
CONFERENCE ABSTRACT

Integrated planning tool for optimisation in municipal home care

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Purpose: The objective is to improve collaboration and enhance quality of care services in municipal, home care services by implementing and developing an integrated planning tool making use of optimisation technology for better decision support. The project will through piloting and action based research establish knowledge on change in work processes to improve collaboration and efficiency.

Context: A planning tool called Spider has been piloted in home care in Horten municipality since 2015 to address the challenges of planning to improve collaboration and quality and to increase utilisation of human resources. Planning of homecare services is a complex task that involves assigning 1) staff to patients, 2) routing staff visits, and 3) scheduling treatments while considering required competences, temporal precedencies between activities, competencies, preferences (of both caregivers and patients), labour laws, organisational policies and so on, within a restricted budget. Despite being a very complex optimisation task, planning is a 'manual' task with limited support from the electronic patient journal system resulting in inefficient solutions negatively affecting collaboration, service quality, quality of life, efficiency and costs. The project in Horten is unique and there is no similar tool available for home care. The project being an activity in the National Program for Welfare, started in one home care unit in 2015. Early 2016, the tool was implemented in all home care units being integrated with the electronic patient journal system (CosDoc) and the rostering system (Visma) in Horten. A Regional Research Funded project called OPTET is continuing research activities in Horten to develop new service processes and will include municipalities in Sandefjord, Porsgrunn and Bergen.

Methods: The project has used an exploratory design where research has been related to an ongoing innovation process in home care in Horten giving the required anchoring from management to do changes affecting users, relatives and employees. Methods for human centred design [1] combined with methods of innovation processes [2] have been applied and the pilot has been through several iterations with problem formulation, testing and evaluation to establish insight and knowledge on how work processes can be changed to improve collaboration and efficiency. Qualitative methods in terms of interviews and workshops are applied from action based research and design [3,4] and quantitative

methods are used for evaluation. New service and work processes are described using Service Blueprint [5] and Business Process Modelling [6].

Results and Discussion: Results from Horten municipality are showing improved efficiency through 1) reduced planning time by ~40%, 2) time savings due to improved planning by 10% and 3) improved service quality by reducing number of caregivers per user by 22%. Having Spider implemented in all home care units, evaluations will continue and also include evaluations of 4) gains by improved flexibility in resource allocation since Spider is enabling larger care units, 5) improved utilisation of resources and competence, 6) improved work professionalism and employee satisfaction and 7) improved health and quality of life for users. The results from the study is likely to change the way home care is organised in the future.

References

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Keywords: planning tool; municipal home care; time savings; ICT support; efficiency
