National data hub for clinical nutrition in Danish hospitals, care homes and primary health care: A quality improvement study

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Description of the initiative

- **Background / context**
- The Danish quality improvement model (DQIM) included quality indicators for undernutrition in hospital since 2009. During an 8-year period the nutritional care process has improved (Holst et al. 2014). To further implement, measure and improve clinical outcomes, the Danish Ministry of Health (DMH) have launched a new quality improvement model (N-DQIM). In this model the following steps have been included: 1. *To have few ambitious national goals for health care* (i.e. coherent patient course, improved survival, efficient care, use of databases). 2. *Establish learning- and quality teams in specialized areas* (i.e. experts in nutrition, implementation and networking). 3. *A national leadership programme* (i.e. improve leadership competencies within the quality area)(DMH 2015).
- **Rationale for the initiative**
- Even though improvements have been shown after introducing a DQIM, different studies show, that treatment of those at risk of undernutrition still are insufficient due to lack of knowledge, implementation procedures and specific outcome measurements (Danish National Board of Health (DNBH) 2016). Further, no national quality registry in clinical nutrition exists.
- **Objectives and scope**
- This research project aim at integrating a model for clinical nutrition in the N-DQIM. The following elements will be included: qualification and validation of nutritional care process (according to ESPEN criteria) implementation of quality indicators (screening, energy- and protein intake) and monitoring of clinical outcomes (i.e. complications, LOS, mortality, patient related outcomes measures (PROMs) and cost effectiveness) for patients at nutritional risk integrating all ready existing clinical databases.

Planned activities & deliverables

- **Outline the steps to be taken**
- An application from a multi-stakeholder organization for including CN in N-DQIM was positively accepted by DMH in 2017 and a new application will be sent 2018 according to recommendations suggested.
- Definition and validation of quality-indicators in N-DQIM including literature research and studying good clinical practice (i.e. Holland, Spain, Israel, Norway, Sweden) is planned.
- Test and implementation of quality-indicators in random departments, nursing homes and primary health care (learning and quality-teams etc.): Screening (> 75%), food intake (> 75%) and patient-relevant outcomes (PRO) (admissions, health care use, quality of life etc.)
- Organization and establishing a national data hub for collecting and analysing data on a national level in all diagnoses (multi stakeholder organization: DNBH, DAPEN, FFU, University, Danish Regions and municipality, DSAM.
- **What are the concrete deliverables of the project?**
- To have national data in CN and outcomes measures supported by a multi stakeholder organization. This is achieved by best evidence and a professional implementation procedure to improve treatment for undernutrition, supported by DNBH, national societies, as well as experts within each specialist area.
- **What achievements are possible in the next 12 and 24 months?**
- 12M: to qualify and validate structure, process and outcome quality indicators
- 24M: to implement and test indicators and organization at a regional level including outcomes measurements
- **Describe personnel, financial needs**
- The organization will in part be supported by the ministry and health care system. A PhD-student will be hosted at a University (Aalborg). Expenses will be around 200.000 Euro's.
- **Specify how the grant will be spent**
- The grant will support the PhD-student and data-analysis. Further, funding will be applied from DMH and private organizations.
- **What factors will make it successful?** Support from multi-stake organisations and Ministry of Health

Results/outcomes & expected impact

- **How will the findings be implemented?** By use of learning and quality-teams and national leadership
- **How will this project advance patient care / contribute to optimal nutritional care?** It includes structure, process and outcome indicators on a national level making adjustments possible
- **What makes the project innovative?** Evidence-based, PRO-measures, stakeholders, national support, using databases for clinical outcomes and involving different specialities.
- **Will the project be likely to influence national nutrition policy?** Yes, being part of N-DQIM
- **Is the project transferable to other settings / countries?** Yes, by integrating the
- project in a generic quality-improvement model based on best evidence and ESPEN definitions

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