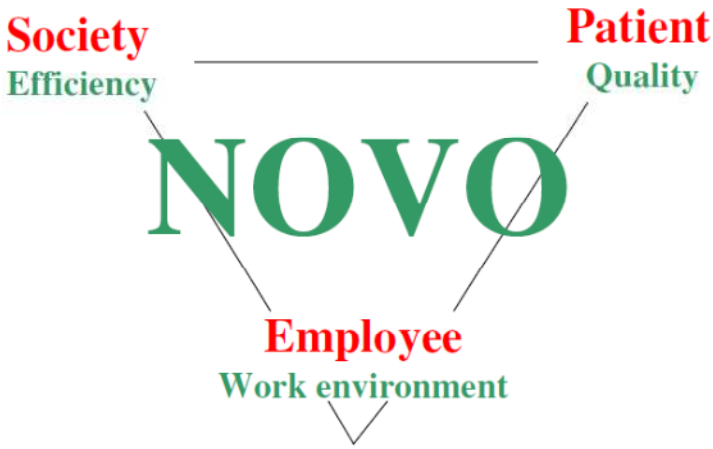
NOVO 2011

5th NOVO Symposium

3 & 4 November 2011

Reykjavík, Landspitali University Hospital

Hringsalur – Childrens´ Hospital



Sustainable Nordic Health Care Systems

& Sustainable Hospital Design

Book of abstracts

ISBN 978 9979 72 047 8

Wellcome to NOVO 2011

The 5th NOVO Symposium in Reykjavík is organized in collaboration with Landspitali University Hospital and University of Iceland, School of Health Sciences. The topic now is *Sustainable Nordic Health Care Systems with emphasis on Sustainable Hospital Design.*

Keynote speakers are Dr. Anna Lilja Gunnarsdóttir, Permanent Secretary, Ministry of Welfare, Iceland and Johannes Eggen, NSW Arkitekter & Planleggere AS, Oslo.

The focus of the symposium this year is interesting for researchers and practitioners in the field and will hopefully provide important contributions regarding improvements in availability, efficiency, quality of care and work environment during times when the Nordic countries wish to invest in the future of health care. The emphasis on hospital design is also both relevant and important as several new hospitals are currently under construction or being planned within the Nordic countries and it is important that these hospitals are designed in a way that provides employees with a good working environment that is stimulating and conductive for at long working life.

Participants of the 5th NOVO Symposium come from various professional disciplines. Papers presented include leadership in healthcare delivery, the pressures of healthcare workers, new ways of organising healthcare and delivering care, designing hospitals and wards and its influence on organisation and management practice.

We do hope the symposium will be informing and interesting and that participants will also enjoy the social part including a trip to Reykjalundur, Rehabilitation Center and to Þingvellir where Alþingi - general assembly was established around 930 and continued to convene there until 1798.

On behalf of the organizing committee,

Sigrún Gunnarsdóttir
Helga Bragadóttir
Kristinn Tómasson

The NOVO network for scientists welcomes you to their 5th symposium

Health care professionals and organizations have current and future complex challenges to understand and handle. The joint considerations of work environment/employee perspective, quality/patient perspective and efficiency/societal perspective seem necessary for sustainable systems, but in reality hard to manage, organize - and evaluate.

The vision of NOVO network is to develop and describe Nordic models for sustainable systems in health care organizations. The goals of the network is to contribute to clearer content, visions and collaboration of research and developments aiming for ”sustainable systems” in health care organizations. The focused research and developments include hospital care, primary care, care of elderly and disabled.

The network has arranged yearly Nordic symposiums since the start in 2007: in Sweden/Gothenburg, in Finland/Helsinki, in Denmark/Copenhagen and in Norway/ Stavanger. Now, the Nordic network for scientist has the opportunity to intensively share, exchange and transform knowledge at the fabulous Iceland.

The scientific program looks very promising this year! The contributions reflect exciting developments in areas, methodology and general knowledge about the integrating aspects of work environment, quality of care and effectiveness. The program includes presentations of research developments of:

- Areas of discussions and knowledge transfers within the network
- Methodological improvements of the areas being studied
- Methods of organizational developments in health care organizations
- Interventions for sustainability
- Steps towards sustainable systems in health care

We hope you will enjoy the symposium and will have plenty of opportunities for meaningful sharing of knowledge during the conference

Lotta Dellve

Chair of NOVO

Sustainable Nordic Health Care Systems & Sustainable Hospital Design
5th NOVO Symposium 3 & 4 November 2011
Agenda

Thursday 3 November

8:30–9:00 Registration & Coffee

9:00–10:00 **Opening first day - Sustainable Nordic Health Care Systems**
Lotta Dellve, Chair NOVO & **Sigrún Gunnarsdóttir**, organising committee
Keynote 1: **Dr. Anna Lilja Gunnarsdóttir, Permanent Secretary, Ministry of Welfare.**

10:00 – 10:20 Coffee

10:20–11:30 **Session 1** Moderator: Endre Sjövold
Multidisciplinary collaboration & Sustainable Health Care
Bergman, C. et al. Communication processes in workplace meetings: a structured observational study.
André, B. The nature of differences between two professions in six Norwegian hospitals.
von Thiele Schwarz, U. Teamwork in the emergency department – effects on efficiency, quality of care, patient satisfaction and staff work climate.
Widmark, C. et al. Barriers to collaboration between health care, social services and schools.

11:30 -15:45 **Cultural & Scientific trip & Lunch: Reykjalundur & Þingvellir National Park (Bus)**

15:45–16:15 Refreshment. Soup & Coffee and Sweets

16:15 – 17:25 **Session 2** Moderator: Timo Sinervo
Leadership, workload & Sustainable Health Care
Dellve, L., E. & Wikström, E. First line managers' time- and activity-related patterns regarding their managerial assignments: a semi-structured observation study.
Bergman, D. Leadership development: a comparative evaluation of short-term and long-term programmes in Swedish health care.
Tengelin, E. et al. Making sense of stress indicators: Managers' perceptions of a multi-source feedback intervention.
Ákadóttir, Þ. Nurse assistants' well being at work – Is there a link to nurse leadership?

