



NSQH

6TH NORDIC CONFERENCE ON
RESEARCH IN PATIENT SAFETY
AND QUALITY IN HEALTHCARE



29–30 SEPTEMBER 2022
JÖNKÖPING, SWEDEN



WELCOME

DEAR COLLEAGUES AND FRIENDS,

at last we can welcome you all to participate in the 6th Nordic Conference on Research in Patient Safety and Quality in Healthcare. We have been longing for this for so long now. During these days in Jönköping, we hope that you will be able to share your own knowledge and also learn new things from colleagues.

We also hope you will take the chance to meet old and new friends in a friendship that may be a common ground for future co-operation in development and research in patient safety and quality in healthcare.

AXEL ROS

Chairman of the organizing committee

PHOTOGRAPHER: PETER APPELIN

JÖNKÖPING ACADEMY

Jönköping Academy is an interdisciplinary nationally and internationally leading center for co-creation and dissemination of knowledge and learning that contributes to better health and welfare. The center is a collaboration between Jönköping University and Region Jönköping County.

CO-PRODUCTION AND APPLICATION

Our research is within the fields of quality improvement, leadership for change, co-production, innovation, and patient safety. A key word for our work is co-production and we therefore strive for the research to take place closely with

practice and people with lived experience, for example patients. Another key word is application – we want the research to benefit the practice. The researchers combine their research time with teaching.

STRONG TIES

Jönköping Academy has a clear collaboration with the practice, and we have always had a clear connection between the researchers and the everyday practice in the field of health care. Seen from an international perspective, the close connection between academia and practice is unique, but for us it comes natural.

NETWORKING

We are part of several international networks for health and welfare. Jönköping Academy contributes with cutting-edge expertise, well rooted in the practical reality where we create new knowledge together with the people we are here to serve.

We are thrilled to invite you to this conference on research in patient safety and quality in health care. We hope you will enjoy your days in Jönköping.

Read more about Jönköping Academy at JU.SE/JA



JÖNKÖPING UNIVERSITY

Jönköping University is a young professional-oriented university characterised by a high degree of internationalization, an entrepreneurial spirit, and extensive collaboration with surrounding society. It is one of three Swedish private, non-profit institutions of higher education with the right to award doctorates.

Jönköping University has around 12,000 students, of which 1,850 are international students. The university is one of the top universities in international student exchange and among the best in Sweden in terms of attracting international students.

The university is organised as a non-profit corporate group with Jönköping University Foundation as the parent organisation and six wholly owned subsidiaries: the School of Health and Welfare, the School of Education and Communication, Jönköping

International Business School, the School of Engineering, University Services and Jönköping University Enterprise.

RESEARCH AND EDUCATION

The university offers 80 programmes and specialisations on Bachelor's and Master's level and prepares students for working in an international context. Focus areas within research are entrepreneurship and renewal; technical expertise and know-how to small, medium-sized and large companies; health, care and social work

from a holistic perspective; and conditions for education and communication.

DOCTORAL EDUCATION

Jönköping University is entitled to issue doctoral degrees in the disciplinary research domain of humanities and social sciences. Within technology, the university issues licentiate and doctoral degrees in the field of Industrial Product Development.



EDUCATIONS IN IMPROVEMENT AND LEADERSHIP

Run by the School at Health and Welfare at Jönköping University

> PROGRAMME

MASTER'S PROGRAMME IN QUALITY IMPROVEMENT AND LEADERSHIP OF HEALTH AND WELFARE

SWEDISH

120 CREDITS

Every improvement means a change, but not all changes are improvements. A fundamental part of this education is to increase the students' abilities to make changes that also are improvements. Through this programme, you will develop a competency for leading and improving the health and social care.

The first two years, which are run at half pace, are mostly theoretical studies connected to the experiences of practice. The third year involves a full time conduct of an improvement project in practice. We apply blended learning and teaching takes place both on campus and online.

Read more about the programme at [JU.SE/KLHV](https://ju.se/klhv)

> 3 STAND-ALONE COURSES

CO-PRODUCTION IN HEALTH AND WELFARE

ENGLISH

7.5 CREDITS

On this experiential learning course, you learn both theory and apply co-production with patient and public contributors to create resources which they can take with them into practice. This flexible, online distance course is an introductory course to co-production and welcomes those both experienced and new to the topic.

COACHING FOR QUALITY IMPROVEMENT IN HEALTH AND CARE

SWEDISH

7.5 CREDITS

On this course, you acquire knowledge and skills in coaching improvement work with the support of quality registers and other metrics, and use this knowledge and skills as a basis for further development of your own coaching role.

PATIENT SAFETY – FROM THEORY TO PRACTICE

SWEDISH

7.5 CREDITS

You acquire knowledge and skills in patient safety work. We start from systems theory models to understand situations and prevent healthcare injuries, where emphasis is placed on collaboration between technology, regulations, organization and people. This is to be able to participate in future patient safety work with the human being as a resource and a holistic view as a basis.

Read more about the courses at [JU.SE/HHJ/AKL](https://ju.se/hhj/akl)



PHOTOGRAPHER: JOHAN WERNER AVBY

Research is important for the development of health care in the Jönköping County Region. Clinical drug trials are part of this. At the oncology clinic, Ryhov County Hospital, patients participate in about 20 different studies.

REGION JÖNKÖPING COUNTY

Region Jönköping County has two main areas of responsibility: Regional development and growth, and Public health, healthcare and dental care.

Region Jönköping County is responsible for ensuring that the county's residents have equal access to high-quality healthcare and dental care, to provide the prerequisites for good public health, a good environment, jobs, research, education, a well-functioning system of public transport, and a rich variety of cultural life.

Region Jönköping County is one of the county's biggest employers, with around 11,000 employees working in more than 100 different occupations.

CO-PRODUCTION AND CO-CREATION

Through close collaboration, co-production and co-creation with patients and residents as well as with local, national and international partners, Region Jönköpings County adapts to providing care and health care with high quality by new methods and in continuous improvement.

HOSPITALS RANKED AMONG THE BEST IN SWEDEN

Region Jönköping County has three hospitals which are located in the cities Eksjö, Jönköping and Värnamo. The hospitals have been ranked among the best in Sweden. Region Jönköping County also operates healthcare centres,

dental clinics, child healthcare clinics, family clinics, and women's health clinics located all over the county.

REGIONAL GROWTH AND PERSONAL GROWTH

Jönköping County is the sixth largest in Sweden in terms of population. 80 per cent of Sweden's population lives within a 350 km radius. Region Jönköping County works in close collaboration with the 13 municipalities in the county, the County Administrative Board, Jönköping University, the business sector and the civil society to create a solid ground for business growth in the region as well as personal growth for the residents in the county.

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Workshops

The role and function of psychological safety in teams engaged in improvement work in clinical settings

Thursday, 29th September - 10:30: Workshop 1 (Konferensrum K11) - Workshop

Mr. Simon Tulloch ¹, Dr. Peter Dieckmann ²

1. Danish Society for Patient Safety, 2. Copenhagen Academy for Medical Education and Simulation / University of Stavanger

Teaser:

The role of psychological safety in teams engaged in safety critical activities, as well as creativity and innovation, has long been established. High functioning and adaptive teams actively work on building and maintaining psychological safety as a fundamental component of their work culture.

Psychological safety is particularly relevant to healthcare teams because the work environment requires them to work interdependently in order to co-ordinate safe and high quality patient care. During times of change, such as during improvement work, we believe the role of psychological safety to be even more important. This is because improvement work involves testing new ideas, speaking up with suggestions or criticisms, and collaborating with others. But improvement activities are often unsuccessful. Team members therefore require high levels of psychological safety to maintain engagement when a lack of success may lead to abandonment of the improvement endeavour or worse, punishment.

Edmondson's (1999) model of team psychological safety highlights factors which contribute to the development of psychological safety for staff groups and the mediating role this has for learning and performance.

In our workshop, we will engage participants in a number of activities which will explore the role of psychological safety for teams engaged in improvement work. We will also ask participants to review and give us feedback on our initial research findings which challenge Edmondson's model. This requires psychological safety on our behalf! Do you feel psychologically safe enough to join us?

During the workshop you will learn:

- How important the role of psychological safety is during improvement work
- That the current model to understand the factors preceding and resulting from psychological safety may need to be modified for healthcare teams engaged in improvement work
- The value of presenting ideas to others early and with humility can be beneficial to the research journey

Methods:

Using a mixed method approach (interview, questionnaire, and workshop) we investigated a change programme (new work-flow processes) in an emergency department of a hospital in the Capital Region of Denmark. Thematic analysis of qualitative data and descriptive statistics of questionnaire data were undertaken. Ethical approval was not required, although all participants gave consent to participate and use their data.

Plan for facilitation:

20 min Introduction of presenters, the research undertaken and the original psychological safety model under investigation.

50 min An interactive component involving volunteers from the audience who will engage in a series of activities which will represent:

- a. 'Standard work process, plus ongoing changes'
- b. First group debrief
- c. 'Revised work processes, plus changes'
- d. Second group debrief.

The activities are based on methods developed during simulation work at Copenhagen Academy for Medical Education and Simulation (CAMES).

Participants not directly involved in the activities will be asked to use a tool developed to support the observation

of psychological safety in groups.

