abstract
book

8th NOVO symposium

Sustainable health care production systems

copenhagen
november 6-7 2014

society
efficiency

patient
quality

NOVO

employee
work environment

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overview

Abstract book
Kasper Edwards & Jørgen Winkel (Eds.)

The 8th Novo symposium
Sustainable Health Care Production Systems

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8th NOVO Symposium

Sustainable health care production systems

preface

Welcome to Copenhagen and the 8th NOVO-symposium!

The NOVO Network is a Nordic Society promoting R&D for increased organizational sustainability in healthcare. The vision is “a Nordic Model for sustainable systems in the healthcare sector”. This core idea is illustrated by our “NOVO triangle” highlighting their mutual dependency. Thus, future R&D needs in a much higher degree to integrate these three dimensions.

This year, the 8th NOVO Network Symposium takes place at the Technical University of Denmark at the Department of Management Engineering. This emphasizes the key role of Management and Engineering for the development of our future Nordic healthcare systems capable of handling the increasing performance demands in a way that secures future organizational sustainability. The present 8th Symposium has received 26 excellent abstracts investigating key aspects of management and technical issues related to the working environment.

For years Hospitals have been working hard on improving performance and they have succeeded in doing so. Tools and methods from industry have found their way into hospitals and healthcare is becoming a production system. This often has implications for the people working in the healthcare system leading to negative impact on ergonomics. Research is needed that will illuminate the consequences, test new principles and point in the direction of how to increase organizational sustainability in healthcare production systems.

We are looking forward to discuss interesting research with fellow researchers and wish you a pleasant symposium!

Kasper Edwards
Chair of the NOVO Network and the 8th Symposium

Jørgen Winkel
Co-chair of the 8th Symposium

novo steering group

Denmark:	Kasper Edwards, chair
	Jörgen Winkel
Finland:	Marjukka Laine
	Timo Sinervo
Norway:	Endre Sjövold
	Frode Heldal
Iceland:	Sigrun Gunnarsdottir, co-chair
	Kristinn Tómasson
Sweden:	Gunnar Ahlborg
	Lotta Dellve

local committee

The symposium has been organized by the Technical University of Denmark, Department of Management Engineering. . The Local Committee has included:

- Kasper Edwards, Department of Management Engineering, Technical University of Denmark
- Jörgen Winkel, Department of Sociology and Work Science, University of Gothenburg, Sweden and Department of Management Engineering, Technical University of Denmark
- Tina Weller Nielsen, Department of Management Engineering, Technical University of Denmark
- Kirstine Lautrup, Department of Management Engineering, Technical University of Denmark

scientific review

Each abstract has been reviewed and we gratefully acknowledge contributions from the following scientific reviewers:

- Endre Sjøvold, Norges Teknisk-Naturvitenskapelige Universitet, Norway
- Ahlborg, Gunnar Jr, Institutet för stressmedicin, Västra Frölunda, Sweden
- Kasper Edwards, Department of Management Engineering, Technical University of Denmark
- Jörgen Winkel, Department of Sociology and Work Science , University of Gothenburg, Sweden
- Marjukka Laine, Arbetshälsointitutet, Social- och hälsovård, Organisationsutveckling, Findland
- Sigrún Gunnarsdóttir, University of Iceland and Bifröst University, School of Business, Iceland
- Timo Sinervo, THL National Institute for Health and Welfare PALO/PAAR, Findland
- Lotta Dellve, School of Technology and Health, KTH Royal Institute of Technology, Sweden
- Frode Heldal, Trondheim Business School, Norway
- Peter Hasle, Aalborg Universitet, Center for Industrial Production, Copenhagen, Denmark

program

Venue: “Glassalen” in Building 101A, Technical University of Denmark, Anker Engelunds Vej 1, 2800 Kgs. Lyngby (see map of venue at last page).

THURSDAY THE 6TH NOVEMBER 2014

9.00 **Registration, coffee and a light breakfast**

10.00 **Symposium opening**

10.10 **Keynote speech** by Professor Holger Pfaff, University of Cologne, Germany
Social capital of health care organizations as a precondition for sustainable performance

11.00

Session 1: Sustainable healthcare production systems Moderator: Jørgen Winkel	
Hanne Berthelsen	*Good work –the relations between social capital, influence at work and perceived quality of work*
Thim Prætorius	*The collaborative hospital: Conceptual underpinnings and empirical insights*
Kasper Edwards	*Is “Relational Coordination” a new theory for developing sustainable healthcare?*
Sanne Lykke Lundstrøm	*Association between relational coordination and patient evaluation in Danish general practice: a combination of a general practice survey and a patient survey.*

12.00 **Lunch**

13.00

Session 2: Lean Management Moderator: Endre Sjøvold	
Monica K. Nykvist	*Towards a Questionnaire to Measure Lean in Health Care*
Jori Reijula	*Lean process and environment design development project in two Finnish hospitals*
Kasper Edwards	*Using Chronicle Workshop to quantify impact of context in case studies*
Jörgen Winkel	*May sustainability of patient flows at hospitals be increased by adding a work environment module to Value Stream Mapping*
Pernilla Lindskog	*The importance of clear roles, clear goals and participation for sustainable implementation of Lean in the Swedish public sector*

THURSDAY (CONTINUED)

14.15 **Break**

14.45

Session 3: Nursing and teamwork Moderator: Lotta Dellve	
Helga Bragadóttir	*Nursing Teamwork and Job Satisfaction in Icelandic Hospitals*
Beate André	*How Positive Work Experiences Influence Work Environment in Norwegian Nursing Homes*
Wivica Kauppi	*Not an ordinary patient; a qualitative study of nurses' experiences of the process of handover between intensive care units and general ward.*
Rolf Westgaard	*Organizational discrepancies in the appraisal of working conditions in the Home Care Services – a case study in the context of work environment interventions and rationalizations*
Helga Bragadóttir	*Mirroring the Missed Nursing Care Model in the NOVO Triangle: A National Study on Missed Nursing Care and Nursing Teamwork in Icelandic Hospitals*

16.00 **End of session and scientific program thursday**

16.15 **Steering group meeting**

18.30 **Art exhibition at Sophienholm,**

Nybrovej 401, 2800 Kongens Lyngby (see map at last

19.00 page) **Symposium dinner at Sophienholm**

Sophienholm

FRIDAY THE 7TH NOVEMBER 2014

8.00 **Coffee**

8.30 **Keynote speech by Professor Per Langaa Jensen, DTU Management Engineering**
On the need for action oriented studies to promote Organizational sustainability

9.00

Session 4: Leadership Moderator: Marjukka Laine	
Caroline Lornudd	*Leadership behavior and employee distress: The mediating role of demand and control*
Frode Heldal	*Professionals and planned change*
Sigrún Gunnarsdóttir	*Comparison of Servant Leadership (SL) at hospital wards in Denmark, Iceland and Sweden: A NOVO Multicenter study*
Sigrún Gunnarsdóttir	*Facilitation of Value Stream Mapping (VSM) processes: significance of first line hospital manager participation and staff perception of servant leadership*
Lisa Björk	*The Chefios project - lessons learned*

10.15 **Break**

10.45

Session 5: Innovative Healthcare Moderator: Frode Heldal	
Tarja Heponiemi	*Evaluating the health care on-call systems in Finland –project*
Anders Paarup Nielsen	*The collaborative hospital: a multiple, embedded case study*
Birna Dröfn Birgisdóttir	*Significance of Servant Leadership for creativity in change processes when using the Lean tool Value Stream Mapping (VSM)*
Lotta Dellve	*Health care professionals' engagement: the importance of work and organisational conditions during the redesign of care processes*
Rikke Seim	*A strategic approach to prevention of musculoskeletal disorders*

12.00 **Lunch**

FRIDAY (CONTINUED)

13.00

Session 6: Integrating health and wellbeing Moderator: Kasper Edwards	
Christina Grill	*Balancing workplace dialogue in healthcare – a qualitative study of an intervention*
Hanna Augustsson	*Integrating health promotion, occupational safety and health and continuous improvements to promote employee health- A longitudinal quasi experimental intervention study*
Liv Starheim	*Lean process as tool to integrate wellbeing, quality and efficiency in hospitals*

13.45 **End keynote speech by Lars Nordgren**
Some efficiency trends in health care and possible effects

14.15 **Symposium summing up**

14.30 **Symposium End**

Glassalen from the outside

keynotes

Holger Pfaff

Holger Pfaff studied social and administrative sciences at the Universities of Erlangen-Nuremberg and Constance. Since 1997, he has held the Medical Sociology professorship at the University of Cologne. He is director of the Institute for Medical Sociology, Health Services Research, and Rehabilitation Science (IMVR) of the University of Cologne since 2009. This “bridge institute” is a joint institution of the Faculties of Human Sciences and Medicine. Since 2009, he has held the professorship Quality Development and Evaluation in Rehabilitation, which is responsible for the teaching fields Medical Sociology (Faculty of Medicine) and Quality Development in Rehabilitation (Faculty of Human Sciences).