19:00 Dinner at Frú Berglaug, Laugavegi 21, 101 Reykjavík
www.fruberglaug.is

Friday 4 November

8:30–9:30 **Opening second day - Sustainable Hospital Design**
Keynote 2: **Johannes Eggen, NSW Arkitekter & Planleggere AS**

*9:*30 -9:50 Invited presentation – SPITAL, Teiknistofan Tröð
Magnúsdóttir, S. New Landspítali University Hospital in Reykjavík. Healing based on knowledge and environment

9:50 -10:40 **Panel discussion**
Johannes Eggen, Kasper Edwalds, Ásdís Ingþórsdóttir
Kristinn Tómasson

10:40 -11:00 Coffee

11:00–12:00 **Visiting tours to Landspitali**
Ragnheiður Sigurðardóttir & Sigríður Zoega

12:00-13:00 Lunch & Group discussion

13:00-14:30 **Session 3** Moderator: Marjukka Laine
Sustainable Hospital Design & New Methods
Sjøvold, E. & Reisegg, O. Direct observation of groups as intervention in health-care.
Terkildsen, P. W. Evidence-based Design – theory and practice and possible guidelines.
Hasson, H. Continuum of care for frail elderly people: evaluation of implementation challenges and short-term effects.
Parantainen, A., Laine, M. et al. Towards systematic patient safety management.
Gunnarsdóttir, S. The importance of servant leadership in health care. Comparison of survey findings from groups of health professionals.

14:30 – 14:50 Coffee

14:50–16:00 **Session 4** Moderator: Gunnar Ahlborg
Sustainable Hospital Design, Collaboration & Productivity
Edwards, K. et al. Simulation as a method for developing new work processes in an out-patient unit.
Bragadóttir, H. & Rúnarsdóttir, S. Sustainable working environment in healthcare
Myhre, I. U. et al. Cooperation across professions in the emergency department.
Sinervo, T. et al. Productivity, work environment and quality of care in public and private care services?

16:00-16:20 **Closing remarks**

Keynote speaker Thursday 3 November

Sustainable Nordic Health Care System

Dr. Anna Lilja Gunnarsdottir
Permanent Secretary
Ministry of Welfare, Iceland

Iceland was severely hit by the financial crisis in 2008 when it's banking system collapsed and the country is still recovering from that. As a result of the crisis, unemployment increased significantly, the currency depreciated, the public debt increased and the Government´s spending was cut significantly. To protect the Welfare System, the welfare services such as health care, social services and education were spared with lower spending cuts compared to other sectors. However, this economic pressure has been a real challenge to the Health Care System.

This presentation will give a brief overview of the organization of Health Care in Iceland. It will summarize the effect of the financial crisis on the Health Care System and the budget for Health Care. This has led to structural changes and change towards greater sustainability of the Icelandic Health Care System.

The Icelandic Health Care System is founded on values rooted in the Nordic model of the Welfare State. This is the major force behind the general structure and financing of the Health Care System. The Ministry of Welfare in Iceland is responsible for administration and policy making of social affairs, health and social security which represents substantial part of the Governmental budget. After the financial crisis an increased attention has been given to how resources can be utilized more effectively, efficiently and equitably to secure safety and quality.

Highlights will include:

- How Iceland has managed to keep the Health Care System operating successfully after the financial crisis.
- How the effect of the crisis have highlighted the role of policy in leading the way concerning structural changes.
- How Landspitali, The National University Hospital of Iceland and the country's largest hospital and employer, has managed decreased funding without major apparent differences in service to patients.
- Efforts in monitoring the impact of the restraints on the Health Care System.
- What has been a challenge and what has been a success.
- And finally, thoughts on the principles for designing sustainable healthcare systems in an environment of restraints and at the same time complex and evolving healthcare needs.

Keynote speaker Friday 4 November

Sustainable Hospital Design

Johannes Eggen
NSW Arkitekter & Planleggere AS, Norway

My speech will be based on experiences I have done as an architect with 25 years of experience in hospital design. During these years, the sight of what matters and sustainable development in the hospital changed a lot.

In the late 80's there was very few new large hospital projects in Norway, and the perception was influenced by the perception that if a hospital just got more surface area would increase efficiency.

In the late 90's opened the new National Hospital in Oslo, as the first of several major hospital projects in Norway. Me and my firm currently works with a new master plan for the national hospital, and I will based on this work give some reflections on how sustainable this hospital stands, now 12 years after the hospital opened.

Next major hospital project was St Olav Hospital in Trondheim. The project represents the ambition of a different configuration of a hospital, based on organ-based centers built into a town structure. The first building at St Olav was completed in 2006, the last building, the "Knowledge Center2, will be completed in 2014. I have been leader of hospital design/ functional planning in the architect team throughout the planning period, and will give some reflections on what we have learned, where we have failed and what has succeeded in this project.

In Denmark, they are now about to start a huge hospital expansion. Programming for these projects is largely based on experiences from other Nordic countries, including Norway. What distinguishes the Danish projects from the Norwegian? How do the Danes describe a sustainable hospital and how we as architects interpret the program into a hospital building?

I have participated in 3 of the major architectural competitions and will present the proposals we have made for the new University Hospital in Odense, where we got second price, and Gødstrup Hospital in Jylland, a competition we won and how we plan for the construction of 2 years.

Nurse assistants' well being at work – Is there a link to nurse leadership?

Ákadóttir, Þóra
Master's student in public health at The Nordic School of Public Health & FSA Hospital Akureyri

Introduction

Demands at the working environment of health care personnel are increasing but one of the main protective factors is support within one's working environment. Limited knowledge exists about nurse assistants work environment and their well being at work. A relatively small number of studies have been conducted in the Nordic countries. The aim of the study was to shed light on nurse assistants' job satisfaction and well-being at work and to gain insight into their work environment from the point of view of their attitudes towards working demands, their control work and support at work and leadership characteristics.

Material and method

The present study was cross-sectional and questionnaires were sent to nurse assistants with registered e - mail addresses at the Nurse Assistants Association (n=588). The first part of the questionnaire was The Demands-Control-Support Questionnaire (DCS) consisting 22 items altogether and additionally one question about job satisfaction. A new Dutch Inventory was used to measure servant leadership, The Servant – Leadership Inventory (SLI) based on the philosophy by Robert Greenleaf. The development of SLI is based on the literature, previous studies and survey data from Dutch and English participants. The eight sub-factors of the inventory relate to empowerment, servitude, accountability, forgiveness, courage, authenticity, humility and stewardship. Additionally questions were asked about working environment demands and symptoms of burnout, 9 questions on emotional exhaustion from Maslach´s Burnout Inventory.

Results

Large majority (92%) of nurse assistants were satisfied at work even though majority thought their job was demanding and they showed signs of burnout. Majority (78%) experienced high demand at work and majority (70%) reported control and support at work. Descriptive statistics for the SLI factors showed that Cronbach´s Alpha was adequate for seven of the eight sub-factors (0,634 – 0,917). Perceived servant leadership measured moderate (mean 2,32 - 4,52). Correlation between perception of servant leadership, job satisfaction and low emotional exhaustion was significant for all SLI sub-factors except for courage. Strongest correlation was indicated for empowerment, humility and stewardship within servant leadership.