20 min Presentation of our proposed revisions to the original model based on our data and theoretical considerations, which will conclude with participants discussing at their table whether the proposed modifications are appropriate, and if so why/if not why. Feedback from each table will be shared in plenum.

As such, our workshop will be a presentation of our findings, and a request for participants to critique our work.

In, and of itself, an example of psychological safety.

Number of participants is maximised to 40.

Co-design with patients for patient safety initiative and tools

Thursday, 29th September - 13:00: Workshop 2 (Konferensrum K11) - Workshop

Dr. Charlotta Nelsson¹, Mr. Tomas Edman², Mr. Bertil Lindenfalk³, Dr. Elin Fröding⁴, Mrs. Malin Holmqvist⁵, Dr. Axel Ros⁶

1. Region Värmland, 2. Experio Lab/Region Värmland, 3. Jönköping University, 4. Jönköping Academy, Jönköping University, 5. Region Jönköping county, The School of Health and Welfare, Jönköping, 6. Region Jönköping County and Jönköping Academy for Improvement of Health and Welfare, the School of Health and Welfare Jönköping University, Jönköping

Teaser

Co-design approaches have been recognized as potentially playing an important role in quality and safety improvement work as a way to involve patients and their next-of-kins as equal actors in the process. To co-design patient safety initiatives and patient safety tools is a relatively new field for improvement of patient safety; the literature in the subject is sparse. This workshop aims to shed light on this field of patient safety work to stimulate further development of it and cooperation between Nordic centres in both improvement and research work. It will do so through

- a presentation of a literature review in the subject made by a working group within the Swedish patient safety national coordinating group,
- two examples of patient safety co-design made within research project in Sweden for medication safety and suicide care respectively,
- a brief oversight of co-design models,
- and an exercise to facilitate group discussions to share experiences and map current knowledge about co-design and patient safety work between participants.

One or more patient(s) who participated in one of the research projects mentioned will participate in the workshop to share experiences.

During this workshop you will learn

- How co-design of patient safety initiatives with patients may improve patient safety
- The current knowledge about such initiatives
- How research on co-design of patient safety initiatives may support these activities

Plan for facilitation

Group exercises to facilitate discussions at round tables.

Co-producing quality improvement: a workshop on creating a conducive environment for engagement

Friday, 30th September - 10:15: Workshop 3 (Konferensrum K11) - Workshop

Mrs. Sofia Kjellström¹, Mr. Bertil Lindenfalk¹, Dr. Helena Kilander¹, Mr. Daniel Masterson¹, Mrs. Annika Nordin¹, Mrs. Marlene Ockander¹

1. Jönköping University

Teaser

Patient engagement in quality improvement work is still a novel approach. Ensuring successful patient safety requires engagement with several actors: competent leaders, skilled health care professionals and as of late active patients. Patients' next-of-kin has also been identified as potentially important partners.

Co-production is a distinct area of a broader cultural and political movement around participation of service users and those with lived experience in the design, delivery, evaluation and (to a lesser extent) management of the improvement of care. Principles underpinning the concept of co-production - mutuality, reciprocity, and shared responsibilities - offer the possibility of fundamentally challenging and changing the way we think about improving health and social care.

In this workshop you will explore the potential of incorporating principles of co-production into quality improvement work together with the other workshop participants. You will be introduced to various principles of co-production based on results from a series of reviews and research from the Samskapa co-production research program (e.g., Kjellström et al. 2019; Masterson et al. 2022 and Kjellström et al., forthcoming). Through round table exercises you will reflect on if (and how) the principles can be integrated into quality improvement and patient safety work.

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During the workshop you will

- Hear about various principles of co-production
- Reflect on the role of co-production in quality improvement work
- Get practical skills for how you can work with co-production and patient safety work in the future

Plan for facilitation

Individual and group level exercises facilitated by the workshop organizers with the aim of fostering reflection, shared learning and discussions.

Authors of abstract and workshop organizers

All authors work at the department for quality improvement and leadership at the School of Health and Welfare,

Jönköping University. All authors are researchers at The Jönköping Academy for Improvement of Health and Welfare and in the Samskapa research program.

Oral Presentations

The role of organizational factors in how efficiency-thoroughness trade-offs potentially affect clinical quality dimensions – a review of the literature

Thursday, 29th September - 10:30: Oral presentations 1 Governance, leadership... (Rydbergsalen) - Oral

Dr. Malin Knutsen Glette¹, Prof. Siri Wiig¹

1. University of Stavanger, SHARE centre for Resilience in Healthcare

Purpose – The purpose of this paper is to increase knowledge of the role organizational factors have in how health personnel make efficiency-thoroughness trade-offs, and how these trade-offs potentially affect clinical quality dimensions.

Method – The paper is a thematic synthesis of the literature concerning health personnel working in clinical, somatic healthcare services, organizational factors and clinical quality. The paper was published in *International Journal of Health Governance* (Glette and Wiig, 2021)

Findings – Identified organizational factors imposing trade-offs were high workload, time limits, inappropriate staffing and limited resources. The trade-offs done by health personnel were often trade-offs weighing thoroughness (e.g. providing extra handovers or working additional hours) in an environment weighing efficiency (e.g. ward routines of having one single handover and work-hour regulations limiting physicians' work hours). In this context, the health personnel functioned as regulators, balancing efficiency and thoroughness and ensuring patient safety and patient centeredness. However, sometimes organizational factors limited health personnel's flexibility in weighing these aspects, leading to breached medication rules, skipped opportunities for safety debriefings and patients being excluded from medication reviews.

Conclusion - Balancing resources and healthcare demands while maintaining healthcare quality is a large part of health personnel's daily work, and organizational factors are suspected to affect this balancing act. Yet, there is limited research on this subject. With the expected aging of the population and the subsequent pressure on healthcare services' resources, the balancing between efficiency and thoroughness will become crucial in handling increased healthcare demands, while maintaining high quality care.

References:

Glette, M.K. and Wiig, S. (2021), "The role of organizational factors in how efficiency-thoroughness trade-offs potentially affect clinical quality dimensions – a review of the literature", *International Journal of Health Governance*, Vol. 26 No. 3, pp. 250-265. <https://doi.org/10.1108/IJHG-12-2020-0134>

The role of local context for managers' experiences and strategies applied when adapting to the COVID-19 pandemic in Norwegian homecare services

Thursday, 29th September - 10:46: Oral presentations 1 Governance, leadership... (Rydbergsalen) - Oral

Ms. Camilla Seljemo¹, Prof. Siri Wiig¹, Prof. Olav RÅise², Dr. Eline Ree¹

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Introduction: Healthcare managers' capacity to adapt to the challenges brought by the COVID-19 pandemic is crucial to ensure safe and high-quality care. To the best of our knowledge, there are no previous studies exploring how these adaptations are made at different system levels, and the role of local context for managerial strategies applied when responding to challenges during a pandemic in homecare services.

Objective: To explore the role of local context for managers' handling and adapting to the COVID-19 pandemic in homecare services.

Method: A qualitative multiple case study in four different municipalities, both urban and rural with different geographical locations in Norway was conducted. A semi-structured interview guide was used for individual interviews of a total of 21 front-line (n=9), middle (n=5), top-level managers (n=4) and the municipality's infection control doctors (n=3) in addition to document analysis of emergency and strategic plans. All interviews were conducted digitally, and data was analysed according to inductive thematic analysis.

Preliminary results: Managerial strategies to adapt to challenges during the pandemic varied across geographical locations and size of their homecare services units, especially regarding dialogue and collaboration with the national health authorities (e.g., Directorate of Health, Institute of Public Health). Difficulties with implementing general national guidelines into local context were highlighted as particularly challenging. To ensure prudent and adequate staffing, managers' collaborated, reorganized, and reallocated resources within their local health system. New guidelines, routines and infection control measures were developed and implemented in lack of adequate preparedness plans and adjusted to fit into the local context. Supportive and present leadership in addition to information and collaboration across national, regional, and local level were highlighted as successful factors within all municipalities.

Conclusion: The findings highlight that managerial strategies for adaptation to a pandemic in homecare services have to be sensitive to local context.

Quality Management as a strategy in the development of Swedish Health and Welfare

Thursday, 29th September - 11:02: Oral presentations 1 Governance, leadership... (Rydbergsalen) - Oral

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Introduction

Quality Improvement (QI) has merged with management and almost become strategy in the Swedish health and welfare sector. Emerging from manufacturing, recent development includes comprehensive service systems, collaboration (between organizations) and coproduction (between caretakers and caregivers) (Batalden, 2018). Today, caregivers are obligated to conduct QI (SOSFS 2011:9). Quality research has simultaneously been intensified aiming to provide knowledge and evidence base for QI by answering the questions “what works for whom, when, where, and why” (Walshe, 2007; Dixon-Woods, 2019).

Objectives

This paper aims to describe and analyze the transition and development of Quality Improvement (QI) within the Swedish healthcare setting.

Methods

A scoping review strategy was used gathering publications produced in a Swedish health and welfare context containing quality improvement or closely related items. The identified scientific papers, books, book chapters and dissertations were analyzed firstly from a timely publication compilation, then by a thematic content approach.