Per Langaa Jensen

Per Langaa Jensen is a professor at DTU Management Engineering within the field of Human Factors in Production Management. He has for years been active both within research and in teaching and discussions with practioners on how to introduce working environment issues in strateguic thinking in companies

Lars Nordgren

Lars Nordgren, doctor of Economics, is Associate Professor since 2009 in Service Studies and Service Management at Lund University in Sweden. He was a hospital manager 1983-1999 and was the manager of the section of Health Management at the department of Service Management at Lund University 2003-2008. His research interest is in the service sector, especially in healthcare, with an orientation towards health management, leadership, marketization processes, and customer orientation. An interest is in service productivity inspired by the concept of value creation. He has done research on behalf of several Official Health Authorities in Sweden.

abstracts

Keynote

Session 1: Sustainable healthcare production systems

Session 2: Lean management

Session 3: Nursing and teamwork

Keynote

Session 4: Leadership

Session 5: Innovative healthcare

Session 6: Integrating health and wellbeing

Keynote

Keynote

Social capital of health care organizations as a precondition for sustainable performance

Holger Pfaff

University of Cologne, Germany

The central message of the key lecture is that a sustainable health care production system needs specific as well as unspecific requirements for performance. Unspecific or general conditions for performance are conditions which have to be fulfilled regardless of the specific aims, services and products of the health care organization (HCO). They are the basis for collective action, energy, sustainability and resilience of HCO. These general performance conditions are necessary conditions, not sufficient conditions for delivering specific products and services. Specific conditions of performance are necessary to reach specific aims (e. g. new skills for applying new health technologies). They are able to bring the collective energy into a specific direction, so that concrete aims can easily be reached. The focus of the lecture lies on the unspecific performance requirements and here especially on social capital as an element of the work environment. It delivers the necessary social integration and collective energy of the HCO. In the lecture I will present a general framework to explain these hypotheses. Additionally, I will show that there is empirical evidence that social capital of HCO improves quality of care and efficiency. Thus, it could be demonstrated that the social part of the work environment, social capital, is – as a precondition - highly connected to quality of care and efficiency.

Good work –the relations between social capital, influence at work and perceived quality of work

Hanne Berthelsen[1], Karin Hjalmers[2] & Jari Hakanen[3]

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1. Introduction

A model for *Good Work,* understood as positive and rewarding aspects of work, has previously been developed based on interviews including dentists working under different organizational systems. An overall finding was that a positive work climate with trustful relations and professional freedom was found important for being able to carry out high quality work. The aim of this presentation is to assess whether the central part of this model can be corroborated empirically.

2. Material and methods

All staff employed at public dentistry in two counties in Sweden received an email with a personal login to an electronic questionnaire. After two reminders a response rate of 78% and 81% respectively was obtained including a total of 610 respondents. Data from non-managerial dental hygienists and dentists with direct patient contact in their work were included in the analyses (N=198). The analyses are preliminary as data from more organizations are in the process of being collected.
A scale was developed for perceived quality of the work done at the clinic. This scale was used as the dependent variable in a multiple linear hierarchical regression model. Independent variables: county, a scale developed to measure social support in relation to patient-work in addition to scales from the Copenhagen Psychosocial Questionnaire on horizontal trust, community at the workplace and influence. The study has been approved by the Regional Ethics Board in Southern Sweden and is funded by the Swedish Research Council for Health, Working Life and Welfare (FORTE).

3. Results

A significant difference in average for perceived quality of work was seen in relation to organization, but this difference disappeared in the final regression model. Being part of a work-related community, having trusted relations and a good support were all significantly associated with a positive assessment of the quality of work performed at the workplace, while influence did not contribute to further explanation. The final regression model explained 35% of the variance of the outcome.

4. Conclusion

The overall model for *Good Work* was corroborated concerning the relationship between social capital and valuation of quality of care.

The collaborative hospital: conceptual underpinnings and empirical insights

Thim Prætorius[1], Kasper Edwards[2], Peter Hasle[1] & Anders Paarup Nielsen[1]

[1] *Center for Industrial Production, Aalborg University Copenhagen*
[2] *DTU Management, Technical University of Denmark*

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1. Introduction:

Hospitals have seen a recent reorientation toward horizontal organization around processes (e.g., care pathways) and/or structural arrangements (e.g., Kaizen meetings) that cross departments, functions and professional boundaries and cultures. This, however, is challenging because hospitals need to move from formal structures and functional silos (low cross-collaboration context) to a form that builds on collaboration and trust. Moreover, this, calls for rethinking our understanding of the hospital as an organization. To those ends, this conceptual paper outlines conceptual underpinnings of 'the collaborative hospital' by drawing on theory and hospital cases.

2. Methods/Theory:

The theoretical backdrop builds on insights from the "The firm as a collaborative community" (Adler & Heckscher, 2006) which is driven by the collaborative trust that emerges through shared purpose and institutionalized dialogue (e.g., focused cross-disciplinary meetings or employees develop working procedures together). This provides a foundation for building organic and mechanic organizational features into individual organizational entities rather than separate ones (e.g., R&D and manufacturing), thereby advancing organizational ambidexterity (simultaneously efficient by drawing on authority interactions and innovative/flexible by harnessing lateral interactions) throughout the organization. Four illustrative cases from Danish hospitals are selected to illustrate central elements of the collaborative hospital.

3. Results/empirical cases:

Collaboration across professions: Set-up of fixed daily multidisciplinary surgery teams led to the implementation of morning kick-off meetings and focus on ongoing dialogue. This resulted in strong planning and task-sharing without compromising professional autonomy. *Collaboration across departments*: An orthopedic surgery ward collaborates with endocrinologists around the shared purpose of improving patient treatment. The set-up is now that an endocrinologist every day spends half a day doing ward rounds in the orthopedic ward, thereby securing medical follow up and facilitating knowledge sharing. *Continuous improvements*: a surgery centre introduced short weekly Kaizen meetings, which ensure multi-professional participation and perspectives and it connects employees closer together. *Integrated care pathways*: such standardized work routines are found to facilitate collaborative interaction because it connects across departments and professional specialties.

4. Conclusions:

The collaborative hospital characterized by organizational ambidexterity is a new way of conceptualizing the organizational developments in hospitals. Examples from local activities support such an understanding of contemporary hospitals.

Is "Relational Coordination" a new theory for developing sustainable healthcare?

Kasper Edwards & Sanne Lykke Lundstrøm

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Social capital is a measure of collaboration and job satisfaction, which may also allow for a targeted intervention. However, social capital is only a valid measure for groups that have the same leader. Many processes in health care cross organizational groups and thus there is a need for a measure that may capture this property.
Relational coordination is a measure of collaboration regarding a specific work process e.g. patients with hip fracture or even more specific mobilizing patients. Relational coordination has caught the attention of the medical community as well as politicians as research has demonstrated a positive association between relational coordination and quality of treatment (Gittell, 2009). Relational coordination is also linked to job satisfaction making it highly interesting as a principle for sustainable organizations. Essentially, relational coordination would allow health care organizations to develop care processes that are both efficient and promote high job satisfaction. Such diagnostic use would require that it is possible to measure relational coordination and conduct an intervention based on the measurement and then measure the change.

This study presents results from an original empirical study of 11 organizational change projects in different wards at two Danish hospitals. The purpose was to study changes in relation coordination as a consequence of organizational change.
We measured relational coordination before and after the organizational change using the 7 question relational coordination questionnaire (Gittell, 2009). A chronical workshop was conducted after each project was finished to uncover the nature and extent of the changes. The measured change in relational coordination was compared with the qualitative results.

We found that organizations' relational coordination score change little – even for organizational change that introduces new work relations and new processes.
This raises questions of the usability of relational coordination and in particular the questionnaire as a valid and sensitive instrument.

Keywords. Relational coordination, organizational change

References

Gittell JH. (2009) High performance healthcare: Using the power of relationships to achieve quality, efficiency and resilience. New York: McGraw Hill.

Association between relational coordination and patient evaluation in Danish general practice: a combination of a general practice survey and a patient survey.