Conclusions

The findings indicate that servant leadership is practised to some extent within nurse assistant's workplaces. Nurse assistants experience high demands at work but empowerment, humility and stewardship of their next superior is significantly related to better work outcomes.

Psychosocial challenges in the Home Care Services. Preliminary results of a qualitative study of Home Care Workers' perceptions of past and present work situation.

Andersen, G. R., Westgaard, R. H.
Department of Industrial Economics and Technology Management,
Norwegian University of Science and Technology, Norway

Introduction

In 2003 The Norwegian Labor Inspectorate revealed a high level of unhealthy time pressure to be a prevalent stressor among Home Care Workers (HCWs) in the council of Trondheim, Norway. Despite a substantial effort in terms of workplace interventions to reduce the detected problems, the HCWs still seem to be exposed to several psychosocial risk factors in their work. The outset of this qualitative study was to gain a deeper understanding of how HCWs experience their work situation, and how they perceive changes in their work situation to affect them.

Material and methods

A qualitative approach was used to obtain rich descriptions about the topic in question. 17 semi-structured, in-depth interviews were carried out with Registered Nurses and Nurses Aids in 6 units within the Home Care Services (HCS). The interviews lasted for 1 hour and were audio-recorded and later transcribed verbatim. The interview guide covered topics dealing with work environment, work tasks and changes in such the last years. Template Analysis was conducted to produce a hierarchical list of codes representing themes identified in the interviews. In addition, 82 qualitative responses in 138 returned questionnaires distributed to the total sample (n=181), were organized to identify topics related to stress inducing changes in the work situation.

Results

A core category that emerged from the interviews was time pressure in terms of an increasingly hectic work situation characterized by a constant fight against the clock, resulting in bad conscience and not being able to perform the job properly. Distress related to consequences of organizational changes, budgetary constraints and the emerging of new and unforeseen work tasks, was perceived to result in (additional) time pressure and strain. These results are reflected in the qualitative responses in the questionnaire where the following topics were described as adverse changes in the work situation: organizational change (36), time pressure (31), increased work load (23), rationalization (17) and sick leave (17).

Conclusions

Time pressure is still a prevalent and increasing stressor for HCWs today, and work life trends indicate that the factors described as antecedents by the informants will continue to prevail in the future.

Differences between professions in perception of their social working environment. A study of six Norwegian hospitals

Beate André, RN, RMN, PhD, Associate Professor, Faculty of Nursing, Sør-Trøndelag University College, Norway.
Frode Heldal, Msc, PhD, Department of Industrial Economy and Technology Management, Norwegian University of Science and Technology (NTNU), Trondheim, Norway.
Endre Sjøvold, Msc, PhD, Associate Professor, Department of Industrial Economy and Technology Management, Norwegian University of Science and Technology (NTNU), Trondheim, Norway

Background
The gap between professions in health care can be caused by structural or cultural differences. This study's aim was to investigate the nature of differences between two professions in hospital units in their perception of their social working environment.

Material and methods
In six Norwegian hospitals 169 physicians and nurses answered a survey based on the Systematizing Person-Group Relations (SPGR) methods. The Systematizing Person-Group Relations (SPGR) method was used for gathering data and for the analyses. 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. The method seeks to find out what aspect that dominates a particular social work environment to say something about the environments challenges and limitations.

Results
In the dimension Withdrawal there were significant differences in both the two vectors, resignation and self-sacrificing, were nurses had higher scores then physicians. Nurses describe the culture as characterized by less empathy and engagement; which belongs to the Synergy dimension. The dimension Opposition also revealed significant differences between the two groups, with higher scores on the vectors criticism and assertiveness.

Conclusions
The differences found between physicians and nurses seem to be of a more structural nature than cultural due to the dimension the differences were found in, Synergy, Withdrawal and Opposition. The study revealed that nurse's experience criticism and considerably more friction in collaboration than their physician colleagues, structural changes must be made to improve this situation.

A study on the work and work environment of practical nurses in acute care inpatient units at Landspitali University Hospital

Ásgeirsdóttir, Alda, RN, MPH, Landspitali-University Hospital.
Bragadóttir, Helga, PhD, RN, MSN, University of Iceland Faculty of Nursing, Landspitali-University Hospital

Introduction

Human resources in nursing are valuable. The need for health care professionals has been growing steadily in recent decades, with increasing demand for the efficient use of human and monetary resources. Therefore it is important to look for ways for better use of the existing manpower in health services.
The aim of this study was to describe the perception of practical nurses (PNs) regarding their work and work environment and identify potential ways to provide patients with better and safer nursing.

Material and methods

Qualitative research methods were used with three focus groups, with a total of 21 PNs from Landspitali-University Hospital acute care inpatient units.

Results

Three themes were identified from the data: 1) Collaboration and knowledge utilisation; 2) Supportive work environment; 3) Extent of work. Underlying topics from participants' discussions were categorized into: a) collaboration, b) workflow, c) accommodation, d) resources, e) patient. Participants identified factors which can be improved. They experienced lack of support services, as they spent a lot of their time transporting patients between units, answering the telephone and working in the pantry; all work that in most cases does not require the knowledge of PNs. Participants perceived that significant amount of time was spent on looking for equipment for patient care. They also perceived increased workload during past years, with patients getting older, sicker, and more often addicted or overweight. They also had to take care of a growing number of victims of violence. To some extent, participants experienced varying work requirements depending on the registered nurse (RN) on duty and some felt that their work did not conform to their education. Most participants agreed that many things in the work environment were positive and that staff support was considerable.

Conclusions

The results indicate that the work and work environment of PNs can be improved in acute care inpatient units with regards to collaboration, supportive work environment and patient load.

Communication processes in workplace meetings: a structured observational study

Caroline Bergman [a], Lotta Dellve [b], Katrin Skagert [a]
[a] Institute of Stress Medicine, Carl Skottsbergs gata 22B, SE-413 19 Göteborg, Sweden
[b] Department of Public Health and Community Medicine, The Sahlgrenska Academy at Göteborg University, Box 414, SE-405 30 Göteborg, Sweden

Introduction
Workplace meetings in Swedish healthcare organisations are a platform for managers to implement and inform about organizational goals, strategies and guidelines. The meetings are also regulated by collective labour agreement in order to strengthen employees influence over their work environment. In that way, work place meetings could be a distinct workplace health promotion arena. The aim of this study was to explore workplace meetings as a workplace health promotion arena and the communication processes in a Swedish healthcare organisation.