Results

QI was introduced in Swedish healthcare in the late 1980th and has from then been applied in various ways and settings. The term improvement research emerges and exploded during the last five years. In total, 210 scientific papers met the inclusion criteria. Those were published between 1992 and 2020, with a majority, n=166 after 2011. The early papers cover mainly organizational macro perspectives, like introduction of quality systems in healthcare organizations. After 2011 new concepts are included, like Lean Healthcare and Value based care. Patient safety, sustainability and coproduction also has some coverage. Thirty books and book chapters published between 2007 and 2020 were also included, and chapters with an educational purpose make up a substantial body of these. In addition, 32 dissertations, defended between 2003 and 2019, from nine different Swedish universities were included. All dissertations include QI in some way but might have a wider scope, reaching from the early interest on the organizational perspective, the later focus on different diagnosis groups, and also themes as patient safety and coproduction.

From the analysis, six themes emerged: 1) systematic and value adding improvement work, 2) Collaboration between caregiving organizations, 3) Use of improvement tools and models, 4) Leadership and learning, 5) Measurements, quality registries and evaluations, and 6) Person involvement and patient safety. Participation and coproduction are an emerging topic, but the result also indicates that QI can serve as an umbrella including different topics, like patient safety, leadership och learning development like learning health systems.

Conclusions

There are a lot of QI activities taking place in Swedish health and welfare organizations. Still, research showing what works, for whom, where and when, needs to be further developed, and how to apply research results into practice. To further develop and improve the improvements, interactive QI work, active leadership and coproduction will need more attention to support sustainability.

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What are outcomes and how much are they?

Thursday, 29th September - 11:18: Oral presentations 1 Governance, leadership... (Rydbergsalen) - Oral

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Introduction

Outcomes are seen as a paramount notion to be able to judge the efficiency, success or results of measures to improve quality and safety in healthcare. But what are outcomes in this setting and how do we know when a successful outcome is achieved? In resilience in healthcare research, a basic premise is a focus on positive, successful outcomes of healthcare processes. Yet, a lack of emphasis on outcomes in the current literature is confirmed by a recent systematic review of the published literature (Iflaifel et al 2020). Out of thirty-six studies only five included outcomes as part of their conceptualisation of resilience. It is appropriate and timely for the resilience in healthcare field to better grasp the nuances of successful outcomes in complex adaptive systems (Aase, 2022).

Objective

To describe the properties of outcomes in complex adaptive healthcare systems.

Methods

Three different cases will be investigated to explore the objective: (1) the governance of the COVID-19 pandemic, (2) the coordinated care across specialist and primary healthcare, and (3) the performance of multi-professional healthcare teams. Each case will be described according to a sample of empirical studies described in the literature, and synthesized in a cross-case analysis.

Results

the downstream effects of the government actions to handle the COVID-19 pandemic (case 1) and to improve coordination of care (case 2) could be deemed successful from one perspective but not from the viewpoint of others. This might also be the case for upstream effects of adjustments made at the local level of the healthcare system (case 3). What is valued as a successful outcome of a resilient performance at a practice level is not necessarily valued as positive at a higher level as the practice adjustment is then seen in relation to other practices of the system. Local resilient performance might induce vulnerability in the system as a whole.

The cross-case analysis identifies a complex web of properties to be taken into account to better understand quality and safety outcomes:

- the novelty of possible threats
- the degree of uncertainty
- the level of interconnections and interdependencies
- the need to change course if chosen measures or guidance prove counterproductive

In this lies the recognition that specific outcomes in healthcare systems and processes are rarely final endpoints. Most outcomes are themselves positive and/or negative influences contributing to subsequent outcomes and stages. In this process, learning and reflecting is crucial, while time to do so is a limited resource. The knowledge base is often insufficient, posing challenges for the anticipation of the short-term and long-term, direct and

indirect outcomes.

Conclusion

Outcomes in complex adaptive healthcare systems are fluent, multi-faceted and dependant on time, space, and stakeholder perspectives and further research is warranted to better describe their properties.

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An overview of associations among adult inpatient experiences, outcomes and organisational climate factors: A systematic review

Thursday, 29th September - 11:34: Oral presentations 1 Governance, leadership... (Rydbergsalen) - Oral

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Introduction: Patient experience is an essential and well-recognised indicator for assessing hospital performance (Lunn et al., 2021). The increasing attention on patient experience has also yielded research on its relationships with patient outcomes as well as organisational factors. In a systematic review by MacDavitt et al. (2007), it was concluded that evidence of associations between organisational climate and patient variables is inconclusive, indicating a need for more research. Considering the years that have elapsed since the review by MacDavitt et al. (2007), and the increasing attention on patient experience from researchers, there is the need for a systematic review to draw adequate conclusions on whether or not there has been some changes in the associations between these variables in the general body of literature, thus the rationale for the current study.

Objectives: This study seeks to describe the main directions and theories within the body of evidence on the associations among these variables.

Methods: The study involved a search for literature in PubMed, PsychINFO, Medline, CINAHL, Academic Search Premier, Scopus and Web of Science. The search was limited to English language and to human adult inpatients. The search was also done with the guidance of a librarian. Articles were screened first on title and abstract, and then on fulltexts. Quality assessments such as risk of bias assessments were done on remaining articles. Data was extracted from articles that met the inclusion criteria and passed the checks. Any discrepancy during the study was addressed through discussions or engaging a neutral expert in systematic review. The review also focused on both foundational climates such as the broad workplace environment, and specific climates, such as safety climate and service climate. Patient outcomes that were sought included both subjective (eg. patient satisfaction) and objective (eg. accidents) outcomes.

Results: Preliminary results showed that the relationships among patient experiences, organisational climate factors and patient outcomes were generally positive. It was also noted that studies on patient safety climate were mainly from nurses or workers' perspectives (thus excluded). Furthermore, there was a plethora of patient experience measures with researchers highlighting the need for more reliable tools to measure patient experience and studies designed to measure the effect of the interventions. Additionally, although Donabedian's framework was used in some of the studies, there seemed to be a lack of a generally accepted theory that captures hospital climate from the patients' perspective.

Conclusions: Although these results are preliminary, some conclusions can be drawn. Patient experience has proved to be a significant predictor of patient outcomes, and a significant antecedent of organisational climate factors. Also, patient experience measures may need to be reassessed periodically to ensure generation of accurate information. Researchers could also pursue a general theoretical underpinning for assessing hospital climate from patients' perspective. Lastly, mechanisms and interrelationships among these variables is worth pursuing.

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Mundane work as a dynamic non-event - investigating everyday adaptations to manage risk in intraoperative anaesthesia care

Thursday, 29th September - 10:30: Oral presentations 2 Safety-II ... (Konferensrum K12) - Oral

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Introduction Anaesthesia has been in the frontline of enhancing patient safety, testing and implementing knowledge from other high reliability industries, such as aviation. Anaesthesia teams work in a complex, adaptive system of an operation room. Investigating management of everyday complex situations may present an opportunity to elucidate the presence of management of safety, which has not previously been described in anaesthesia care. The aim of this study was to explore factors supporting anaesthesia nurses and anaesthesiologists in managing complex mundane situations during intraoperative anaesthesia care.

Methods Individual interviews on anaesthesia nurses (n=9) and anaesthesiologists (n=6) using cognitive task analysis, which was constructed on case scenarios from previous prospective, structured observations. Results were managed and analyzed using framework method. Ethical approval was obtained by Ethical Board of University of Turku (1/2012). All participants signed an informed consent.

Results During anaesthesia care the strategies supporting the management of complex situations are various. Safety is sustained through preparing, supporting mindful practice, monitoring and noticing complex situations and also managing them. The prerequisites for management of complex everyday situations are created on both individual and organization level. Administration may ensure adequate resources of personnel, equipment and time, enhance team and personnel sustainability and early planning of daily work.

Conclusion Exploring complex mundane work provided knowledge on what factors aid anaesthesiologists and anaesthesia nurses in managing safety in the continuously changing context of an OR. Basic prerequisites are needed, such as resources ensuring adequate stability in team compositions, enabling adaptive capacity to grow through formation of deep understanding of processes, also others than their own. Standardization of work environment and processes support and form a part of safe boundaries in care. Management of complex situations benefit from high quality team work and non- technical skills, such as communication, leadership and shared situational awareness. Learning from success as a team, also during the clinical work process, may support the anticipation and successful management of planned and unexpected complex situations. Including these strategies in to education and research could further support the awareness and understanding on the importance of adaptive capacity. Complexity has been accepted as a part of everyday work in health care. Exploring how professionals manage it could result in finding ways to utilize it as a source of strategies of sustaining safety, also in other contexts in health care.

Patient safety in the intensive care unit during the Covid-19 pandemic

Thursday, 29th September - 10:46: Oral presentations 2 Safety-II ... (Konferensrum K12) - Oral

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Introduction: The enormous increase of patients in need of respiratory support during the Covid-19 pandemic enforced fundamental changes in the health care organization which induced patient safety risks. In parallel, identification of safety risks relied solely on observations and reports by the healthcare workers. To date, little is known about what safety consequences the Covid-19 pandemic entailed.

Aim: To describe healthcare workers' experiences of patient safety in intensive care during the Covid-19 pandemic.

Setting & participants: Twenty- eight healthcare professionals (nurses, physiotherapists, nurse assistants and physicians) who worked in the intensive care unit during the Covid-19 pandemic were included in the study.