Sanne Lykke Lundstrøm[1] & Kasper Edwards

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1. Introduction

Relational coordination is a research model proposed by Gittell in 2002 to assess organisational coordination, i.e. to measure and analyse a network of communication and relationship ties within work groups engaged in a common work process. Relational coordination is particularly important in service organisations characterised by high levels of uncertainty, interdependence and time constraints, where it is expected to improve both quality and efficiency performance. In hospital settings, a positive association between relational coordination and quality of care has been shown. Studies in primary care have shown that enhancement of relational coordination among core disease management professionals improves delivery of chronic illness care. Furthermore, studies comprising Danish general practices have shown a positive association between relational coordination and productivity. Relational coordination has been shown to be associated with increasing number of consultations per staff member in a general practice.

Patient evaluation surveys are widely used in connection with quality development in general practice. Patient evaluations of general practice reflect the extent to which general practice succeeds in meeting the patients' individual needs and can be used to identifying areas that can be improved. Further, Heje et al. found that feeding back patient evaluation results to the GPs had a significant impact on GPs' attention to the patients' perspective on care quality and on the GPs' job satisfaction.

The objective of this study was to analysis the association between relational coordination and patients' evaluation of general practice.

2. Methods

A cross-sectional study among Danish general practice, where two questionnaire surveys were combined: general practices were surveyed with the Relational Coordination Survey and patients in general practices were surveyed with the DanPEP Survey. Linear regression was used to assess the association between each of the five dimensions in DanPEP and a number of explanatory variables including relational coordination.

3. Results

In total, 113 general practices participated in both surveys. There was no significant association of relational coordination within general practice with patient evaluation of general practice in this study after adjusting for other characteristics.

4. Conclusion

There is no evidence of an association between relational coordination and patient evaluation of general practice.

Towards a Questionnaire to Measure Lean in Health Care

Monica Kaltenbrunner Nykvist[1], Lars Bengtsson[2], Svend Erik Mathiassen[1] & Maria Engström [1].

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2University of Gävle, Gävle, Sweden. Department of Industrial Engineering and Management.

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1. Introduction

The rapid spread of Lean implementation within the health care sector has made it urgent to evaluate the effects of Lean on productivity, working conditions and health. Therefor an instrument is needed to measure Lean in primary care. The aim with this research is to find an instrument that captures the character of Lean.

2. Method

Literature search
A literature search was conducted in Academic Search Elite, WileyOnlineLibrary, PubMed, Cinahl, PsycInfo, JSTOR, ScienceDirect, Emerald and Scopus. Keywords used were reflecting Lean and measurement and the search resulted in 7933 hits. Included were articles that presented an instrument that had the possibilities to distinguish between high or low Lean adoption. It was desired that the instrument was as like Likers (2004) description of Lean as possible. Malmbrandt and Åhlstöm´s (2014) instrument fulfilled criteria and was chosen.

The instrument
Four questions were added to achieve Likers description of Lean, the questions included were linked to the principles about technology and the employees, partners and decision making. The resulting questionnaire thus consisted of 32 items with the dimensions Lean enablers and Lean practices and measure both form and level of Lean, each with five response alternatives (in terms of statements) expressing the extent of Lean adoption in terms of that particular item.

Translation process
The original instrument was firstly translated to Swedish. A back translation was made by a bilingual authorized translator. The current status of the process is to adjust the Swedish version due to any discrepancies between the versions.

Testing the instrument and participates
The prototype will be tested among health care professions in Sweden using the think aloud method (TA) with the aim to explore how the participants perceive and interpret the Swedish version (Collins 2003). Five to 15 participants per round will be audio taped while they complete the questionnaire thinking aloud (Beatty & Willis 2007). Immediately afterwards, they will be interviewed about how they interprets specific expressions in the questionnaire. After every round the prototype will be adjusted and when saturation is reached the TA will terminate and the Swedish version will be finalized.

After psychometric tests the finalized instrument is to be used in a longitudinal study to describe status of Lean and how Lean correlate with the health of primary health care staff, there working conditions and productivity over time.

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Lean process and environment design development project in two Finnish hospitals

Jori Reijula

Finnish Institute of Occupational Health

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Healthcare expenditure will soar in Finland and also in the Nordic countries in the upcoming years due to ageing population and the increasing need for medical treatment and other healthcare services. Today's healthcare processes and healthcare environment design are both in dire need of improvement and thus significant pressure has been exerted to develop them. However, the steadily declining economic circumstance in Finland limits possibilities to improve the local healthcare situation. Due to limited resources, demand for new innovations to improve healthcare using less resources has arisen.

This research project aims to utilize Lean thinking in improving healthcare processes and work environment design. The aim is to develop a concept and tools to enhance work process quality, efficiency, flow and safety in healthy, ergonomic and safe environments optimized for the work processes. The project will first focus on hospitals, but the aim is also to apply the learned concept and tools also more widely in the healthcare sector. By optimizing work environments together with work processes, the goal is to enhance employees' well-being and work productivity. The research will be carried out in selected units in the Kuopio University Hospital (KUH) and in the Turku University Hospital (TYKS) that will be moved to new locations inside the hospitals during 2015.

In this study, we will first analyze the work environment and attempt to map the work processes carried out the selected units in KUH and TYKS. Then we will conduct questionnaires and semi-structured interviews to the staff to assess their perception of the work environment and the work processes. Also, Lean tools such as Value Stream Map, 5S and Healthcare Kaizen will be used. By participative planning we will attempt to enhance hospital work environment design so that in the new units, the environments will not only limit, but instead enhance the optimal flow of the work processes, user well-being and work productivity.

Keywords *– Lean thinking, healthcare, process optimization, environment design*

Using Chronicle Workshop to quantify impact of context in case studies

Kasper Edwards[1], Birna Dröfn Birgisdóttir[2], Sigrún Gunnarsdóttir[3], Ulrika Harlin[4], Caroline Jarebrant[5], Kerstin Ulin[6], Jan Johansson Hanse[7] & Jørgen Winkel[8]

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1. Background:

Chronicle Workshop (CW) is a methodology developed to maintain and document important features during a specific period of time in a specific organization (Limborg and Hvenegaard, 2011). The focus is on important events as perceived by persons in the organization. It is a qualitative method where significant events are thematised.
This method has recently been used to assess all significant change processes that occurred at 14 investigated hospital wards during a period of 6-18 months. The aim was to discriminate between those events caused by the rationalization tool Value Stream Mapping (VSM) or a modified VSM tool also considering ergonomic dimensions, Ergonomic Value Stream Mapping (ErgoVSM), (Winkel et al, 2012) in relation to other events, the so called "context". For this purpose we developed a procedure to quantify the amount of context in the evaluation of the primary interventions caused by VSM or ErgoVSM.

2. Collection of context:

The participants (N=3-6) represented all job categories at the ward. The CW proceeded as a funnel i.e. starting with a broad question that is narrowed in during the subsequent two questions. The questions were answered individually on post-it-notes. All answers were placed on a timeline on the wall as they were explained, thus providing a detailed picture in chronological order.

3. Quantification of context:

All items were numbered consecutively. Items mentioned more than once by the same respondent were removed. Remaining items were categorized into two groups: 1) VSM and 2) ErgoVSM. The two categories were analyzed for their effect on three dimensions: 1) psychosocial work environment, 2) physical work environment and 3) efficiency. Effect was categorized into positive, none, or negative effect on the three dimensions. Lastly context was quantified by simply dividing the number of VSM events by the total number of events. On this basis it was possible to identify significant events ("context") that may have acted as modifiers of the impact caused by the ErgoVSM/VSM tool.

May sustainability of patient flows at hospitals be increased by adding a work environment module to Value Stream Mapping (VSM)? - A NOVO Multicenter study in Denmark, Iceland and Sweden

Jørgen Winkel[1], Birna Dröfn Birgisdóttir[2], Kasper Edwards[3], Sigrún Gunnarsdóttir[4], Ulrika Harlin[5], Caroline Jarebrant[6], Jan Johansson Hanse[7] & Kerstin Ulin[8]

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1. Introduction

Development of production systems in healthcare is at present to an increasing extent based on Lean Production ideas. VSM is a common Lean tool used to identify and minimize waste. It is a participatory tool, i.e. those affected by this type of rationalization are performing the analyses and subsequently suggesting the interventions. However, scientific evidence indicates that the resulting proposals may imply physical work intensification and impaired psychosocial work environment (WE). On this background WE factors were integrated into the VSM tool, thus offering an ErgoVSM tool.

