the background of the project is presented, then the method, followed by discussions and conclusions.

II. BACKGROUND

FUNNKe was part of a National program owned by the Ministry of Health and managed by the Norwegian Health Network. This program implemented electronic messaging in the other regions of Norway. The Norwegian Centre for Integrated Care and Telemedicine (NST) ran FUNNKe's project management.

The purpose of FUNNKe has been quality and efficiency in the health service delivery in Northern Norway. The main objective of FUNNKe was; "a public health service sector in Northern Norway communicating electronically by the end of 2014".

By the end of the project period, 85 of 87 municipalities, Over 400 GPs and all four hospitals in the region had implemented electronic messaging as their main communication tool. The two missing municipalities will start up in February 2015. The project therefore reached its goal.

The challenges of implementing use of electronic messaging are connected to the fact that only nine of the 87 municipalities in Northern Norway have a population above 10 000, and 65 of the municipalities have a population under 5000. Remotely situated municipalities with a small population size often lack personnel in sectors like ICT and health care personnel. Many of these municipalities also have outdated and insufficient ICT equipment. The situation when it comes to updated ICT equipment is better at the four hospitals in the region.

Hospitals and GPs in the region started using Electronic Patient Record (EPR) earlier than many of the municipalities. A survey from 2012 [2] shows that 26 of the 87 municipalities in the region used EPR to little or some extent, or not at all. The leap from this to taking electronic messaging in use required extensive resources, organizational changes and new ways of working.

The hospitals, municipalities and GPs in the region use several EPR systems. All hospitals use the same system delivered by one vendor, while other vendors serve the municipalities and GPs. All EPR-systems can communicate and the actors use standardized messages. The electronic

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traffic goes on the Norwegian National Health Network (NHN), which is the national infrastructure for the electronic interchange of individual health data.

III. METHOD

Two of the authors are the Project Managers of the implementation project. The article and poster summarize the experiences made in the project period, from the point of view of the project managers. We use minutes from meetings, strategy documents and internal discussions as our data. We will not address to what extent electronic messaging as such is part of regular routine in the health sector. An evaluation is under development, in which municipal personnel is asked to evaluate the implementation process. Research is also going on to analyze the potential for time saving and perceived changes in the quality of care [1]. We will discuss the large-scale project's implementation methods.

IV. DISCUSSIONS

The idea behind FUNNKe's strategy for implementation has been to support the municipalities and hospitals towards expertise. The FUNNKe strategy has six characteristics, developed and initiated by the project management:

1. Information work to attain management and users' commitment.
2. Free access to guidance and support from the project organization.
3. Network building and establishing local networks.
4. Sharing experience and expertise among all parties.
5. Small financial contributions to municipalities as a start-up support.
6. Purchasing of services from local expertise (often nurses working as ICT advisors) and offering their assistance to other municipalities,

According to our experience, the implementation strategy has worked well.

The NPT explanatory model builds upon four constructs: Coherence, Cognitive participation, Collective action and Reflexive monitoring.

We delimit our focus to one of these constructs, Cognitive Participation, which is about the "work that defines and organizes the enrolment of participation in practice" [3:2]. Key questions in this construct are: Does key participants *initiate*, in the work to drive the implementation of electronic messaging forward? Do the health and ICT-personnel *enroll* and buy into the idea of electronic exchange of health information? Do the participants believe it is right for them to be in involved in the new practice (*legitimation*)? Will the users of the electronic messaging system involve and *activate* in the sustaining of the practice? [4].

The NPT's foci on what people actually do and how they work as a crucial starting point for implementation align with our experiences. In the project period of FUNNKe we have learnt that although municipalities tell us they will start implementing electronic messaging, it does not necessarily mean they will start the work immediately.

The FUNNKe project management spent much time on attaining commitment to the project from the municipal management since we needed consent from the decisions makers to a starting up of the process. Our experiences show us, however, that in the last phases of the project lack of commitment from the user level caused delays in the project. The personnel were not enthusiastic about the idea of electronic messaging. In some of the municipalities health- and ICT-personnel were worried about the responsibility following the new system, and wanted to postpone the implementation because of this. The project management realize that more inspirational work targeting the users, could have been of help. We believe that the NPT's construct "Cognitive Participation" could have helped us with a more thorough focus on the commitment from health- and ICT personnel.

However, management support is also crucial for e-health initiatives like this. Lacking support from the city managers would have hampered the implementation process, and we miss a focus on this aspect in the NPT model.

V. CONCLUSIONS

The FUNNKe project's strategy for implementation aligns with the NPT theory. Our analyses indicate that the health- and ICT personnel's lack of enthusiasm can explain some of the problems the implementation project faced in the last period of the project.

Electronic messaging in the health sector is now implemented in the northernmost region of Norway. Challenges for the future will be developing the electronic messaging system and commissioning support to the service and. The municipalities together with the hospitals will address this.

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