Methods: Individual semi-structured interviews were conducted, transcribed verbatim and analysed with a qualitative content analysis according to Elo and Kyngäs.

Results: ICU staff's experiences of patient safety generated five main categories regarding infrastructure, routines and guidelines, changed competence mix, stress and fatigue and the importance of the leadership.

The categories above consists of risk-increasing tasks and procedures such as the following: mistakes associated with the prescription or administration of drugs, lack of adapted premises for intensive care which created both difficulties in monitoring patients and insufficient privacy for the patient, time consuming manual documentation, difficulties to get through with important information, restraining orders and prioritizing among vital medical and nursing tasks. The healthcare workers highlighted risks associated with lack of adequate equipment, the large increase of patients admitted to the ICU and competency shortage within intensive care.

Conclusion: The health care workers experienced that ICU patients were exposed to greater safety risks, especially during the first wave of the pandemic. The results provide important information on how healthcare professionals work in situations characterized by extreme pressure and how these situations affect patient safety.

Developing a next of kin involvement guide in cancer care-results from a consensus process

Thursday, 29th September - 11:02: Oral presentations 2 Safety-II ... (Konferensrum K12) - Oral

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Background: In hospital cancer care, there is no set standard for next of kin involvement in improving the quality of care and patient safety. There is therefore a growing need for tools and methods that can guide this complex area.

Objective: The aim of this study was to present the results from a consensus-based participatory process of designing a guide for next-of-kin involvement in hospital cancer care.

Method: A consensus process based on a modified Nominal group technique was applied with 20 stakeholder participants from 2 Norwegian university hospitals.

Result: The participants agreed on the 5 most important priorities for hospital cancer care services when involving next-of-kin. The results showed that next-of-kin stakeholders, when proactively involved, are important resources for the patient and healthcare professionals in terms of contribution to quality and safety in hospitals. Suggested means of involving next-of-kin were closer interaction with external support bodies, integration in clinical pathways, adjusted information, and training healthcare professionals.

Conclusion: In this study, we identified topics and elements to include in a next-of-kin involvement guide to support quality and safety in hospital cancer care. The study raises awareness of the complex area of next of kin involvement and contributes with theory development and knowledge translation in an involvement guide tailored for use by healthcare professionals and managers in everyday clinical practice.

Implications for practice: Service providers can use the guide to formulate intentions and make decisions with suggestions and priorities or as a reflexive tool for organizational improvement.

Conflict of interest statement: The authors have no conflicts of interest to disclose. This paper is published in the journal Cancer nursing.

Bergerød IJ, Braut GS, Fagerdal B, Gilje B, Wiig S. Developing a Next-of-Kin Involvement Guide in Cancer Care-Results From a Consensus Process. *Cancer Nurs.* 2021 Nov-Dec 01;44(6):E447-E457. doi: 10.1097/NCC.0000000000000869. PMID: 32769375; PMCID: PMC8560156.

The role of collaborative learning in resilience in healthcare - A thematic qualitative meta synthesis of resilience narratives

Thursday, 29th September - 11:18: Oral presentations 2 Safety-II ... (Konferensrum K12) - Oral

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Background: To provide high quality services in increasingly complex, constantly changing circumstances, healthcare organizations worldwide need a high level of resilience, to adapt and respond to challenges and changes at all system levels. For healthcare organizations to strengthen their resilience, a significant level of continuous learning is required. Given the interdependence required amongst healthcare professionals and stakeholders when providing healthcare this learning needs to be collaborative, as a prerequisite to operationalize resilience in healthcare. As particular elements of collaborative working, and learning are likely to promote resilience there is a need to explore the underlying collaborative learning mechanisms and how and why collaborations occur during adaptations and responses. The aim of this study is to describe collaborative learning processes in relation to resilient healthcare based on an investigation of narratives developed from studies representing diverse healthcare contexts and levels.

Methods: The method used to develop understanding of collaborative learning across diverse healthcare contexts and levels was to first conduct a narrative inquiry of a comprehensive dataset of published health services research studies. This resulted in 14 narratives (70 pages), synthesised from a total of 40 published articles and 6 PhD synopses. The narratives were then analysed using a thematic meta-synthesis approach.

Results: The results show that, across levels and contexts, healthcare professionals collaborate to respond and adapt to change, maintain processes and functions, and improve quality and safety. This collaboration comprises activities and interactions such as exchanging information, coordinating, negotiating, and aligning needs and developing buffers. The learning activities embedded in these collaborations are both activities of daily work, such as discussions, prioritizing and delegation of tasks, and intentional educational activities such as seminars or simulation activities.

Conclusions: Based on these findings we propose that the enactment of resilience in healthcare is dependent on these collaborations and learning processes, across different levels and contexts. A systems perspective of resilience demands collaboration and learning within and across all system levels. Creating space for reflection and awareness through activities of everyday work, could support individual, team and organizational learning. NOTE: This abstract is based on a submitted article that is currently being reviewed in BMC Health services research

“Yes, please. To both”. Norwegian and Swedish healthcare staff’s perceptions of safety reflection huddles in a Safety-I and -II approach.

Thursday, 29th September - 11:34: Oral presentations 2 Safety-II ... (Konferensrum K12) - Oral

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Introduction:

Safety huddles with health professionals is used as one method to support incident reporting and learning in healthcare. In Nordic countries the Green Cross model is used to recognise, document and discuss patient safety incidents in huddles, i.e., Safety-I (1).

In 2019 this model was implemented in a Norwegian Postanaesthesia Care Unit (2). In 2018, in a Neonatal Care Unit in Jönköping, Sweden, the method was further developed to include learning from situations where work goes well (3), i.e. Safety-II (4).

Objective:

The aim is to describe and compare Norwegian and Swedish healthcare staff’s perceptions of the Green cross model founded on the two approaches: Safety-I and Safety-II.

Methods:

In Norway, the Green cross method was implemented and evaluated by focus group interviews and analysed with qualitative content analysis. Four focus groups were conducted before the implementation (n=19 nurses) and four after the implementation (n=16 nurses).

The Swedish study used a multi-method approach. The quantitative part consisted of a questionnaire (151 items), submitted on four different occasions, and analysed using a Mann Whitney U-test and a Kruskal Wallis ANOVA-test. The qualitative parts were analysed using thematic content analyses, one deductive and two inductive, of interviews with staff (n=14), as well as answers to open questions in the questionnaires.

Results:

Reflections in safety huddles were perceived positively in general. Safety huddles were perceived to be useful for discussing events and to increase patient safety. They were also perceived to provide interprofessional understanding and cooperation and improve unity in the working group.

Both approaches were perceived to encounter challenges in engaging doctors, finding time for reflections that suited all professions, spreading knowledge and providing enough visible improvements. Support from management is needed in both Safety-I and Safety-II work. Additionally, when the focus is Safety-II, those who facilitate huddles need knowledge in the theory behind Safety-II in order to engage deep reflections. When the focus was patient safety incidents (Safety-I), the staff also wanted to talk about what had gone well and when the focus was on what’s going well (Safety-II), they also wanted to talk about patient safety incidents.

Conclusion:

Healthcare staff in Norway and Sweden expressed a wish for juxtaposing learning from patient safety incidents (Safety-I) with work that goes well (Safety-II). Safety huddles were perceived positively in general and was suitable for both approaches. Reflecting and learning upon work that goes well demands more from the facilitator, than does learning and reflecting upon incidents. Both methods were found wanting in providing visible improvements and in engaging doctors in the huddles. More clinical research focusing on both Safety-I and-II approaches in continuous improvement work is needed in order to increase patient safety.

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Adaptive capacity within intensive care during the initial wave of COVID-19: a grounded theory study

Thursday, 29th September - 13:00: Oral presentations 3 Covid 19 Governance, leadership... (Rydbergsalen) - Oral

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Introduction

Over the past years, the COVID-19 pandemic has challenged societies and revealed the built-in fragility and dependencies in complex adaptive systems, such as healthcare. The first wave of the pandemic hit some Swedish regions substantially earlier and harder than predicted and the number of critically ill patients increased exponentially. Hence, healthcare organizations rapidly had to escalate the intensive care capacity to an unprecedented extent. The escalation put healthcare providers and systems under great amounts of strain, with potential consequences that have not yet been fully elucidated. Additionally, processes involved to facilitate resilience are still largely unknown.

Objective

The present study aimed to explore the escalation process of intensive care during the initial wave of the pandemic, with focus on adaptive capacity from a micro level perspective. Understanding adaptive capacity in the escalation process can provide extended knowledge about how resilience is created, which can serve a basis for designing interventions focusing on preparedness to manage current and future challenges in healthcare.

Method

The study was part of a larger explorative research project (ResCOV), which utilizes Grounded Theory methodology to study resilience in healthcare during the COVID-19 pandemic.¹ The present sub-study includes 70 healthcare professionals (managers, physicians, registered nurses and assistant nurses) that permanent or temporary served within intensive care in two Swedish regions that initially were severely affected by the pandemic.

Data were collected in connection with the first pandemic wave and consisted of the participants' first-person stories, provided by written narratives or individual qualitative interviews. All data were managed by the NVivo-software and analyzed using constant comparative analysis according to the principles of Grounded Theory.