2. Aim

To investigate if ErgoVSM facilitates the process towards more sustainable patient flows at hospitals.

3. Material and Methods

Fourteen hospital wards in Denmark, Iceland and Sweden are investigated, 7 used VSM and 7 ErgoVSM. Action Plans were analysed based on different stakeholder assessments. Chronicle workshops were used to assess important changes/events at the wards during the investigated period.

4. Results

In general, neither the VSM nor the ErgoVSM wards developed proposals that had an immediate negative impact on WE. The ErgoVSM wards showed a tendency towards more realized proposals and these more often included WE considerations; ErgoVSM seemed not to reduce the emphasis on efficiency. However, the effects seemed to be modified by the way the VSM/ErgoVSM were organized and performed. When using ErgoVSM the resulting proposals with an estimated positive impact on WE most often focused the work situation, i.e. the general business of the ward, the coordination and/or management of the work that two or more occupational groups performed. This is in contrast to the task-focusing proposals generally suggested by ergonomists. The Chronicle Workshop data showed that negative impact on WE could be derived to e.g. cutbacks decided about above ward level and poor introduction of new technologies. Neither VSM nor ErgoVSM seem to cause WE

impairments.

5. Conclusions:

The results suggest that ErgoVSM compared to VSM offers a number of effects on the change processes that may result in a higher level of organizational sustainability. But these gains may subsequently be threatened by saving demands decided about above ward level.

***Financial support**: The Nordic Council of Ministers and national grants.*

The importance of clear roles, clear goals and participation for sustainable implementation of Lean in the Swedish public sector

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1. Introduction

To increase efficiency, Lean is spreading in the public sector. The Swedish public sector face both increased costs and decreased employee health. There is thus reason to better understand what makes implementation of Lean sustainable as well as its contribution to a better working environment. Lindskog (2014) suggest a model for sustainable organizational development work, applicable to Lean in healthcare. 'Clear goals' and 'clear roles' are raised in promoting 'participation and learning', all being important factors for Lean implementations to be sustainable.

2. Purpose:

Are organizational *transparency* (clear goals and clear roles) and *participation* significantly higher in units working sustainably with implementing Lean? If so, do these units also have significantly better working environment?

3. Material and methods

A longitudinal survey within the Swedish public sector (two hospitals and three municipalities), i.e. baseline and follow-up, was used (response rates 65 %, 2012; 51%, 2013). In all, 894 employees answered both surveys. Units working sustainably with Lean were identified by interviewing a key actor in the development work in each organization (5). Mean value comparisons were done between the surveys using the indexes; transparency, participation, level of Lean and working environment. A comparison was also made between identified units working sustainably with Lean and the whole population.

4. Results

It seemed likely that the majority of the organizations in the study were not working sustainably with implementing Lean, since the level of Lean had significantly decreased. Overall, there was a significant level of dissatisfaction concerning the working environment. However, units working sustainably with implementing Lean had a significantly higher level of Lean, participation, transparency and satisfaction in working environment compared to the whole population.

5. Conclusions

From the study it is concluded that the degree of organizational transparency and participation is significantly higher in units working sustainably with implementing Lean than those who do not. Hence, the results of this study support that these factors may be considered to be important factors for sustainable implementation of Lean. These factors can also be considered to have positive effects on the working environment. However, further analysis of the data is recommended in strengthening the conclusions made.

Nursing Teamwork and Job Satisfaction in Icelandic Hospitals

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1. Introduction

Good teamwork and satisfied employees are both considered key elements to quality patient care and safe work environment in health care. Study results from hospital nursing staff in the United States indicate nursing teamwork to be a significant contributor to job satisfaction of nursing staff as well as patient care. The purpose of this study was to shed light on nursing teamwork and identify the relationship of nursing teamwork and job satisfaction in nursing staff in Icelandic hospitals.

2. Material and methods:

This was a quantitative cross-sectional study using a paper-and pencil questionnaire. The questionnaire contained the N*ursing Teamwork Survey-Icelandic* as well as questions on demographic and background variables. The sample consisted of 925 nursing staff in 27 medical, surgical and intensive care units within 8 hospitals in Iceland.
Participants were 632 registered nurses (RNs) (54.7%), practical nurses (PNs) (35.5%), nurse managers (3.3%), unit secretaries (4.5%), and other staff (1.1%). The majority worked in in teaching hospitals. Overall mean nursing teamwork was rated 3.89 (*SD*=0.48) on a scale 1-5 with a higher score indicating better teamwork. Teamwork was significantly related to a) unit type, b) perceived staffing adequacy, c) role, and d) work experience on unit. A significant positive relationship was identified between teamwork and: a) satisfaction with role and b) satisfaction with current position. A significant negative relationship was identified between teamwork and intent to leave current position.

3. Conclusions:

Study results indicate a relationship of hospital and staff characteristics with nursing teamwork and job satisfaction. Better teamwork was significantly related to more satisfaction with role and position as well as intent to leave. Teamwork is a part of work environment contributing to staff outcomes and therefore patient safety and quality of care. Minimal turnover with satisfied staff is known to support better patient care, aspects reflected in the NOVO triangle of sustainable health care which cornerstones are: environment, efficiency and quality of care. Good teamwork at the point of care and satisfied staff should be of major concern to all health care providers and administrators.

How Positive Work Experiences Influence Work Environment in Norwegian Nursing Homes

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1. Introduction

Working in contexts with more positive culture, leadership and evaluation can lead to more research utilization, staff development and lower rates of patients and staff adverse events. Workplace empowerment and job satisfaction in health care have been found related to higher quality care and less patient risk.

2. Aim

To study health care workers perceptions of positive work experiences and their influence on the work environment in Norwegian nursing homes?

3. Methods

To be able to answer the research question we have used multiple methods. The respondents participated in an in-depth interview; descriptive information about the respondents was collected, and two questionnaires were uses to collect data. The questionnaires used were The Systematizing Person-Group Relations (SPGR) and Work-Soc. Work-SOC is an indicator for overall quality of working life with a salutogenic orientation. The main factors in this orientation are comprehensibility, manageability, meaningfulness. The SPGR method seeks to explore what aspects dominate the particular work environment identifying challenges, limitations and opportunities. This method applies six different dimensions representing different aspects of a work culture (Synergy, Withdrawal, Opposition, Dependence, Control and Nurture) and each dimension has two vectors applied.

4. Results:

The results show a correlation between a strong Work-Soc and high scores on the synergy vectors in the SPGR. In- depth interview reviled that better planning, delegation and predictability made the respondents better capable of being present for the patients ” that you have time to prepare before being thrown into tasks”. A positive work environment was characterized by solution orientation and the respondents’ experiences better opportunity to “attend to the patients in a god a way”.

5. Conclusions:

Better work environment for health care personnel in nursing homes must also focus on the positive factors in the work environment and reinforce these. Nursing home organizations must promote positive health and a healthy work environment to achieve a meaningful working life for health care personnel in nursing homes.

Not an ordinary patient; a qualitative study of nurses' experiences of the process of handover between intensive care units and general ward.

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1. Introduction

Research describes discharge from intensive care units, ICUs, and the process of hand over as demanding processes. Unsuccessful hand overs may even increase risk of patient mortality. Literature describes, for example, night time and early discharge and lack of preparation as factors affecting the outcomes of this process (Chaboyer, James & Kendall, 2005; Lin, Chaboyer & Wallis 2009). Despite the existing body of knowledge, there are still difficulties in clinical practice concerning discharge of ICU patients, specifically where there is no intermediary care units. To our knowledge there is a lack of studies about registered/ward nurses' perspective in this matter. The aim of this study was thus to explore registered nurses experiences of patients´ handover between ICU and general wards.

2. Material and methods

Data was collected by focus group and in-depth interviews. In total 16 nurses from three different hospitals in Sweden participated in the study. Data were analyzed using qualitative content analysis.

3. Results

Three main themes and eight subthemes emerged. The main themes consisted of; organizational structures, struggling for inner strength and caring for a different patient. From organizational perspective, collaboration between the units, arrangements e.g., information, documentation and staffing rate was described as important prerequisites by nurses in order to deliver a safe care. Lack support and sudden hand overs were described demanding in several ways as patients were usually in a poor condition and in a continual need of medical interventions and monitoring of vital signs. Many times nurses struggled to maintain a professional image toward patients, family and other colleges. It was described that patient's condition and family's expectations and worries resulted in spending a huge amount of time bed side. Ethical issues, justice in care and patient safety were raised as major concern when nurses had to prioritize between the sick ICU patient and the other patients at the ward. Newly registered nurses also described loneliness and felt overwhelmed by the responsibility they couldn´t handle, whereas the experienced staff felt more confident.