Material and methods
Nine strategically selected workplace meetings within nine different surgical and medical wards were observed in their natural setting. A semi- structured computerized observation scheme was used in order to clock and categorized data into predetermined categories, complemented with field notes. After all observational data was collected, the preliminary results was given as a mirroring and reflecting feedback for the ward-managers. This feed-back section validated the findings and also gave us additional data that was helpful in the analyse process. Collected data were analysed using a content analysis and frequency charts.

Results
Each of the nine meeting's structure (location, frequency, duration, number of participants) and flow of communication differed from the other. Total observed time was eight hours. Flow in communication downwards consisted of information from the manager (46 %) and upwards consisted of information from employees and dialogue/discussion between manager and employees and between employee and employee (54 %). Almost half of the time was devoted *Clinical work* (49 %), such as pharmaceutical care guidelines, number of occupied beds, medical and clinical devices. *Personnel-related* subjects such as manning, schedules and employment affected 15 % of the time and *Physical and psychosocial work environment* affected 16 % of the time. Less common subjects were *Structural organisational changes* (2 %), *Economy* (2 %) and *Quality- and operational development* (2 %).

Conclusions
The observed opportunities of influence for the employees indicate that workplace meetings can by viewed as a distinct health promotion arena. Suggested areas for future research could be studying meetings for one ward over time for a pattern of communication and collect employee's view of workplace meetings.

Leadership development: a comparative evaluation of short term and long-term programmes in Swedish health care

Bergman, David, M.D., PhD, Medical Management Centre, Department of Learning, Informatics, Management and Ethics, Karolinska Institutet, Stockholm, Sweden

Introduction

Health care leaders and doctors are all key persons in the development of a good work environment and a well-functioning health care organisation. The overall aim of these five studies was to evaluate interventions aimed at developing health care managers', doctors', and medical students' leadership.

Material and methods

Studies I and II assessed the impact of long-term dialogue groups (n= 60). Psychosocial work environment measures were collected through a validated instrument and five focus group interviews were performed. In Study III, two questionnaires were sent to 160 medical students, before and after their participation in a short-term leadership course. In Study IV, 53 managers participated in two different leadership programmes, one short-term and one long-term. A questionnaire was used for evaluation before and after their respective leadership programmes. Eight focus group interviews were conducted after the programmes. Study V is an ongoing randomised trial of a long-term leadership program (n=220) with the aim to evaluate short- and long-term effects among subordinates to participating managers and the impact of the managers´ personality on leadership and work-environment.

Results

Those participants, who would be least likely to voluntarily attend a short-term leadership course, are the ones who learn the most. Such a course supports learning about group dynamics, group development, communication, and enhances self-awareness and strengthens participants in their leadership role. However, the effects seem limited in time. Hierarchy among doctors seems to influence many aspects of the doctors' role, the health care organisation, and the work environment. Long-term leadership development groups can support leadership development in context, decrease hierarchy, visualize gender inequities, facilitate building of a learning organisation and improve the work environment. There were high correlations between managers´ personality and 360-degree assessments of leadership behaviour.

Conclusions

Short-term intensive courses and long-term leadership development groups seem to complement each other as useful methods for leadership development in health care. The impact of personality needs to be further investigated. A practical implication is to initially offer short-term leadership orientation courses to current and future health care leaders followed by long-term leadership development groups in order to further develop participants' leadership competencies.

Value added and non-value added work of registered nurses in the emergency room

Bragadóttir, Helga, RN, PhD, Rúnarsdóttir, Sólrún, RN, MS, University of Iceland and Landspítali-University Hospital

Introduction

The work of registered nurses (RNs) is essential to every health care facility. It is however argued that better use could be made of RNs knowledge and time, adding value to their work. Value-added work of RNs is patient centered work that directly benefits patient outcomes. Non-value added work of RNs on the other hand is work that does not benefit patients or is not necessary to delivering nursing care.
The purpose of this study was to measure value added and non-value added work of RNs in the emergency room (ER).

Material and methods

Using mixed methods, constant observations were done during whole shifts. Data were collected in the ER at a university hospital in Iceland during 10 eight hour shifts were one trained observer shadowed one RN during each shift. Standardized data on the work of RNs, influencing factors, movements and time were collected on a hand held computer. Qualitative field notes were collected on a digital recorder. Quantitative data were analyzed using Excel and SQL. Qualitative field notes were content analyzed.

Results

Findings indicate that most of RNs working time in the ER was spent on value added work or 77.35%. The findings also indicate participants' frequently were multitasking, that they frequently encountered interruptions, often had to put work activities on hold, and had to look for equipment, supplies or colleagues.

Conclusions

Study results indicate that most of emergency room RNs working time is spent on value-added work. However there are potentials for improvements as non-value added measures were made in the work of participants. It is important for RNs, their coworkers, managers and policy makers to identify, acknowledge and work with influencing factors of value added work, and thereby improve quality care and patient safety.

First line managers' time- and activity-related patterns regarding their managerial assignments: a semi-structured observation study

Dellve[1], Lotta, Tengelin[1] Ellinor and Wikström[2] Ewa
[1] Sahlgrenska Academy, Gothenburg University
[2] School of Business, Economics and Law, Gothenburg University

Introduction

Managers at operational levels have key roles in handling and transforming goals of work environment, quality of care and economic issues into practice. Earlier studies point to their challenges in prioritizing, in practice, between managerial responsibilities regarding their managerial assignments. This may cause fragmentation and imbalances. Further, the need of assessment and supportive reflections regarding patterns of time use and interactions to increase awareness, control and handling have been expressed by managers.
This study focuses on first line managers' work with their central assignments (work environment, quality of care and economy) regarding time-use and interaction.

Material and method s

Twelve randomly selected 1st line managers from medical and surgical 24 hour clinics were observed. A semi-structured observation scheme, developed from earlier studies of managerial, was used during 2 days and self-rated measures of stress and recovery for 5 days.

Results

The 1st line managers spent more than half part of the observed working time on administrative tasks that was related to personnel/staffing and work environment issues. About 20 % were spent on strategic developments and little time was spent on issues regarding quality of care and budget. However, issues of budget and quality of care may be embedded in staffing and in the activities that included a combination of managerial activities. Further, managers spent most time at their office, working alone (70%) and a little time (17%) was spent in interaction with employees.