The project was ethically approved. Considerations regarding the ongoing strain on healthcare were handled by sensitivity and flexibility in the data gathering.

Result

Available results are preliminary and may be adjusted in the final analysis. Based on the analytic process an overall conceptual model has emerged. The model explains the escalation process of intensive care during the initial wave of the COVID-19 pandemic, from a micro level perspective.

Main concern in the escalation process emerged as uncertainty and altered demands and the core category emerged as proactive and reactive adaptations. The concern originated in the occurrence of a new contagious disease, scarce knowledge and unpredicted progress of the pandemic. This, together with existing contextual conditions, triggered and affected the adaptive response, and led to positive as well as negative processual consequences. In turn, the consequences affected the conditions, which contributed to further alterations and forced additional adaptations in an onwards iterative process. The iterative process of adaptation continued until the contagion ebbed out and the outcome of the first wave of the pandemic was discernible.

Conclusion

During the rapid escalation, a surge of adaptations were performed. Working conditions, ethics and patient safety were affected. However, the adaptations enabled intensive care for a large number of patients, and lessons were learned which were immediately applicable and increased preparedness for future challenges.

Reference

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The influence of COVID-19 on Danish cancer care

Thursday, 29th September - 13:32: Oral presentations 3 Covid 19 Governance, leadership... (Rydbergsalen) - Oral

Mrs. Lisbeth Høeg-Jensen¹, Ms. Lotte Linnemann Rønfeldt¹

1. The Danish Cancer Society

Introduction

In the Danish Cancer society, the effects of the COVID-19 pandemic for cancer patients were followed closely as the patient rights for cancer patients were still in force and activity should continue as normal in cancer care, including the screening programs.

Objectives

The objectives of generating knowledge from relevant data sources were two-fold: 1) to be able to support the cancer patients during the pandemic, and 2) to be able to follow any change in practice by the health authorities at national, regional and local level in order to address potential quality issues and unnecessary harm to patients.

Methods

The data sources were a literature review, cancer patient surveys, the official Danish national monitoring of activity levels and research projects.

Results

The cancer patients were – and some still are – afraid to get COVID-19, not sure about changes in their cancer care and confused about the vaccination programs. This led to an increase in – and also changes to the types of – counselling services from the Danish Cancer Society and daily updates of information to patients and care givers on www.cancer.dk.

The Danish Health Care system has been continuously 'open for business' with regards to cancer care. Nonetheless, the first lock down period during the spring of 2020 resulted in far lower levels of activity (e.g. contacts to general practice, referrals to cancer patient pathways), and reorganization of cancer pathways i.e. out-patient visits changing from face-to-face consultation to video. The lower level of activity lead to 14 pct. fewer cancer diagnosis in Q2 2020 compared to Q2 2019 and 6 pct. fewer cancer diagnosis in all of 2020 compared to 2019. The rapid changes in type of out-patient consultations did not compromise patient safety and the overall level of cancer patient pathways for the entire year of 2020 ended up being equal to 2019.

Conclusion

Cancer services within the Danish Health Care System have remained in operation throughout the COVID-19 pandemic. We are, though, still to follow whether the lockdown during the spring of 2020 meant that the missing patients were diagnosed in a later stage and – consequently – whether the lockdown will influence the cancer mortality in the coming years. Furthermore, potential patient safety issues or benefits for patients and care givers from introducing alternative and more digitalised workflows need further investigation.

Lessons learned

On a more general level, we saw that agility, changes in workflows, closer cooperation across sectors and professional groups and new national monitoring was implemented more rapidly than ever during the pandemic. In Denmark, we experienced:

- A move from organisational and professional silo mentality to quick and coordinated implementation of new organisational structures and services
- New ways to provide quick and easy digital access to consultations, tests and test results for the public
- New data collection and monitoring of activity and outcomes at a national level
- New public-private partnerships

Managing working hours and recovery during the Covid-19 pandemic and implications for safety - A qualitative study of HR-representatives in the Swedish healthcare sector (Unpublished)

Thursday, 29th September - 13:48: Oral presentations 3 Covid 19 Governance, leadership... (Rydbergsalen) - Oral

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Introduction

Insufficient recovery from work imposes a health and safety risk as fatigue may impair attention and executive functioning. Both work environment and work hours affect employee's ability to recover between shifts. During the Covid-19 pandemic the increased pressure on the healthcare system has led to more challenging working conditions and more demanding working hours. Several studies have reported a high prevalence of stress-related issues, such as burnout and sleep problems amongst healthcare workers during the Covid-19 pandemic, especially amongst those working with Covid-19 patients. Working hours within the Swedish healthcare system are governed at several levels through instances such as legislation and collective agreements, as well as policies and guidelines. These may differ between regions and organizations, which could have different implications for both health and safety amongst healthcare personnel.

Objectives

The aim of the present study was to investigate how working hours and recovery for healthcare workers have been managed strategically in different Swedish regions during the Covid-19 pandemic, and which implications this may have had for patient safety.

Methods

To investigate how working hours and recovery for staff have been managed on a strategical level, and potential implications for patient safety, HR-representatives working with these issues were interviewed. Participants were recruited from different Swedish regions and filled in an informed consent before being interviewed (dnr. 2020-04230). Semi-structured interviews were conducted via phone or video call between May and November 2021. A total of 20 HR-representatives from 18 out of 21 regions in Sweden were included in the study. The data are being analyzed using thematic analysis.

Results

Data are currently being analyzed, and results will be ready to be presented at NSQH 2022. The present study will provide further knowledge on how HR has worked on strategical level regarding working hours, recovery for personnel, scheduling, and staffing during the pandemic and implications for patient safety and a sustainable working life. The interviews will also shed light on which types of support that has been provided to employees and ward manager, specific rules and guidelines around scheduling, as well as challenges that have been faced throughout the pandemic and implications for the future.

Conclusion

As the results have not yet been finalized, we cannot draw any conclusions based on our data. However, it is clear that ways of managing working hours and assuring sufficient recovery for staff within the Swedish healthcare sector have differed between regions, which potentially has implications for patient safety. Our research adds a general perspective on different practices and strategies used during the pandemic and provides implications for similar situations in the future. Further knowledge on how to provide sustainable working conditions and high level of patient safety under extraordinary circumstances could also be gained by including other perspectives, such as from healthcare workers.

Managers' experiences of handling the Covid-19 pandemic in Norwegian nursing homes and homecare services

Thursday, 29th September - 14:04: Oral presentations 3 Covid 19 Governance, leadership... (Rydbergsalen) - Oral

Dr. Eline Ree¹, Prof. Siri Wiig¹, Ms. Camilla Seljemo¹, Dr. Torunn Wibe², Dr. Hilda B. Lyng¹

1. University of Stavanger, SHARE centre for Resilience in Healthcare, 2. Centre for Development of Institutional and Home Care Services in Oslo

Introduction: Several studies have been published about the challenges of the Covid-19 pandemic faced by health care personnel and patients in different healthcare settings. However, there is limited knowledge regarding managers experiences and strategies used to handle the Covid-19 pandemic in nursing homes and homecare services.

Objective: Exploring nursing home and homecare managers' experiences of the Covid-19 pandemic, and the strategies they used to handle the challenges.

Method: The study has a qualitative design with semi-structured individual interviews conducted digitally by videophone (Teams). Eight managers from nursing homes and five managers from homecare services located in a large urban municipality in eastern Norway participated. Systematic text condensation was used for analysis.

Preliminary results: The main challenges faced during the pandemic were related to insufficient contingency plans and infection control, lack of staffing, constantly changing guidelines and routines, and challenges due to communication and information flow. The managers used several strategies to handle these challenges, including being proactive and thinking in advance about possible scenarios that might occur, continuously training of staff in new procedures and routines, and systematic information sharing at all levels, as well as disseminate information in different ways to reach staff, patients and next-of-kins. To handle staffing challenges, they used strategies such as hiring temporary staff that were permitted from other industries, and bringing in students.

Conclusion: Managers at different levels in nursing homes and homecare services had to find new and creative ways of working to deal with the challenges faced during the pandemic. The strategies used were related to anticipating, responding, and adapting to the continuously changing circumstances in order to meet new demands and overcome obstacles such as lack of staffing, insufficient infection control equipment, changing guidelines and routines, and challenges due to communication and information flow.

Participatory working time scheduling in Swedish healthcare – How do managers and staffing assistants ensure employees' health and patient safety? A qualitative interview study.

Thursday, 29th September - 13:00: Oral presentations 4 Human and organizational ... (Konferensrum K12) - Oral

Ms. Majken Epstein¹, Dr. Erebouni Arakelian¹, Dr. Marie Söderström¹, Dr. Anna Dahlgren¹

1. Karolinska Institute

Introduction

Participatory working time scheduling (PWTS) is a common working time model in Swedish healthcare. In PWTS, working hours are planned with the aim to meet both employees' individual preferences and the wards' specific needs for staffing and competence. The approach is collaborative, and usually ward managers, staffing assistants and employees cooperate in the planning process, which often takes place in several steps. Working hours are crucial for the employee's ability to recover between work shifts, which inevitably has large implications for as well employees' health and wellbeing as work performance and patient safety. This implies a great responsibility for both employees, staffing assistants, and managers when planning the working hours. Ways of implementing PWTS vary, e.g. regarding how the process is organized, degree of influence of the employees, and rules about minimum number of specific shifts, shift combinations or days off in-between working shifts. Recent qualitative research from our group has shown variability in ways of implementing PWTS at different hospital wards in Sweden, and has also revealed a variable level of knowledge among involved persons about e.g. how different working hours influence recovery and the Swedish Working Hours Act. Although the major implications of working hours for wellbeing and safety, and the widespread use of PWTS in Swedish healthcare, little is known about which factors that are important for optimizing working hours to ensure both employees' wellbeing and patient safety in working time models using participatory scheduling.