4. Conclusions

Nurses need organizational support and attentive leadership to be able to perform a safe and high qualitative care. This is in line with Eliott, Chaboyer, Ernest, Doric and Endacott´s (2012) study that stresses uncertainty and lack of knowledge, especially, in novice nurses has a negative impact upon care and also upon the satisfaction of work. The process of hand over between ICUs and general wards at hospitals where there is no intermediate care could be highly improved in many ways e.g., extended teamwork between ICU staff and ward nurses, by using check lists for facilitating nurses work are and increasing patient safety. The study

can be presented either as an oral presentation or a poster presentation according to the committee's preferences.

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Organizational discrepancies in the appraisal of working conditions in the Home Care Services – a case study in the context of work environment interventions and rationalizations

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1. Introduction:

The present study is a follow-up study of factors contributing to an undesirable quality of work environment and sick leave rate in the home care services in a Norwegian municipality. The underlying assumption is that organizational discrepancies in the perceptions and appraisals of significant factors and processes in an organization have detrimental effects on the management of the organization and on work environment conditions. Thus, the study aim is to explore potential organizational discrepancy in the appraisals of factors relating to home care workers' working conditions.

2. Material and methods:

The study, using a mixed-methods design, comprised 6 home care units. It included survey responses of home care workers (80 respondents, response rate 54 %) and qualitative descriptions of stakeholders' appraisals of organizational issues gathered through semi-structured interviews (33 interviews with stakeholders on three organizational levels).

3. Results:

Employees at different organizational levels in the home care services expressed divergent appraisals of factors related to the working conditions of home care workers, including impact of organizational measures. Survey responses supported interview descriptions of home care workers. Findings suggest that organizational discrepancy serve as an important barrier to a sustainable, well-functioning organization in general and to quality-enhancing changes to work procedures and work environment in particular.

4. Conclusions:

It is recommended to improve communication channels and facilitate the exchange of information across levels to ensure a common understanding of matters significant to the organization of the home care services and work environment of home care workers. The prevalence and impact of organizational discrepancy should be included in organization research, particularly when exploring explanatory factors of an unhealthy organization.

Mirroring the Missed Nursing Care Model in the NOVO Triangle: A National Study on Missed Nursing Care and Nursing Teamwork in Icelandic Hospitals

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1. Introduction

A recently identified quality indicator for patient care is *missed nursing care* (MNC) defined as any necessary nursing care omitted (partially or in whole) or delayed, indicating an error of omission. The Missed Nursing Care Model indicates hospital and staff characteristics as well as nursing teamwork to contribute to missed nursing care affecting staff and patient outcomes. This paper discusses how the Missed Nursing care Model can be mirrored in the NOVO triangle in a national study from Iceland.

2. Material and methods

This was a quantitative cross-sectional study using a paper-and pencil questionnaire. The questionnaire contained the *MISSCARE Survey-Icelandic* and the *Nursing Teamwork Survey-Icelandic* besides questions on demographic and background characteristics. The sample consisted of 864 registered nurses (RNs) and practical nurses (PNs) in 27 medical, surgical and intensive care units within 8 hospitals in Iceland.

3. Results:

Participants were *566* RNs (60.8%) and PNs (39.2%), mainly working in teaching hospitals (79.7%). MNC was significantly related to hospital and unit type, age of participants, occupation, overtime, years of experience in current unit and perceived adequacy of staffing besides overall nursing teamwork. Participants in teaching hospitals reported significantly more MNC than their counterparts in other hospitals and participants in intensive care units reported least MNC. RNs, younger participants, those who had worked up to 12 hours overtime in past 3 months and those who perceived adequate staffing in their units least of the time reported significantly more MNC. Better teamwork was related to less MNC.

4. Conclusions:

Hospital and staff characteristics as well nursing teamwork contributed to MNC in Icelandic hospitals as the Missed Nursing Care Model indicates, shedding light on the quality of care in a wide perspective including patients, staff and work environment. The results can therefore be mirrored in the NOVO triangle of sustainable health care with its cornerstones of environment, efficiency and quality of care. Study results support the notion that the interplay of hospital and staff characteristics and nursing teamwork with nursing care are important aspects of sustainable health care in the Nordic countries.

Keynote

On the need for action oriented studies to promote organizational sustainability

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1. Introduction

The planning of production and the resulting design of work determine working conditions. Often this causal relation does not play an important role for the designers of production system and of work systems.

2. Aim

As the conference is dominated by researcher, the aim of this presentation is to discuss the demands to research having the ambition of conducting action oriented research contributing to a truly preventive effort.

3. Material and Methods

The presentation builds on experiences gathered and subsequent reflections in many case studies dealing with the joint optimization of productivity and working conditions.

4. Results

An efficient preventive effort must take into consideration that designers are situated in a complex setting with many conflicting demands to the design process. To handle these conflicting demands, the designers typically follow the demands formulated by the interest group identified as the most powerful often the financers of the design process.
This has consequences both for practitioners but also for researchers included in action-oriented preventive research. This covers a complex and - for many researchers working with a health paradigm unfamiliar set of competences including understanding of designers decision making processes - and the drivers behind this process, the ability to argue alternative proposals within the conceptual models characterizing the designers. Behind the specific competence is the ability to see options for involving in the design process and to be able to contribute to the problem solving process of the designers. This can be labeled competencies to involver in the local political battles concerning the design of workplaces and of work processes.

5. Conclusions

Presently we are in a learning situation. How do we as researchers contribute to action oriented research focusing on promoting prevention of health and safety risks. This expands the research activities from documentation to studies of how to influence decision making processes of designers with a combination of a documentation of the long and short term effects of the actions initiated.

Leadership behaviour and employee distress: The mediating role of demand and control

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1. Introduction

Thus far, the growing interest in understanding the indirect effects of leadership on employee well-being has focused primarily on transformational leadership style in the healthcare sector. Less is known about the influencing processes in relation to other well-validated leadership models, such as leadership behaviour in change, production, and employee orientation. The objective of the present study was to examine possible mediating effects of the work environment factors demand and control in the relationship between leadership behaviour and employee distress.

2. Material and methods

The study was conducted at a large county council in Sweden providing both institutional and non-institutional care. A questionnaire was e-mailed to a random sample of 1249 healthcare workers (primarily nurses, but also a wide range of other healthcare professionals and administrative staff) who had a manager that was about to enter a leadership development programme. The response rate was 64%. The healthcare workers rated their managers' behaviour in change, production, and employee orientation, as well as their own perceptions of level of demand, control (subdivided into decision authority and skill discretion), and five distress outcomes. Multilevel analysis was performed.

3. Results

The mediators demand, decision authority, and skill discretion were significant predictors of all five distress outcomes for all three leadership orientations. In eight of 15 regressions, the mediators fully explained the relationships between leadership orientations and outcomes. Four of five relationships with distress outcomes were fully mediated for change-oriented leadership, whereas two of five outcomes were fully mediated for production- and employee-oriented leadership. In all three leadership orientations, the relationship between the mediator skill discretion and the distress measure disengagement were particularly strong, with B-coefficients (–.44, $p<.001$) twice as high as for any of the other relationships.

4. Conclusions

It seems that the way that employees perceive change orientation in healthcare managers, and how that aspect is related to employee distress, is primarily explained by perception of demand and control. Furthermore, regardless of behaviour orientation, employees' perceptions of leadership behaviour appear to be involved mainly in the interplay between disengagement and employee skill utilisation.

Keywords: Demand-control, Employee distress, Leadership behaviour, Mediation, Healthcare

Professionals and planned change

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1. Introduction

Professional actors have shown themselves to be notoriously difficult to control and manage (Pepper, 2002). How does the context of planned, organizational change affect the relationship between managers and professionals? How do managerial control and professional autonomy relate to each other in a planned change program?

2. Material and Methods

Data were primarily collected through in-depth interviews, group interviews, and observation of planned change program at a Norwegian hospital. The observational studies were conducted during a 4-year period (2009 to 2013), during which the head author was involved as a consultant on the different clinics.

