
CONFERENCE ABSTRACT

Gains analysis of Lightweight Collaboration & Workflow ICT in municipal health care

European Telemedicine Conference 2016, Oslo 15-16 November

Elin S. Boysen¹, Karl-Gerhard Hem, Dag Ausen, Ingrid Svagård

1: Sintef ICT, Norway

Correspondence to: Elin Boysen elinsundby.boysen@sintef.no

Purpose: To study the effects of lightweight collaboration technology [1] in municipal health&care services. Focus has been on identifying quantitative and qualitative effects, within each organization unit/department that participated in the pilot, and in collaboration between them.

Context: Lightweight Collaboration Technology from Imatis (www.imatis.no) has been piloted in the municipalities Lørenskog, Bærum and Oslo from 2014-2016 (support by Regional Research Funds) [2]. The ICT provide overview of indwelling and incoming patient status, planned and performed examinations, patient risk assessments and logistics, and task checklists for assigned personnel; all updated and shared in real-time on electronic whiteboards, pcs and tablets. Units that have taken part in the pilots include: Acute Day Bed Units [No:KAD] in Oslo (max 3 days stay, 72 beds) and Bærum (max 7 days stay, 21 beds); Short Term Nursing Home in Lørenskog (7-14 days stay); Patient Coordinating Units [No: Søknadskontor] in Bærum and Lørenskog; Bærum Emergency Room [No: Legevakt]; and Ambulance Entrance Unit in Oslo.

Methods: In each participating department, a baseline was established using interviews, focus groups and surveys. Effect evaluations have been conducted at different intervals (typical at 6 and 12 months) using the same methods. Informants have been leaders and employees (nurses, doctors and other care workers) in each unit. An economic analysis was carried out in Bærum.

Results and Discussion: Users express that the collaboration technology improves the quality of information and increases the quality and efficiency of their work. Common work tools in these types of units are EPJs, whiteboards, paper lists, simple manual overview lists, post-it notes, message books and reports (Excel/Word). Time-thieves identified in the baseline were manual handling of lists, actively searching EPJ systems for new/changed information, waiting for calls or trying to get in touch with the right person.

Information exchange via the collaboration system in-stead of telephone calls are reported as a benefit in terms of less interruptions and better planning of work activities and resources. In

Lørenskog 87% of employees report that the system saves time, and 75% save between 20 and 40 minutes every day, mainly because information is available on a screen on the wall. Better overview was reported in Lørenskog, Bærum and Oslo as a source reducing errors, higher patient safety, and more efficient communication both internally and between organizational units.

Economic analysis show that the most prominent time savings in care units are related shift report and pre-visits, where each task is reduced by 25-40 minutes each day due to the introduction of the information screen. In one unit with 21 beds this sums up to appx EUR 77.000 pa.

Gains are related to how well the whiteboards match the work processes in each unit. This requires an active approach where each unit takes a critical view on their own work processes followed up by adjusting the screen layouts to support the work flow. A current drawback is the lack of integration with other systems requiring entering the same entries in several, but this drawback is outweighed by the positives.

References

1. Bendik Bygstad (2016). Generative innovation: a comparison of lightweight and heavyweight IT, Journal of Information Technology (2016) 1–14
2. SINTEF (2016) – reports on pilots in Lørenskog (A27490) and Bærum (A27433)
<http://www.sintef.no/projectweb/velferdsteknologi/publikasjoner>

Keywords: collaborative work; municipal health care; time savings; ICT support