Objectives

The aim of this study was to explore how healthcare managers and staffing assistants work for achieving working hours that promote employees' wellbeing and patient safety within a PWTS model, and to identify important factors for optimizing working hours in respect to this.

Methods

Semi-structured interviews were conducted with 11 healthcare managers and 10 staffing assistants at seven different hospitals in four different Swedish regions. Interviews were conducted via telephone March 2020 and October 2021. Questions focused on rules and guidelines for employees in the scheduling process, knowledge about the influence of working hours on recovery and sleep, experienced challenges, need of support and success factors in the process. The study had ethical approval (2019-05245) and all participants filled out an informed consent before being interviewed. Data are currently being analysed using thematic analysis.

Results

Data are currently being analysed and will be ready to be presented at the NSQH 2022. The results will highlight how healthy and safe work hours within a PWTS model is created in the interaction between humans, organisations and technology. The study will increase knowledge about which factors that are important to address for achieving sustainable, healthy and patient-safe working hours within a PWTS model.

Conclusion

As data are currently being analysed no conclusions can yet be drawn.

Patient Safety Skill Requirements at the Emergency Department - Interview Study to Staff and Immediate Superiors

Thursday, 29th September - 13:16: Oral presentations 4 Human and organizational ... (Konferensrum K12) - Oral

Mrs. Tytti Alho¹, Mrs. Merja Jutila¹, Mr. Hannes Friberg¹, Ms. Marianne Kuusisto², Mrs. Essi Vesterlund¹, Mrs. Heli Ylihärtilä¹, Mrs. Sanna Kiili¹, Dr. Tanja Eriksson¹

1. Finnish Center for Client and Patient Safety / Wellbeing Services County of Ostrobothnia, 2. Finnish Centre for Client and Patient Safety

Emergency department (ED) is a critical unit in a hospital setting as its functions, and staff's expertise must always be secured. ED is also considered a complex environment from the point of view of patient safety. Previous studies indicate that constant hurry and high strain are contributing factors to adverse events (1). New client and patient safety strategy in Finland emphasizes staff's wellbeing and expertise as prerequisites to patient safety (2).

The aim of this study is to explore healthcare professionals' perceptions of patient safety in ED of a medium size hospital in Finland. This study clarifies what are the challenges and potential solutions for improving patient safety and gives understanding for educational needs in this setting.

Methods

This study is a qualitative interview study performed by multi-professional study group. All members of the group have diverse experience from the clinical work and from the patient safety and education. Some study group members had worked in the ED, which helped coordination of the recruitment. Connections of researchers to the context were reflected during the whole process.

Voluntary health care professionals and secretary (n=15) were recruited from the ED. Semi-structured interviews were conducted between December 2021 and March 2022. All participants have a various length of working experience. They provided a written informed consent to participation in the study.

The interviews were semi-structured. An external actor transcribed interviews for the analysis. After transcription, the data was anonymized in accordance with good scientific principles. Data was analyzed by using inductive theme analysis according to Braun & Clarke (3). Atlas.ti analyze program was used in the analysis.

Results

Preliminary results show that the concept of patient safety was seen differently in the target group. For some participants it was easy to describe what patient safety meant for them, for others it took a while to construct their understanding of patient safety.

Challenges related to patient safety were described widely. Collaboration between different actors in healthcare system was seen challenging due to for example multiple IT-systems. Interviewees considered that lack of human resources and inexperienced staff in nursing had negative effects in patient safety. Also, more structured introduction in nursing was needed.

Although challenges were easier to describe, also positive issues emerged. For example, triage is done in a same structured way every time. Other routines were also seen as a positive thing. The ED had an atmosphere, where open discussion was possible. It was easy to ask for help from a colleague and help was given when needed.

Conclusions

The preliminary data shows that there are issues that should be addressed in the ED considering patient safety. For example, with the help of education, staff could get tools to manage their tasks in a more patient centered way. According to Amaniyan & al (4) competent staff provides safer care for patients.

Key topics: Emergency department, patient safety, skill requirements

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Equipping health professionals to meet existential needs of patients and their relatives – a reflective practice directed by a pack of cards

Thursday, 29th September - 13:32: Oral presentations 4 Human and organizational ... (Konferensrum K12) - Oral

Dr. Karin Thörne¹

1. Region Jönköping County,

Introduction

Health care with all professions have built and continually improve broad and deep competences to support physical, mental and social health of different groups of patients. World health Organisation have added existential health as an area that promote the other areas of health. Existential health, meaning the combined processes of basic thoughts, actions and feelings when a person relates to life's different situations in relation to self, context and personal perceptions. Examples of existential dimensions of life are meaning and purpose in life, experience of awe and wonder, feeling of wholeness, spiritual strength and hope. Research shows that building existential meaning-making structures supports an individual's healthy development and quality of life. Health professionals in Sweden are not enough equipped to understand and meet patient's existential needs, together with physical, mental or social needs. Since 2017 an interprofessional educational approach in existential health has been developed in Region Jönköping County, consisting of conversations groups focusing on the existential dimensions of life. Evaluations of today in 22 interprofessional groups show unanimous positive results in terms of the participants being aware of existential perspectives and developing a listening approach, that they found important in health care work.

Objectives

The purpose of the study is to deepen understanding of the interaction and learning in conversation groups.

Method

The study is based on a qualitative, interactive research approach, where the researchers are engaged in a collaborative process with two of the leaders of the conversations groups. The data include informal conversations with the leaders, tape-recorded focus groups with participants from two different conversation groups half a year after finishing the conversation groups, and participatory observation of all conversation meetings for one of the conversation groups, of which the last four have been tape-recorded. Data was analysed inductive thematic and a second analyse is in progress through the lens of the theory of practice architectures to scrutinize significance of the socio-material conditions in the conversation groups .

Result

The educational design included weekly and structured group conversations in a group of 8 participating professionals and two leaders, shared perspectives on eight existential dimensions. Each dimension was explored with the use of three cards distributed among the group. The first card has questions about thoughts, the second about feelings, and the last about actions related to one dimension. The questions on the cards direct the professionals to "test thinking", put thoughts into words, and listen to each other. Each conversation was ended with questions about how the existential dimension that was in focus could relate to the participants work with patients.

The rotating question cards supported the participants to focus, take the time they needed to answer and to actively listen to each other. In short time a trustful and respectful practice emerged. The two leaders responsible for the frames and group process also answered the questions posed to the groups, and through that, equal positions were created. The participants found the approach of the leaders important for the development of the practice. Through the weekly conversions a process of perspective exchanges and reflective ability emerged.

Conclusion

Sorry not completed

Short intervals between shifts (<11h) - pros and cons in relation to patient safety, continuity of care and fatigue

Thursday, 29th September - 13:48: Oral presentations 4 Human and organizational ... (Konferensrum K12) - Oral

Ms. Kristin Öster¹, Dr. Philip Tucker², Dr. Marie Söderström¹, Dr. Anna Dahlgren¹

1. Karolinska Institute, 2. Stockholm University & Swansea University, UK

Introduction: Short rest (<11h) between evening and day shifts – known as quick returns (QRs) – impede recovery and have been associated with reduced health, and an increased risk of sick leave. There is also emerging evidence of an association with work related accidents and mistakes. Nevertheless, QRs remain common within the health care sector which suggests there could be associated benefits as well. In order to design healthy and safe shift schedules, an understanding of the potential benefits of quick returns from an organizational and individual perspective is important. To our knowledge, this is the first study to actively investigate the potential benefits of QRs in addition to their potential harm.

Objectives: This study explores nurses' and nursing assistants' perceptions of the merits and demerits of QRs in relation to individual wellbeing, work performance and patient safety.

Methods : Participants were recruited at eleven hospital wards in two regions of Sweden as part of a larger quasi-experimental intervention study. A total of 366 nurses and nursing assistants received information about the study. Ninety-six participants were enrolled in the study and undertook a baseline survey regarding recovery, tolerance and work performance in relation to QRs. Questions were either rated on a 5-point likert scale (for example "1 – Strongly agree", "5 – Strongly disagree"), or provided categorized response alternatives (for example "none", "1-2", "3-4", "5 or more"). Frequency distributions of responses were analyzed.

The study was approved by the Swedish ethics research committee (Regionala etikprövningsnämnde Stockholm) (dnr 2018/1541-31). All participants gave their informed consent prior to data collection.

Results : A majority experienced difficulties unwinding before bedtime (76 %), insufficient sleep (80 %), and daytime fatigue (72 %) when working QRs. A third experienced an increased risk of errors and mistakes. However, QRs appeared to facilitate taking reports from patients and planning work, as this task was more often rated as 'very easy' following a QR (62 %) compared to other shift combinations (34-38 %). Tolerance of QRs varied substantially: 45 % of the participants reported that they could work at most 2 QR before experiencing negative effects whereas 16% never experienced negative effects.