3. Results

The change program may have succeeded in a measurable way (they did put the new building into use, and patients were treated), there were still challenges two years after the move. The professionals were not collaborating as planned, and some even actively resisted the administration of the program. Managerial control was met with opposition from the health professionals. Why and how? We propose three management tactics that seemed essential to the management of the change program but that were met with professional resistance. Based on these, there are two important arguments we put forward: First, the managerial tactics were as much a consequence of the change process itself as they were the intended actions of the managers. Second, the tactics may be understood as not only an imposition of managerial control but also an urge to achieve coordination. It may have been this drive to coordinate that largely led to the professionals' resistance, as it contrasted with not only professional autonomy but also the professional systems' need to be diversified.

4. Conclusions

The findings suggest important areas to be aware of with regard to any kind of managerial control in a professional system. Managers should be aware that a change process is inherently complex, and that this may compel a need to control and coordinate. A challenge arises when this contrasts with professional decisions and professionals' need to be unique and distinctive. It may be stated that while professional autonomy is the freedom for professionals to do what they want, professional differentiation is the freedom to be unique and special. Professionals may meet this managerial initiative with resistance, seeking to maintain a system built upon professional differentiation.

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Comparison of Servant Leadership (SL) at hospital wards in Denmark, Iceland and Sweden: A NOVO Multicenter study

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1. Background

Leadership support is essential regarding healthcare professionals' psychosocial work environment, job satisfaction, health and turnover intentions.

2. Aim

To investigate if there were differences between hospital wards in three Nordic countries as regards servant leadership (SL). A second aim was to examine the associations between SL, job satisfaction and health.

3. Material and Methods

Questionnaire-based cross-sectional studies were undertaken at hospital wards in Denmark, Iceland and Sweden. The study included 516 healthcare professionals. Oral and written information were given regarding the main aims of the study and that the study would follow strict guidelines of confidentiality. Employees' perceptions of ***SL*** were ***measured*** using a ***23-item*** six-dimensional ***SL*** scale (van Dierendonck & Nuijten 2011). These six dimensions were: empowerment, standing back, accountability, courage, humility and stewardship. Each SL-item was rated using a six-point Likert-type scale where high scores represent employees who perceived ***high servant leadership*** behavior in their leaders (1 = strongly disagree to 6 = strongly agree). Job satisfaction and health were measured using items from the COPSOQ questionnaire (Pejtersen *et al.*, 2010).

4. Results

There was a significant difference of SL scores between the Nordic countries, $F(8,507) = 4.27$, $p<0.001$. The mean values were within the range of 3.80-4.89 on a six-point scale. Results indicate that dimension mean values vary within SL. Also, there were significant correlations between SL and job satisfaction and health.

5. Conclusions

The results suggest that SL at hospital wards varies between the three Nordic countries and that SL is associated with job satisfaction and health.

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Facilitation of Value Stream Mapping (VSM) processes: significance of first line hospital manager participation and staff perception of servant leadership

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1. Background

Numerous studies show that support at work from the organisation, inclusive management practices and support from coworkers are associated with improved outcomes for work processes and staff wellbeing. Servant leadership is linked to positive staff outcomes and continuous improvements and is founded on leader´s awareness, supporting behavior and ethics which fosters intrinsic motivation and democratic decision making. Based on previous research it is hypothesised that the level of servant leadership and management engagement in VSM processes may facilitate the VSM process as well as the subsequent implementation of proposals. This study is part of a Nordic Multicenter Study investigating VSM processes.

2. Aim

To investigate if the staff perception of servant leadership and 1st line manager participation in the VSM process had an impact on the completing implementation of VSM processes.

3. Material and method

Baseline questionnaire data, before process implementation, was gathered from nine clinical wards in four different hospitals in Denmark, Iceland, and Sweden by measuring total score for Servant Leadership. Qualitative data was collected on clinical ward managers´ views regarding their experience on the VSM processes. Two of the 9 wards decided not to finish their VSM processes. Servant leadership data from the two wards that did not finish was compared to data from the seven wards that finished.

4. Findings:

The analyses did not show a statistical difference in staff perception on servant leadership when comparing wards finishing the VSM processes and not finishing. Qualitative data shows signs of limited participation of managers in the VSM processess in a ward not finishing the implementation process which may provide some explanations to why the implementation was not successful. Other possible explanations are not available.

5. Discussion

Contrary to expectations findings do not show different scores of servant leadership across

wards finishing and not finishing implementation. Here, issues, e.g. cultural and linguistic, regarding the SL instrument may be of importance. Also, in this study there may be other factors than servant leadership that may contribute to the success of VSM implementation, e.g. ownership, accountability, trust, autonomy, but these are closely linked to the practice of servant leadership. The qualitative data shows limited engagement of ward management in the VSM process which raise questions about their actual potentitals to influence the VSM processes in general.

Financial support: The Nordic Council of Ministers and national grants.

The Chefios project - lessons learned

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1. Introduction:

For some decades, management trends have posed higher demands on public service production. Demands on systematic quality work and customer orientation have to be met at the same time as budgets are slimmed, central control increased, and organizations constantly changed. In combination with an increasing use of information and communication technology, new techniques of control bring about new routines for administrative work, and expose the managers' performance to other actors. Despite these turns in public management, much research still focuses on the attributes and skills of individual leaders, who cope with great challenges and turn their schools and hospitals into successful organizations. In the Chefios project we have called for a less individualistic view that recognizes the organizational influences on managerial work practices. The local government sector is the most gender segregated on the Swedish labour market. Given that women and men are found in different municipal settings, it has also been of interest to explore whether the organizational preconditions for managerial work are similar across the sector, or whether there are differences in differently 'gendered' municipal services.

2. Purpose:

The overall aim of the Chefios project has been to explore the relationship between organizational preconditions for managerial work and the work environment, psychosocial health and performance of local government organizations. The project has also developed, tested and provided knowledge about an intervention model that can be used in politically governed organizations to improve innovation, work environment and performance.

3. Methods:

the project used a quasi-experimental design, combined with qualitative studies. 100 managers of six different departments, representing health and social care, education and technical services, took part of the intervention. The comparison group consisted of 550 managers in 23 departments. Several contextual levels were incorporated into the research design and both qualitative and quantitative methods were used for analysis.

4. Results:

There is a gap between the daily operational practices and the goals and policies that stem from the administrative organizational levels. As it stands, it is many times up to the individual manager to balance the external demands to increase transparency, standardization, comparability and output control against the everyday needs of employees and service users. This gap is accentuated in the female predominated health and social care services, where the organizational preconditions for making these difficult priorities are insufficient. The Chefios model can be used to improve the organizational conditions for managerial work.

Evaluating the health care on-call systems in Finland –project

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1. Introduction

Health care services must be provided round-the-clock and in physicians, it normally means working on-call. On-call is usually organized in a way that it includes detrimental elements such as long periods awake and disruption of circadian rhythms which may cause mistakes in work and negative health effects. Therefore, new ways of organizing on-call work has recently been introduced. In Finland, for example, city of Turku has introduced a new model for on-call work which includes physicians who specialise on on-call work and do mainly only on-call work and on-call is done in shorter periods.

2. Material and methods

The aim of the present project was to examine on-call work in three Finnish emergency rooms, which all had a different way of organizing their on-call (including work rotation system). We interviewed 6 physicians and 6 registered nurses working in these emergency departments. In addition, 39 physicians took part to experiment with physiological data monitoring and questionnaires about their work environment, stress, well-being, etc.

3. Results

This study presents some results from the interviews. Altogether, it seemed problematic that emergency was used as a substitute for primary health care centers and interviewees pointed out that it would be important to improve triage (patient priority) process and primary health care in a way that only those who need emergency treatment would be taken care in emergency rooms. The hecticity, patients with complex health problems, the large amount of patients, and low levels of collegial support were seen as strainful in emergency. There also seemed to be problems in the flow of information, especially between physicians and nurses.
In Turku where the periodic system had been introduced, the interviewees felt that the current work schedule system allowed predictability, weekday off duties, possibilites to long-term plans, and more ergonomic work hours. Also staffs' motivation was good, but there seemed to be problems in recruiting staff.

4. Conclusions

It would be important to improve the triage process and primary health care inflow in a way that emergency rooms could concentrate on those actually needing emergency services. Moreover, patient information systems and the flow of information should be improved.

The collaborative hospital: a multiple, embedded case study

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1. Introduction

High organizational and clinical complexity and patient, financial, clinical and quality demands increasingly push hospitals towards organizing more around horizontal processes (e.g., care pathways) and/or structural arrangements (e.g., Kaizen meetings) that cross departments and professional boundaries. Interestingly, recent literature indicates that enabling processes and structures building on collaboration and social capital may facilitate this development and at the same time support employee engagement and well-being. The micro-mechanisms underlying that potential, however, remain unclear. This research project investigates: How do standardized care processes and structural arrangements facilitate (and/or hamper) collaboration and social capital in hospitals?