Conclusions

The results illustrate current challenges for health care organization regarding managerial work: (a) to handle staffing and scheduling effectively within the organization and (b) the time for managers to interact in the daily strategic work and improvements of health care. These results indicate that the role of 1st line managers may have changed towards handling practical "HR-work" on behalf of the managerial strategic work. Have the trend of HR-transformation moved the manager from the strategic work and moved the personnel department from practice? Even though this may point to general challenges, the results should be interpreted and reflected upon in the local context to be accurate and useful.

Simulation as a method for developing new work processes in a an out-patient unit

Edwards[1], Kasper Ole Broberg[1], Jacob Nielsen[2], Tanja Schou Hartmann[3], Else Momme[3] and Marianne Graa Hansen[4]

Introduction

Healthcare organization is an important but unfortunately overlooked subject. When new hospitals are designed architects are the first to sketch design thereby defining the confinements and to some extent how the new organization will function. This paper presents simulation as a novel and cost effective approach to developing new department design and organization.

Material and methods

A large outpatient department with a staff of 328 full time employees and 18000 patient visits a year serve as case. The research team spent 5 days of observation study in the department examining secretary work, reception, meetings, patient treatment, and waiting areas. Two doctors, 2 nurses and 1 secretary participated in 4 workshops of 3 hours and 3 simulations each with duration of a day. The 4 workshops explored the current work practice and developed a new future department. The workshops used A1 cardboards and LEGO figures to pretend patient and staff movement. Workshop 1 identified challenges and breakdowns using drawings to of the communication structure. The second workshop introduced an organic star-like shape and made the medical practitioners develop a new department within this structure. The simulation-method used in all 3 sessions was tabletop simulation as a tool to explore and develop department layout and organization. Again A1 cardboard, LEGO figures and boxes to simulate rooms. In the two first sessions organization models derived from the workshops where tested, and during this a new organization principle was developed. The 3rd and last simulation was used to test the robustness and generalizability of the discovered model, using participants from a different medical specialty and hospital.

Results

The participatory approach in the workshops revealed problems with communication, collaboration, IT, and layout of the department. This insight allowed the medical staff to develop a new department layout and organization, which was fundamentally different from their current work practice. The simulations resulted in development of a new organization model for outpatient departments: The Star-model. The star-model introduces three areas and a new role. The three areas are: 1) the core an area for the medical staff, 2) the examination rooms where medical staff and patients meet, and 3) the patient area with reception. During simulation it was discovered that a coordination role was needed to ensure smooth operation.

Conclusions

Simulation is a low-cost but powerful tool for exploring and developing new types of layout and organization in healthcare.

The importance of servant leadership in health care. Comparison of survey findings from groups of health care professionals

Gunnarsdóttir, Sigrún, Assistant Professor, University of Iceland, Faculty of Nursing

Introduction

Available evidence on health care leadership shows that leaders need to be involved with others as full partners in a context of mutual respect and collaboration, i.e. focus on people and relationships, trust, empowering environment and balancing values and priority. Servant leadership is founded on leader´s awareness, supporting behavior and ethics. A parallel can be identified between servant leadership and successful work environmental attributes in health care services.

Aim

The aim of this paper is to present findings from three questionnaire surveys conducted among Icelandic health care professionals to evaluate their attitudes towards servant leadership behavior of their next superiors and to indentify a potential link to staff job satisfaction.

Material and methods

Nursing care staff (n=140), nurse aids (n=588) and biotechnicians (n=65) in different health care settings were surveyed using a new and reliable instrument on servant leadership (SLI).

Results

Findings on SLI sub-scales mean scores show that perceived servant leadership (range 1-6) among the participants in the three surveys measured moderately high (mean 2,39 – 4,99); lowest SLI scores were reported by nurse aides. Majority of the respondents were satisfied with their jobs and intercorrelation between job satisfaction and perception of servant leadership characteristics shows a significant correlation for majority of servant leadership factors measured. Comparison to SLI mean scores as reported by staff in primary schools and by staff in service companies shows that scores reported by nurse aids and biotechnicians are lower than among staff outside the health care sector.

Conclusions

Findings of this study support the link between servant leadership and job satisfaction as presented e.g. in a Dutch multi-site study based on the same instrument. Present findings further strengthen the evidence on the importance of servant leadership for better health care staff outcomes. Furthermore, the present study opens up for comparison of SLI scores between groups of health care professionals, towards groups outside the health care sector and between countries.

Continuum of care for frail elderly people: evaluation of implementation challenges and short-term effects

Hasson, Henna PhD[1,2,3]
Anna Dunér, PhD[4,2], Staffan Blomberg, PhD, associate professor[5,2] Helene Berglund, RN, MSc, PhD student[6,2], Karin Kjellgren, RN, PhD, Professor[6], Katarina Wilhelmson, MD, PhD[7,2]

[1]Lund University School of Economics and Management, Department of Business Administration
[2]Vårdal Institute, The Swedish Institute for Health Sciences
[3]Karolinska Institute, Department of Learning, Informatics, Management and Ethics, Medical Management Centre (MMC)
[4]Department of Social Work, University of Gothenburg
[5]School of Social Work, Lund University
[6]Institute of Health and Care Sciences, The Sahlgrenska Academy at University of Gothenburg
[7]Department of Public Health and Community Medicine/Social Medicine, Institute of Medicine, The Sahlgrenska Academy at University of Gothenburg

Introduction

Integrated care programs have been used internationally to reduce fragmentation and to improve the continuity and coordination of care. The aim of this presentation is to report short-term effects of a care continuum model and to highlight challenges when implementing such a complex model in Swedish health and social care context.

Material and methods

The study design is a randomized controlled study with a total of 181 participants divided into intervention and control group. The study is conducted in the city of Mölndal in western Sweden. The multi-professional and multidimensional intervention is for frail community-dwelling elderly people. The intervention strives to connect three organisations responsible for delivering health and social care to older people: the regional hospital, primary health care and municipal eldercare. The intervention includes an early geriatric assessment, early family support, a case manager in the community with a multi-professional team and the involvement of the elderly people and their relatives in the planning process. The implementation process was evaluated during the first 20 months of the study (2008-2010) with observations of work practices, stakeholder interviews and document analysis. The short-term effects were assessed three months after the start of the intervention on the participants' satisfaction with care planning.

Results

The elderly people receiving a continuum of care intervention perceived significantly higher quality concerning all the studied aspects of the quality of care planning than those receiving usual care. The results of the implementation process pointed to the importance of paying attention to the different cultures of the organisations when implementing a new model. The role of upper management also emerged as very important. Furthermore, employees' all level of the participating organizations need to perceive the model as effective in dealing with real problems in the everyday practice.