Conclusion : Our findings provide new knowledge about the role of QRs in continuity of work processes, which might be an important consideration for the construction of healthier and safer shift schedules. Our findings also generate new hypotheses regarding potential organizational benefits of QRs, benefits that need to be contrasted against QRs' negative impact on recovery, fatigue and patient safety. Future research should also examine factors influencing individual tolerance to QRs and how they may impact guidelines for QRs.

Key words (3): Patient safety, Continuity of care, Recovery

A proactive programme for sleep and recuperation in newly graduated nurses: can it promote safety? Results from a randomized controlled trial.

Thursday, 29th September - 14:04: Oral presentations 4 Human and organizational ... (Konferensrum K12) - Oral

Dr. Anna Dahlgren¹, Ms. Majken Epstein¹, Dr. Marie Söderström¹

1. Karolinska Institute

Introduction: Entering working life as a newly graduated nurse is stressful and for many also an introduction to shiftwork. Both stress and shiftwork is associated with impaired sleep and recuperation, which can have negative effects on cognitive functioning and increase accident risk.

Objectives: This study examines whether a proactive intervention targeting strategies for sleep and recuperation in relation to work related stress and shiftwork could promote work performance and implications for safety.

Methods: 209 newly graduated nurses were recruited at five Swedish hospitals and randomly assigned into experimental (intervention) and control group. The intervention involved group education on strategies for sleep and recuperation, based on cognitive behavioural therapy techniques modified for shiftworkers (three 2.5h sessions). In total 64 participants in the intervention group and 74 participants from the control group filled in a diary for one week before, and one week after the intervention. In the diary, participants rated how well they had managed different aspect of their work during the day, such as “making decisions”, “keeping things in mind”, “keeping an overall picture of the work situation”, “staying present in meetings with others” and “performing work safely” (1 very well, 5 – not very well). They also rated difficulties stop thinking about work during free time (1-5 to a great extent), sleep quality (1-5 good quality) and stress/worry at bedtime (1-5 not at all) during working days and days off. For an objective measure of sleep quality participants wore an actigraph during each measurement week. Group by time interactions were examined in ANOVAs based on mean levels during work days and days off. The study had ethical approval 2016/1395-31/2.

Results: The results showed that nurses in experimental group, after the intervention, improved their cognitive executive performance, such as the ability to make decisions ($F=8.13$, $p<0.01$), keep things in mind ($F=14.3$, $p<0.001$), keep an overall picture of the work situation ($F=13.98$, $p<0.001$), stay present in meetings with others ($F=5.82$, $p<0.05$) and to perform work safely ($F=6.54$, $p<0.05$), whereas the control group showed no changes or a decreased performance. There were also significant group by time interactions showing that the experimental group, after the intervention, reported less stress/worry at bedtime ($F_{\text{work}}=6.24$, $p<0.05$; $F_{\text{days off}}=4.25$, $p<0.05$) and improved their ability to stop thinking of work during free time ($F_{\text{work}}=10.80$, $p<0.01$; $F_{\text{days off}}=14.58$, $p<0.001$) on work days as well as days off., whereas the control group showed no difference or more problems. During work days there were no effects on measures of sleep quality. During days off, however, there were significant group by time interactions in both subjective ($F=6.87$, $p<0.05$) and objective measures ($F=6.41$, $p<0.05$) of sleep quality showing that sleep quality increased in the experimental group and decreased in the control group.

Conclusions: Supporting newly graduated nurses in adaptive strategies for sleep and recovery seems to improve cognitive executive functioning and work safety. Systematic work with promoting sleep and recovery in health care organizations may improve the organisations resilience and ability to provide high quality of care and patient safety.

Feasibility of an electronic patient safety checklist across seven elective surgical pathways

Thursday, 29th September - 15:00: Oral presentation 5 Co-production... (Rydbergsalen) - Oral

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Introduction: Poor uptake and understanding of critical perioperative information represent a major safety risk for surgical patients. Thus, mobilisation and empowerment of patients' participation in their own safety is emphasised by several patient safety initiatives. Building on the Norwegian Patient Safety Program's target areas, the Patients' Surgical Checklist (PASC) was developed to address preventive measures and to empower patients to take more charge before and after surgery. (1,2) The validation of PASC as a patient-completed safety checklist (paper version) is promising as a tool to empower patients in becoming involved in their own safety in surgical care. (3) Yet, there is limited research on effects of patient-centred surgical checklists. Therefore, an effect study on the implementation of PASC in surgery will be conducted as a multicenter study, using the stepped wedge cluster randomised control trial design (SWCRCT) (4). This research project is funded by the Research Council of Norway. (5) To improve the usability of PASC prior to the SWCRCT, an electronic checklist version, e-PASC, has been developed.

Objective: To investigate the feasibility of the e- PASC from a patient perspective.

Methods: Five patients from seven different surgical clusters at two Norwegian hospitals were invited to test e-PASC prior to undergoing surgery (N=35). All patients were interviewed individually by telephone, two to five weeks after their surgery. A semi-structured interview guide focusing on acceptability, implementation appropriateness, and feasibility of PASC was used.

Results: The data is currently being analysed. Implementation barriers and potential risks will be addressed and mitigated before the the intervention part of the SWCRCT starts.

Conclusion: PASC will be the first checklist study using a RCT design to examine effects of patients using their own checklists to avoid preventable patient harm, and the feasibility study will provide valuable knowledge and practical input to the ongoing research process.

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Patients' and clinicians' expectations and views on the use of safety-netting advice in consultations

Thursday, 29th September - 15:16: Oral presentation 5 Co-production... (Rydbergsalen) - Oral

Dr. Rita Fernholm ¹, Dr. Kiku Pukk Härenstam ¹, Ms. Carolina Wannheden ¹

1. Karolinska Institutet

Background: One of the biggest patient safety problems in emergency and primary care is the failure to cross-check uncertain diagnoses, which introduces a risk of preventable diagnostic harm. A promising approach is to use safety-netting. However, there is still limited knowledge about how to successfully apply safety-netting strategies in practice. Furthermore, although safety netting involves both clinicians and patients, few studies have included patient experiences of diagnostic uncertainty and safety netting.

Objective: To explore clinicians' and patients' experiences of diagnostic uncertainty and their views on how safety-netting can be successfully applied in primary and emergency care settings.

Method: The study was performed in a Swedish setting and used an exploratory research design. We conducted Six interviews and two focus group discussions, involving a total of nine clinicians working in primary and emergency care, as well as seven patients and one family caregiver with experiences of diagnostic uncertainty. Data were analyzed inductively, using framework method analysis. The results are reported according to the COREQ guidelines for reporting qualitative research..

Results: Both clinicians expressed a shared understanding of the need for safety netting as well as for the active involvement of patients in safety netting. To manage diagnostic uncertainty, clinicians and patients emphasized the need to understand preconditions for the consultation (i.e., the patient's capacity and their social context; aspects influencing the patient-clinician collaboration; the healthcare context) furthermore they raised gained shared situational awareness regarding the patient's perspective and experiences as an important goal,. Our analysis identified six strategies for successfully applying safety-netting: 1) openness about uncertainties; 2) communicating expected course of events; 3) tailoring information; 4) using multiple modalities; 5) teach-back; 6) facilitate re-consultation.

Conclusions: The understanding of preconditions for the clinical encounter and the establishment of shared situational awareness between the clinician and the patient were identified as vital aspects for the successful selection, tailoring, and application of safety-netting strategies. Our results suggest that successful safety netting can be viewed as a team activity where clinicians and informed and empowered patients collaborate in monitoring whether the development follows or deviates from the predicted path after the care visit. Furthermore, our findings suggest that successful implementation of safety-netting advice needs to be tailored both to the clinical context in general as well as the patient-clinician encounter in particular.

A person-centred and age-friendly service ecosystem for senior citizens: Stakeholder perspectives

Thursday, 29th September - 15:32: Oral presentation 5 Co-production... (Rydbergsalen) - Oral

Mr. Christophe Eward Kattouw¹, Prof. Karina Aase², Dr. Petter Viksveen¹

1. University of Stavanger, SHARE centre for Resilience in Healthcare, **2.** University of Stavanger, SHARE - Centre for Resilience in Healthcare

Introduction: Most senior citizens want to live independently at home as long as possible. The World Health Organization recommends a person-centred and age-friendly community approach by transforming the service ecosystem for senior citizens and basing it on the question “What matters to you”. However, there is limited research-based knowledge to determine the characteristics of the preferred service ecosystem from the perspectives of multiple stakeholders.

Objectives: The purpose of the study was to gain a deeper understanding of stakeholder perspectives on the preferred service ecosystem for senior citizens living at home.

Methods: Four stakeholder groups (n=57) from a Norwegian municipality participated in an interview study in 2019 and 2020: senior citizens, carers, healthcare professionals, and managers. The study was approved by the Norwegian Regional Committee for Medical and Health Research Ethics (REK; case no. 2019/1027).