2. Methods

The research is carried out as an in-depth qualitative multiple, embedded case study in order to get a fine grained understanding of mechanisms in the collaborative hospital. The empirical investigation is informed by theoretical insights related to collaborative and ambidextrous organizations and social capital. The research is embedded because standardized care processes and structural arrangements are investigated in relation to the larger hospital. Four hospitals are selected on basis of a unique case selection strategy. Two embedded cases from each hospital are selected theoretically. The background dimensions vary along: department type (fast versus slow-response); interdependence level; extent of standardization; and patient volume. Moreover, departments relying on high levels of cross-boundary collaboration and where social capital measures have increased are investigated to learn about the influence of processes and structures in this regard. The data sources are interviews, observation and archival data. Data are analyzed using computer assisted qualitative data analysis software. Data coding occurs by: open coding followed by an inductive coding process and a theory guided grouping of codes, thereby opening for developing theory and challenge existing. The findings subsequently contribute toward developing the understanding of hospitals as collaborative organizations.

Significance of Servant Leadership for creativity in change processes when using the Lean tool Value Stream Mapping (VSM)

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1. Background:

Researchers recognize innovation as an important source for organizational success. Creativity is widely believed to be an important pre-requisite for innovation. Creativity has been described as a property of thought processes that can be acquired and improved through instruction and practice. Theories of organizational creativity posit that the work environment can be a stimulus for employee creativity. Existing research suggests that creativity and innovation can be enhanced through good leadership. Health care organizations are often dominated by leadership styles that are thought to be unsupportive of creativity. Researchers argue that Servant Leadership (SL) may be particularly well suited for enhancing creativity.

This study is part of a Nordic Multicenter Study where we evaluate if an ergonomic module (Ergo) added to the participatory Lean tool VSM results in an enriched sample of proposals.

2. Aim:

To investigate the significance of SL for creativity in healthcare when using VSM/ErgoVSM, with aspects of the work environment as a moderator.

3. Material and method:

Two clinical wards comprising 126 employees and two first line managers at each ward (nursing and medicine) were investigated. SL, creativity and psychosocial factors were assessed by questionnaire.

4. Results:

Analysis of a mediated path model shows that SL is important for employees' creativity as it is positively related with employee creative self-efficacy. The relationship between SL and creative self-efficacy is stronger when role clarity is high.

5. Conclusion:

The results suggest that SL may modify the sample of proposals created when using VSM/ErgoVSM.

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Health care professionals' engagement: the importance of work and organisational conditions during the redesign of care processes

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1. Introduction

There are many attempts to improving care processes to decrease costs and at the same time improve quality of care. Care process redesign in line with lean production has been common. Health care professionals´ engagements have considerable impact on occupational health and the success the improvements. However, there are challenges in engaging health care professionals and there is a lack of systematic knowledge of what organizational and work-related conditions that are related to various kinds of engagement among health care professionals. The aim was to assess engagement (attitudes and beliefs, cognitive state and clinical engagement) among health care professionals and how these are related to work- and organizational resources and challenges during the redesign of care processes.

2. Material and method

A prospective study: questionnaires was sent to physicians, nurses and assistant nurses working at units (n=32) that were collaborating in care processes at five hospitals in 2012 and 2013 (n=1 294). Descriptive, comparative and multivariate analysis, stratified to professional groups and degree of lean implementation, was conducted.

3. Results

Associations between attitude to engagement, cognitive state of work engagement and clinical engagement in patient safety and quality of care were identified. Work- and organizational conditions had overall importance for engagement, but stronger impact when lean was implemented. Increased resources, i.e. leadership, recognition, role-clarity and predictability, had stronger importance for employees' engagement when lean was implemented to a higher degree. Also, decreased pace and quantative demands had stronger importance for engagement related to degree of lean implementation. Attitudes to engagement were more negative, and less improved, when process redesign was implemented to a lower degree. The results identified differences between professional groups regarding (a) working conditions, (b) work engagement and attitude to engagement during implementing lean, (c) what working conditions that had importance for work engagement, (d) how conditions and attitudes to engagement triggered clinical engagement in patient safety and quality of care.

4. Conclusion

Increased work and organizational resources have importance for health care professionals' engagement in organizational developments, especially during the implementation of lean.

A strategic approach to prevention of musculoskeletal disorders

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Musculoskeletal disorders (MSDs) are a common designation for pain, stiffness or tenderness in the joints, ligaments, tendons, muscles or bones and the associated cardiovascular and nervous system often resulting in symptoms as swelling, restriction of motion and functional impairment. MSD is a serious and comprehensive work environment problem, and in the Danish National Work Environment Strategy 2020 MSD is ranked as one of three main focus areas with the aim of reducing the number of MSD incidents with 20 %.
Employees in the health care sector are especially prone to develop MSDs do to the high level of manual labor for instance the physical handling of patients. The sector work environment council for the social and health care sector (BAR SOSU) has joint forces with researchers at the Department of Management Engineering with the aim of developing a set of tools to strategic prevent MSDs in municipalities. The research project is design to take place in eight steps: 1) Baseline: Identify the strategic action towards prevention of MSDs in all Danish municipalities using telephone survey, 2) Qualitative research interviews: Interviews with representatives from both employees and management in three municipalities, 3) Development of strategic tool to prevent MSDs: Based on the first two steps a strategic tool is develop in contact with BAR SOSU, 4) User test: The tool developed in step 3 is tested and further developed in a pilot municipality, 5) MSD risk assessment: Collection of ideas for possible method of identifying MSD-risk, 6) Implementation and assessment: Tools developed in the previous steps are implemented and tested in the pilot municipality, 7) Evaluation: evaluation of the individual steps and the developed tools effect on MSD incidents in the pilot municipality, 8) Dissemination: presentation and publication of results to Danish municipalities via BAR SOSU.

Balancing workplace dialogue in healthcare – a qualitative study of an intervention

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1. Purpose

Cooperation and coordination at work require planning for a dialogically oriented communication to prevent stress and ill health and to promote personnel well-being, learning and efficiency. In this study, the aim was to illuminate and analyse how the influences of a dialogue training for health care were experienced.

2. Methodology

The intervention method was based on dialogue theory, with Socratic provocations and concrete workplace examples enhancing authenticity of conversations. Twenty-four nurses, assistant nurses and paramedics, strategically selected from 156 intervention participants, were interviewed and the data analysed with qualitative content analysis.

3. Findings

Two themes developed; dialogue-learning processes and dialogue-promoting communicative actions. The first included *risk-taking* to overcome resistance and fear of dialogue, *expressing openly* thoughts and feelings on concrete issues and taboo subjects, *listening to and reflecting on* one's own and others' perspectives and *problematizing* norms and values. The second comprised: *voicing* opinions, and regarding one's own limits; *requesting* support and room for manoeuvre, and *restraining* negative emotions and comments in the interest of well-being. Findings depict strengthened dialogue awareness and readiness, and improving care quality and personnel well-being while multiple balancing of work-place dialogue.

Research implications - Further observing and examining of communicative patterns during workplace dialogue.
Practical implications - An approach useful for occupational health work in health-care and other workplace contexts.
Value - Previously, arenas have been created for dialogue, but close process studies of dialogue in health-care work are scarce. This study provides insights into how workplace communication can develop towards dialogue.
Keywords: Interpersonal communications, Dialogue, Workplace learning, Health-care, Occupational health

Integrating health promotion, occupational safety and health and continuous improvements to promote employee health - A longitudinal quasi experimental intervention study

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1. Introduction:

Occupational safety and health (OSH) and health promotion (HP) for employees are often handled separately in organizations. In addition, they are often separated from other systems aiming at improving organizational quality and productivity. This lack of integration prevents optimal use of resources and obstructs efforts to maximize the overall health and productivity of the employees. The aim of this presentation is to describe how an integration of HP, OSH and a quality improvement and production system (Kaizen) can be done, and to present its' effects on immediate employee outcomes (health promotion, integration and Kaizen) and distal outcomes (self-rated work ability, self-rated productivity, self-rated health and self-rated sickness absence). The aim is also to present the practical implications of the integration by describing the actual improvement suggestions related to workplace health protection and promotion in the intervention group compared to the control group.