Conclusions

A comprehensive continuum of care model was successful in improving elderly peoples' view of quality of care planning. However, there were several challenges concerning the implementation of the model. The long-term effects of the intervention on participants' functional abilities and health care consumption will be evaluated in future studies.

New Landspítali University Hospital in Reykjavík. Healing based on knowledge and environment

Magnúsdóttir, Sigríður, Architect FAÍ, Teiknistofan Tröð, SPITAL

It was a huge progress in the Icelandic health care system when in 1930 the first Landspítali Hospital building was opened. In the following decades the hospital expanded and now the total area of hospital, university and research buildings is approx. 53.000m2. During the same period hospitals were built at Landakot and Fossvogur area in Reykjavík. At the turn of the century the hospitals in Reykjavík were integrated operationally. The purpose of the integration was to improve the hospital management and service. The final phase of the integration is to transfer activities to one place.

The future development site for the Landspítali University Hospital would be the Landspítali Hospital site. The decision was made by the government and is based on various planning development and financial studies. The focus was to use existing buildings as much as possible. A policy was adapted that put the patient in center and all the patient bedrooms would be individual bedrooms with private bathroom.

In 2010 the design team SPITAL won a competition for the new Landspítali University Hospital. SPITAL consists of a group of architecture offices and engineering firms.
Landspítali University Hospital is an independent borough that integrates and develops within the vicinity by using the existing road layout. The planning proposal shows future extensions on the site. Five buildings will be built as a part of the first building phase. The key functions of the hospital, treatment and patient wards, will be in one single building. The patient hotel, research facilities, the School of Health Sciences and a parking house will be in single buildings. Underground tunnels and pedestrian bridges in significant places will connect new and existing buildings.

The goal of the SPITAL proposal is to create an environment that contributes to the wellbeing and pleasure of patients and staff. Factors such as daylight, views, vegetation, artwork and various uses of color and materials can have positive influence on patients health as well as the moral of hospital staff. This reduces risk of mistakes and increases the probability of successful treatment.

Cooperation across professions in the emergency department

Ulimoen Myhre, Ida, Anna-Catharina Hegstad and Endre Sjøvold

Introduction

Lean production and teamwork are two approaches to two recurring challenges in hospitals, efficiency and quality improvements. While both approaches have great results to refer to, Lean philosophy in addition implies that collaboration and teamwork are prerequisites for a successful Lean implementation. Previous studies have furthermore shown that cooperation often is a challenge in hospitals, especially in regards to collaboration across professional boundaries.

Material and methods

A total of 22 interviews with health workers at the emergency department at two Norwegian hospitals, St. Olavs Hospital and Kristiansund Hospital, were conducted. In addition an SPGR survey was conducted at Kristiansund Hospital.

Results

The study shows that effective work in the emergency department require holistic thinking and collaboration across both professional boundaries and divisions. Today collaboration in the emergency department is characterized by silo thinking and optimizing each single step of the patient's way through the department, rather than optimizing the patient flow as a whole. There are also different perceptions of the resources and expertise professions, limited communication across professional boundaries and a tendency to view other professionals in terms of stereotypes.

Conclusions

To overcome professional barriers and achieve increased cooperation are required to achieve efficiency and quality improvements in hospitals, based on lean principles.

Towards systematic Patient Safety management

Elina Pietikäinen[1], Teemu Reiman[1], Jouko Heikkilä[1], Kaarin Ruuhilehto[1], Luigi Macchi[1], Johanna Leväsluoto[1], Pia Oedewald[1], Annika Parantainen[2], Eija Lehto[2], Simo Salminen[2], Elisa Valtanen[2], Marina Kinnunen[3], Timo Toivonen[3], Pirjo Berg[4], Anna Maksimainen[4], Toini Nukari[4], Olli Tolkki[4], Arto Helovuo[5], Jarkko Wallenius[6]

[1] VTT Technical Research Centre of Finland, [2] Finnish Institute of Occupational Health, [3] Vaasa Hospital District, [4] Nordic Healthcare Group (NHG) Audit, [5] Huperman Ltd., [6] Awanic Ltd.

Introduction

Systematic development of patient safety is considered necessary internationally and in Finland. The emphasis has traditionally been on management of single factors, such as check lists regarding the distribution of medicines. However, safety also must be examined as a whole, integrated to service system and leadership. Indeed the new health care law and the patient safety strategy created by Ministry of Social Affairs and Health obligate organisations to be active in patient safety work, and the aim is that every Finnish health care organisation have a patient safety plan by the end of year 2012. In addition to direct benefits to patients, safe care of patients has significance for the work wellbeing of personnel. The ability of the employer to provide the staff with sound ethical circumstances, with possibility to work of good quality, is an ever more important asset in recruitment of new eligible personnel.

Aims

What is needed now is expertise in patient safety management as well as scientifically proven practices and tools to enhance safety in health care organisations. Our project consortium "Safety Asset" (2010-2012) is a contribution to this work. Our goals in the project are to (1) develop an innovative model for patient safety management, one which is client-centred and considers the complexity of the health care organisations, the continuity of care and the well-being of the personnel; (2) develop tools that support patient involvement in the process of care, organisational learning, proactive risk assessment and development of overall safety; (3) promote distribution of good practices in patient safety management in Finland and (4) promote development of innovative services and products in relation to patient safety management.

Status of the project in autumn 2011

Some examples of what has been carried out during the project so far: Data has been collected relating to patients' perceptions about patient safety and the ways they desire to participate in safety enhancement. Three workshops among project partners and companions have been arranged, with aim to build a model for patient safety management. Joint handling of work and patient safety deviations has been piloted in two central hospital units.

Concluding notes

Analyses of patient and work safety deviations revealed the complex operational environment in hospitals. Many of the risks were originally due to lacks in introduction, be it implementation of new equipment, instructions on how to make prescriptions, or updates for those returning from a long work absence. While the progresses of risk events are quite clearly described in accident reports, it seems that continuous psychosocial work strain is not yet fully perceived as risk.

Productivity, work environment and quality of care in public and private care services?

Sinervo, Timo, Anja Noro, Harriet Finne-Soveri
THL (National Institute for Health and Welfare), Finland

Introduction

In present difficult economic situation Finnish municipalities have a strong pressure to produce care services more effectively. As an answer private services are more frequently used. No consensus exists, however, on the effects of using private services in costs, efficiency, quality of care and well-being of workers. In several studies private services have found to be more efficient and their organization flatter and employees' autonomy at higher levels, but also contradictory results exist. There are also results that for-profit private owned organizations are cheaper but also have more quality problems. We also know that some organizations can produce high quality services with reasonable costs. There is a lack of comprehensive studies taking into all these aspects, which may give misleading results. Aim. In the paper we attempt to find out the relationships between productivity and work environment and secondly between productivity and quality of care in public and private services.

Material and method

This study is using a large sample, and combining different data. The aim is to explore the relationships of productivity, work environment and quality of care in private-owned and municipal services in service housing for elderly people. The factors studied are costs, quality of care and work environment. In analyses patient-structures are taken into account. The study is based on data from personnel surveys (N=1249), resident assessments (2172) (quality of care, patient structure) and data on costs, organizational structures and bed-days (134 work units).

Results

The results showed that productivity had only weak direct relationship with work environment and quality of care. Ownership of the unit had stronger effect on both quality of care and work environment. Public services proved to be cheaper. On the other hand stress levels were higher in municipal services but leadership was experienced more positively.

Direct observation of groups as intervention in health-care

Sjøvold, Endre, Dpt Industrial Finance and Technology management, Norwegian University of Science ans Technology, NTNU, Trondheim, Norway
Olaf Reisegg, Evidea AS & Dpt Psychology, University of Oslo, Norway

Introduction

Effort to increase effectiveness in the health sector is mainly concerned about logistics, technology and other «hard» interventions. From other industries we know that sustainable improvement is only achieved when also «soft» or relational aspects are considered. Attempts to increase effectiveness in health-care often fail due to lack of cross-professional cooperation and status issues. «Lean» philosophy consider crucial that the strongest competence is upstream. Still in emergency wards that claim to have implemented «lean», we find that the least experienced physicians is the first to meet the patient. Established norms over-rules what's obviously the most effective. Methods for gathering data on «soft» issues are typical questionnaires, interviews or the like. In this paper we argue that direct, systematical observation of real groups represents a powerful supplement to traditional methods.

Material and methods

In this study we performed observation and feedback sessions on cross-professional teams. Trained researchers used the SPGR 12 category observation system to score verbal and non-verbal transactions between group members in real action. The observations were supported by video recordings and sequences of productive cooperation were picket out and used in feedback sessions with corresponding SPGR observation-diagram.

Results

Our findings suggest that direct observations are an effective in bringing “taken for granted” patterns of communication up to discussion. We used two types of SPGR diagrams to display results; the Field-diagram and the Arrow-diagram. The Field-diagram shows change in role-structure and the Arrow-diagram shows communication patterns. Combining the diagrams with recorded video-sequences proved to be a strong and engaging form of feedback. While the Field-diagrams are fairly straight forward to grasp, we see that the Arrow-diagrams easily looks overloaded and need to be simplified and focused to the most relevant issues. The use of video-recording requires agreement with the group on how it should be used prior to the sessions.

Conclusions

Direct observation is not often used in attempts to improve cooperation and communication in the health-sector. Our study indicates that direct observation followed by concrete and pointed feedback is effective. More studies are needed to further document these effects at different groups and levels of the health-sector.

Making sense of stress indicators: Managers' perceptions of a multi-source feedback intervention

Tengelin, Ellinor, PhD-student, Occupational Health, University of Gothenburg
Ingibjörg H. Jonsdottir, Institute of Stress Medicine
Lotta Dellve, Occupational Health, University of Gothenburg

Introduction
The primary objective of this study was to provide feedback to health care managers on three stress indicators measured during a work week, and thus explore whether and how the recipients perceived and appraised this feedback as 'meaningful'.

Material and methods
We measured stress indicators in 12 individuals during one work week, using two bio-measures and one self-assessment scale, and fed back this data 2–6 months later in a structured interview session. We analyzed the participants' narrative data using conventional content analysis, as this method organizes qualitative data into conceptual classifications. We chose this analytical approach because narration is a basic human means for making sense of situations and events.

Results
The findings described that the sessions encouraged sensemaking of the stress indicators through a two-step appraisal process. The sessions triggered meaning-making of the participants' perceived and observed stress, but there were also obstacles to learning from the feedback.

Conclusions
Value-free feedback on stress indicators may initiate key processes of sensemaking, which can aid the recipients' stress management by increasing their awareness and supporting their learning about their stress.

Evidence-based Design – theory and practice and possible guidelines

Terkildsen, Pernille Weiss RN, M.Sc. Health, Master of Leadership & Innovation, EDAC, Ph.D. fellow at Aalborg University (AAU) and owner of ArchiMed

Michael Mullins, Ass. professor and head of department, AAU
Kjell Tryggestad, Ass. professor Copenhagen Business School, CBS
Roger Ulrich, Professor Texas A&M University, TAMU

Introduction

Sustainable health care services and hospital design is not done out of the blue. Knowledge and experience, besides from skills and courage to question given standards is important ingredients to the complex dynamic system of decision making when developing innovative products and building design for health care businesses. Knowledge, research and experience are central parts of what is called evidence. And the systematic use of evidence in building projects is called "evidence-based design".
This project aims to provide insight into how key actors of complex organizations of hospital building projects defines, perceive, develop and practice evidence-based design and hereby uncover the system of incentives, methods etc. that either drives or out-battles an innovative and valid evidence-based project. As the extension hereof the aim with this project is to develop recommendations for methods and guidelines for the practice of evidence-based design.

Material and methods

The overall method is based on the science of hermeneutic (Hastrup 1995) in a setup of triangulation using various methods to investigate the different layers of data in the field in scope (questionnaires, semi-constructed interviews, focus group interviews etc.). Using the case study method (Yin, 2009) in combination with some degrees of action research (Reason & Bradbury, 2006) opens up to pluralistic use of data combining both qualitative and quantitative data. In relation to the latter the purpose of mixing methods is to test and adjust the conclusive recommendations from the analysis onto the actors within the system of hospital projects aiming to strengthen the conclusions. Hospitals from the Nordic countries, U.S. and Canada are included and the sub-case focus is the layout of patient rooms and patient wards because of the inbuilt conflicts between patient well-being, patient safety, work environment, efficiency etc.

Results and conclusions

Project runs from 2009-2014 so results are yet not produced. The preliminary conclusion is that there are multiple ways to define, produce and integrate evidence to the complex system of hospital design and building projects. Respecting this multifaceted context is crucial aiming to navigate from initial strategic intention to successful occupancy of a sustainable hospital.