2. Material and methods:

The integration of HP, OSH and a quality improvement and production system was conducted at a Swedish hospital with 12 departments. The hospital worked with quality improvements using Kaizen already prior to the integration. This work consisted of engagement of all employees in identifying problems at their workplace on Kaizen notes and attending regular, short meetings at department level where possible solutions to the problems were discussed, chosen, tested and evaluated. The Kaizen system was used as a base for the integration. Using a quasi-experimental design, the departments were matched based on type of department (e.g. opening hours, acute or non-acute care), size and working processes involving Kaizen, and from each pair, one department was randomized to the intervention group. Hence, the integration was conducted at six departments. All employees (approx. 500) received questionnaires at baseline, 12 and 24 months follow-up (response rate 79%-87.5%). All kaizen notes (n=403) documented during 2013 at both the intervention and control departments were collected and analyzed.

3. Results:

There was a significant increase in immediate outcomes over time in the intervention group compared to the control group, and a trend for improvements in work ability and productivity. The intervention group had more suggestions concerning HP and OSH, a greater variety of HP and OSH suggestions and an increased focus on health and safety aspects as secondary outcomes when suggesting solutions to other organizational problem.
Conclusion: Integration seems promising for engaging employees in HP and OSH, including improving employees' understanding of the linkage between work and health.

Lean process as tool to integrate wellbeing, quality and efficiency in hospitals.

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The intervention project called P-Lean aims at developing a work environment assessment tool based on the workflow analysis in Lean. The close connection between the description and analysis of the flow of task and the assessment of the experienced psycho social work environment suggests improvements closed connected to conducting the core task in the hospital wards. Improved wellbeing is suggested to be an indirect outcome of improving the work performance and the coordination around performing the work tasks.
The tool is developed and tested in seven hospital wards including a pilot project. The intervention workplaces have volunteered on the basis of the 2014 employee questionnaires on wellbeing.
The intervention consist of three workshops based on Value Stream Analysis, ten project meetings with the local project group and the consultant from the hospital development department and follow up activities in the short daily white board meetings. The Workshop group consists of the members of the project group including department manager and representatives for all professions involved in the work process. The first value stream workshop describes the actual performance of the work task in the defined improvement area. In between the first and the second workshop the workshop group members obtain relevant registrations and observations regarding the works process. The second workshop elaborates the insights in the problems of the discharging procedures. In the third workshops the workshop group develops work processes solving the overlap, misses, lack of communication, technical support and lack of precise responsibilities and task performance shaping the problems. Afterwards the local project group describes the action plan for implementing the new work processes and how to measure the improved quality of wellbeing, quality and efficiency.
The results show, that this method are enabling the involved in solving the problems in the workplaces and secondly improves the wellbeing of the employees.
The preliminary results from the developing and testing of the assessment tool in the pilot project and the first results from the evaluation drawn from the projects programme theory will be presented at the oral presentation.

Keynote

Some efficiency trends in health care and possible effects

Lars Nordgren

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There have been several trends concerning the developing of efficiency and productivity in health care in the Nordic countries. I have chosen to discuss effects of the following trends.

Decentralization of the administration in organizations (organizing)
Free choice of care (customer choice) and the care-guarantee of limited waiting-times for patients (health policy)
Value co-creation in health care organizations (service management)
Coordination of health care resources and cooperation between actors (service innovation)

The effects of the trends can be discussed in different ways as medical quality and service quality, costs and employees' well-being. Jointly for the trends is the aim to increase efficiency.

The first trend regards the effects of decentralization of the administration in organizations which has been going on since the 1980th. What are the consequences in terms of costs, values and efficiency of this trend to decentralize the administration within organizations? What happens to staff when increasingly more administrative work has to be performed by them?

A second trend concerns the political reforms related to the so-called new public management, which is connected with the marketization of health care. The reforms are free choice of care and the health care-guarantee of limited waiting-times. Especially in primary health care there has been an increased supply of health care providers in Sweden. How quality of service and medical quality is affected by customer choice reforms will also be discussed.
Thirdly there is an organizational trend, patient involvement, which is trying to involve the patient as a co-creator (a partner) in health care. What do we know about the effects of this view of the patient in a health care context and how is it possible to empirically examining this phenomenon? Does it create more value or is it simply a new fashion or discourse in organizing health care? Three types of effects can be discussed; health outcomes, patient satisfaction, and health-care costs.

A fourth trend is a form of service innovation in health care, which aims to plan and coordinate health care actors, resources and patients in order to use capacity well and increase equity for the citizens. An example is the national collaboration on radiotherapy in Sweden.

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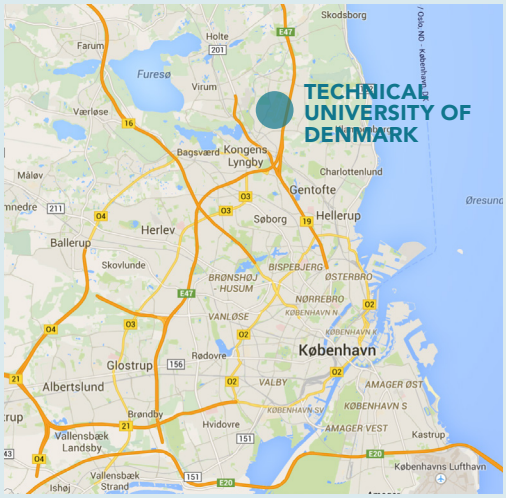
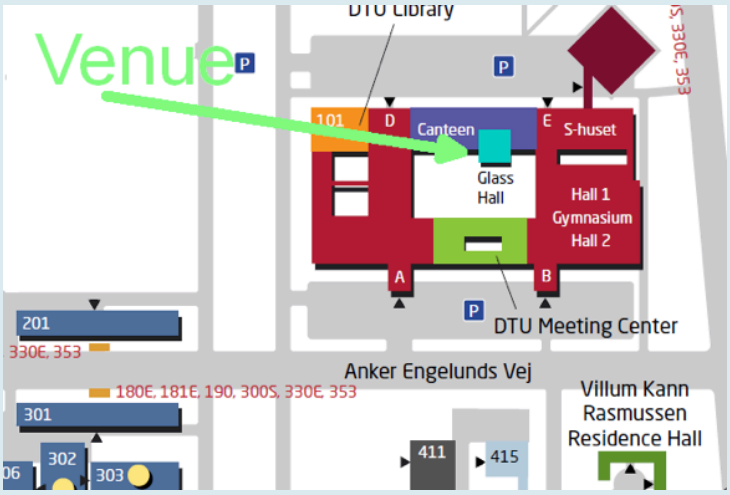
notes

general information

The conference will take place at Technical University of Denmark.

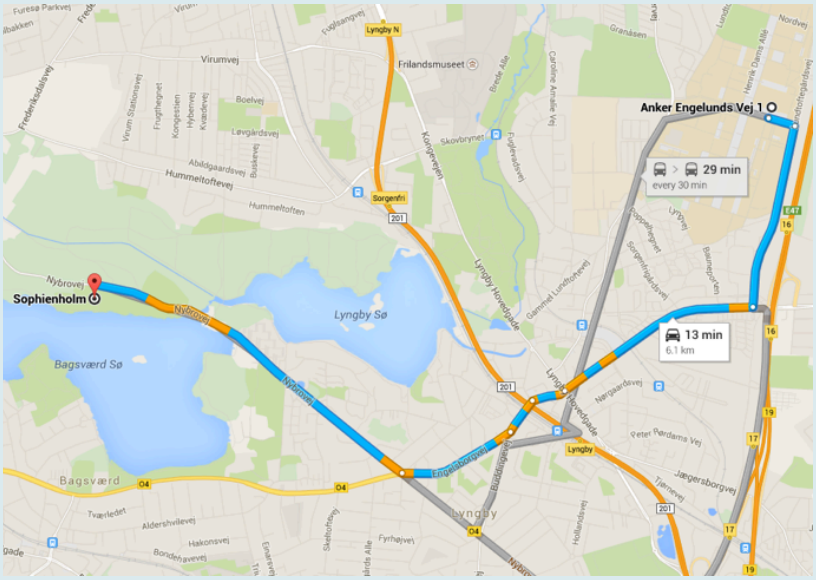
The conference room is Glasssalen (eng: Glass Hall), Building 101A,
Anker Egelunds Vej 1, 2800 Lyngby, Denmark





For additional travel info check out:
http://www.dtu.dk/english/About/Practical-information/Directions/DTU-Lyngby-Campus

Rute to Symposium dinner and Art exhibition at
Sophienholm, Nybrovej 401, 2800 Kongens Lyngby



Abstract book

Kasper Edwards & Jørgen Winkel (Eds.)

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