Teamwork in the emergency department – effects on efficiency, quality of care, patient satisfaction and staff work climate

von Thiele Schwarz, Ulrica, PhD[1,2], Åsa Muntlin Athlin, PhD[3,4,5], Nasim Farrokhnia, PhD, MD[3],Mandus Frykman, MSc[2]

1. Stockholm University, Department of Psychology, Sweden
2. Karolinska Institutet, Medical Management Center, Sweden
3. Department of Medical Sciences,Uppsala University,Sweden
4. Department of Public Health and Caring Sciences,Uppsala University,Sweden
5. Department of Emergency Care, Uppsala University Hospital,Sweden

Background
Overcrowding and excessively long waits are a concern for emergency departments around the world. It has been argued that simply adding capacity (such as staffing) is not sufficient to fix flow problems. Accordingly, process orientation has been embraced and multidisciplinary teamwork has been suggested as a promising approach to improving care processes in emergency departments (ED). However, less is known of how teamwork affects quality of care from the patients' perspective, and staff work climate.
The aim of this study was to study how teamwork in an ED is related to efficiency, quality of patient care, patient satisfaction and staff work climate.

Material and methods
A quasi-experimental study using multiple baseline and comparison groups were conducted in a university hospital ED as teamwork was implemented into clinical practice. Teamwork was implemented to reach the 4-hour target by getting the physician involved earlier in the care process and by avoiding multiple handovers between care givers. The multidisciplinary teams were directed by a flow manager and consisted of a physician, a nurse and a nursing assistant. Data was collected at several time points: during four weeks immediately after the implementation of teamwork when teamwork was altered with traditional work (baseline) in an ABAB-design, and after four and 12 months. Data from multiple sources was used, including electronic health records, observations, patient questionnaires and self-ratings from healthcare professionals.

Results
Compared to traditional work, teamwork was related to some improvements in ED efficiency. Also, patients rated fewer areas in need of immediate quality improvement. They also rated the waiting times to physicians as shorter (although the registered waiting times did not differ significantly). In contrast, staff initially perceived their efficiency as worse and their work as less rewarding.

Conclusions
Teamwork may be promising in generating better patient flow and to improvement in patients perceptions of quality of care. However, staff needs time to adjust to the changes in work process.

Barriers to collaboration between health care, social services and schools

Catharina Widmark, ***BSc, Karolinska Institutet, Medical Management Centre, SE-171 77 Stockholm, Sweden***
Christer Sandahl, ***PhD, Professor, Karolinska Institutet, Medical Management Centre, SE-171 77 Stockholm, Sweden***
Katarina Piuva, ***PhD, Stockholm University, Department of Social Work, SE-106 91 Stockholm, Sweden***
David Bergman, ***MD, PhD, Karolinska Institutet, Medical Management Centre, SE-171 77 Stockholm, Sweden***

Background
It is essential for professionals from different organizations to collaborate when handling matters concerning children, adolescents, and their families in order to enable society to provide health care and social services from a comprehensive approach.
This paper reports perceptions of obstacles to collaboration among professionals in health care (county council), social services (municipality), and schools in an administrative district of the city of Stockholm, Sweden.

Material and methods
Data were collected in focus group interviews with unit managers and personnel.

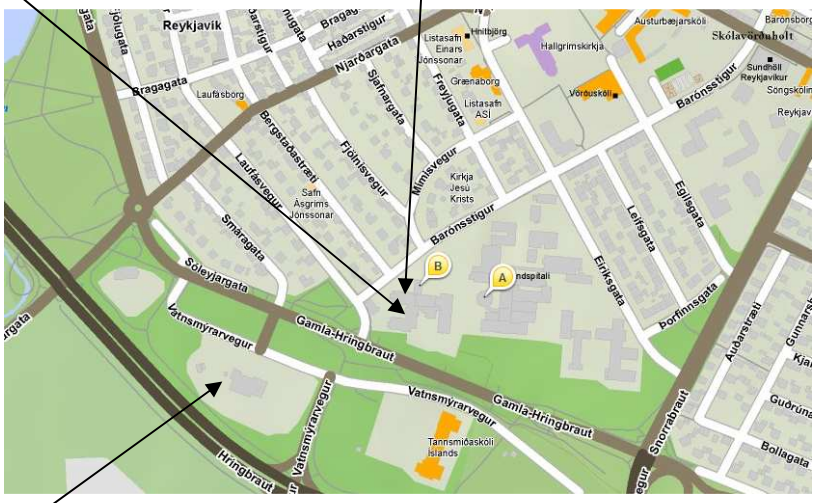
Results and discussion
Our results show that *allocation of responsibilities*, *confidence* and *the professional encounter* were areas where barriers to collaboration occurred, mainly depending on a *lack of clarity*. The responsibility for collaboration fell largely on the professionals and we found that *shared responsibility of managers from different organizations* is a crucial factor affecting successful collaboration. We conclude that a *holding environment,* as a social context that facilitates sense making, and a *committed management* would support these professionals in their efforts to collaborate.

5 th NOVO Symposium 2011 - Location

Building: Landspitali University Hospital

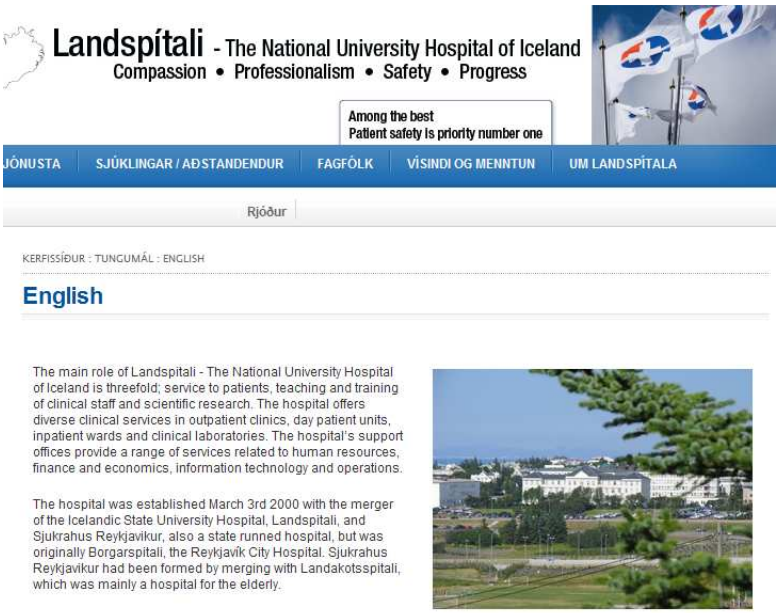
Street: Hringbraut (Gamla-Hringbraut)

Meetingroom: **Hringsalur, - Childrens ´Hospital**



5 min walk from BSÍ Bus Central (Keflavik Airport – Reykjavík City) www.bsi.is

www.landspitali.is



Society Efficiency Patient Quality NOVO Employee Work environment