Results: There was considerable correspondence between the four stakeholder groups’ perspectives on the preferred service ecosystem for senior citizens, while discrepancies existed regarding the focus on an age-friendly infrastructure and reablement. Six themes were developed: 1) *self-reliance – living independently at home as long as possible*; 2) *remaining active and social within the community*; 3) *support for living at home as long as possible*; 4) *accessible information and services*; 5) *continuity of services*; and 6) *compassionate and competent healthcare professionals*.

Conclusion: The rapidly expanding aging population worldwide requires national health and care policies to be adaptive to meet the growing and changing needs of senior citizens. The preferred service ecosystem should support senior citizens’ autonomy and enable them to live in their home as long as possible, in line with their own wishes. Such services should be developed through co-production, including different stakeholders’ perspectives. This study therefore provides important insights to improve and develop a complete service ecosystem that better meets the needs of senior citizens and enables them to continue to live at home.

Reported Safety Incidents associated with ethical burden in a Finnish Central Hospitals' Emergency Department in 2021

Thursday, 29th September - 15:00: Oral presentations 6 Adverse events, learning... (Konferensrum K11) - Oral

Mrs. Merja Jutila ¹, Mrs. Tytti Alho ¹, Dr. Tanja Hautala ¹, Prof. Tuija Ikonen ¹

1. Finnish Center for Client and Patient Safety / Wellbeing Services County of Ostrobothnia

Various safety incidents take place due to different phenomena at the system or process level of health care organizations. These phenomena will not be identified without systematic reporting and analysis of safety incidents. Analyses of gathered information from incident reporting systems are useful for identifying the reasons of the incidents and for further improvements in patient safety. In the fall 2021 we noticed a peak in emergency department's patient safety incidents reported to HaiPro®, a web-based anonymous patient safety incident-reporting system, developed in Finland.

Objective of the study was to compare the reported safety incidents at the emergency department from 2020 and 2021 in order to identify the characteristics of safety incidents and to find possible reasons for the observed change in incident reports. The purpose was to improve patient safety by highlighting the reasons for patient safety incidents and plan actions to eliminate organisational causes of safety risks.

Methods: Reported patient safety incidents regarding the emergency department at a Finnish teaching hospital from two consecutive years 2020-2021 were analysed in order to describe the variation in the frequency of reported incidents and scrutinize their contents. The data were gathered from original incident reports made by staff, patients or patients' relatives, and the subsequent remarks and classifications recorded in the HaiPro®-system during the incident handling process. Descriptive statistics (frequency and percentage) were analysed by using Excel-programme, and the findings were systematically classified according to the definitions of the HaiPro®-system. Furthermore, a qualitative content analysis was performed to the narrative contents of the original incident reports.

Results: In 2021 there were total of 407 reported patient safety incidents at the emergency department, compared to 422 in 2020. Department's own staff made 150 and 163 of the safety reports in 2020 and 2021, respectively. Staff-reported incidents about ethical knowledge and actions increased by ca. 90% (16 and 30, respectively), and other/non-listed –type of incidents increased by ca. 130% (33 and 75, respectively), from 2020 to 2021.

In 2021, 47% (n=77) of the incidents reported by the department's own staff were made between September and October. Among other –type of reports by emergency department's own staff, 69% (n=50) had a reason related to having too many patients in the department compared to the amount of staff. Other reasons were haste, and not being able to send patients to the correct ward from the emergency department. When reasons for reported other –type of incidents were analysed by qualitative content analysis, it was noticed that the reasons were related to staff, for example, increased ethical and psychological burden, as well as reasons related directly to patient care, for example delayed care and insufficient monitoring of patient's condition. Interestingly these causes were not always assigned to a correct category in the original reports.

Conclusion: We noticed a peak in incident reports within two months in 2021. Biggest increase in safety incidents from 2020 to 2021 was associated to areas of ethical knowledge and actions, and lack of staff at the department. These aspects seemed to affected psychological safety of the staff. Timely response to observed changes in incident reports is elementary. Changed profile or sudden increase of incident reports may indicate a phenomenon requiring managerial actions to eliminate the root causes of patient safety risks.

Implementing e-PRO follow-up of cancer patients treated with immunotherapy for safer cancer care

Thursday, 29th September - 15:16: Oral presentations 6 Adverse events, learning... (Konferensrum K11) - Oral

Dr. Ellinor Haukland¹, Dr. Siv Gyda Aanes²

1. University of Stavanger, SHARE centre for Resilience in Healthcare, 2. Nordland Hospital trust

Introduction: Cancer patients experience adverse events more often than other patients, and most adverse events are related to systemic anticancer treatment¹. Introduction of new types of systemic treatment like immunotherapy exposes cancer patients to new and other types of adverse events. Studies have demonstrated that using electronic patient reported outcomes (e-PROs) can reduce acute admission to hospitals, improve quality of life and symptoms and prolong overall survival compared to follow-up by standard care^{2,3}.

Objectives: Implement Kaiku Health⁴ e-PRO follow up as standard of care to provide personalised and safer follow-up of cancer patients receiving immunotherapy treatment.

Method: Implementation study using the model of improvement to implement new technology and using Statistical Process Control for result, process and balancing measures to investigate if the implementation contributes to change over time.

Results: The implementation where done at the Department of Cancer and Palliative Medicine at the Nordland Hospital Trust in Northern Norway. The department provides cancer care to more than 1 200 patients per year, where about 10 % of the patients are treated with immuno- and immunochemotherapeutic. The first patients were included in June 2020. After ten months of use 74 patients have been included, which counts for a median of 75 % of eligible patients. An average of 245 symptom questioners and 54 values for weight are reported by the patients each month. 70 messages are sent from patients to their healthcare team and 52 messages are sent to the patients on average per month. Planed follow-up phone call consultations by nurses are reduces from 19 per months before the implementation to 3 per month after 7 months use. Patients reports 52 % (CI 20-86) less severe adverse symptoms (grad 1-2), which is higher than reported in other clinical trials. Fatigue, decreased appetite and itching are the most common less severe adverse symptoms reported. 18 % (CI 0-48) severe adverse symptoms (grad 3) are reported, which is as expected with immunotherapy treatment. The most common grad 3 symptoms are shortness of breath, cough and itching. This reflects the large number of lung cancer patients included and the development of pneumonitis as a severe adverse event during treatment.

Conclusion: Implementing e-PRO follow up as standard of care is a shift in mindset from reactive to a proactive way of reacting to symptoms and patient's needs. By reporting their own symptoms in real time, we enhance patient involvement. For healthcare personnel e-PRO makes clinical work more efficient, provides real time decision support for treatment and enables immediate response to potentially serious adverse events. Changes takes time so data presented are preliminary and we do not expect to have good result data before two years after start of implementation.

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The importance of occupational health for patient safety: Learnings from a development project

Thursday, 29th September - 15:32: Oral presentations 6 Adverse events, learning... (Konferensrum K11) - Oral

Mr. Patrik Haraldsson ¹, Dr. Axel Ros ¹, Dr. Dirk Jonker ¹, Prof. Kristina Areskoug Josefsson ²

1. Region Jönköping County and Jönköping Academy for Improvement of Health and Welfare, the School of Health and Welfare Jönköping University, Jönköping, 2. Faculty of Health Studies, VID Specialized University, Sandnes, Norway and Jönköping Academy for Improvement of Health and Welfare, the School of Health and Welfare Jönköping University, Jönköping

Introduction

Patient safety and work environment are highly related to each other, good working conditions are important for patient safety. Workplace factors like collaboration, workload and frequent interruptions has been shown to affect compliance to patient safety guidelines. Good working conditions also contribute to psychological safety, important for patient safety.

Work environment research and practice has an important knowledge gap. There is knowledge about how to conduct individual directed interventions (fitting the employee to work) but little knowledge about how to conduct workplace directed interventions (fitting work to the employees). The practical implications is that individual interventions are put in place to solve to workplace problems. Hence, patient safety work and work environment interventions are both characterized by the tension between individual and system approaches. The Structured Multidisciplinary Work Evaluation Tool (SMET) is an Occupational Health Service (OHS) method for support in Systematic Work Environment Management (SWEM), developed with the intention to close this knowledge gap both in practice and in research.

A quality improvement (QI) project was started at the Department of Internal Medicine and Geriatrics in a local hospital in Sweden, using SMET to support work environment and patient safety work. The project started with a pilot testing 2015-2019, and was used in a larger setting during the Covid-19 pandemic.

Objectives

The first aim of this study was to evaluate SMET as an OHS method for support in SWEM and its effect on work environment and patient safety, during the Covid-19 pandemic.

The second aim was to evaluate potential resilience effect of participation in the pilot testing.

Methods

Action research with a mixed methods approach was used to study the QI project. Work environment mapping was conducted quarterly with the SMET questionnaire between June-2020 and December-2021. To add further understanding, the results were discussed with a reference group of employees. The result from the SMET questionnaire and the reference group was presented to the management team of the department, which then were able to put in tailored measures to improve the work environment. Tailored interventions and continuous evaluation of workplace interventions are important parts in SMET.

The work environment is measured as employee's degree of problems with the SMET questionnaire. Patient safety is evaluated as compliance to patient safety guidelines, measured as the frequency of Senior Alert risk assessments during the project. Data will be presented with descriptive statistics. Associations between work environment factors and compliance to patient safety guidelines will be conducted with Spearman's rho.

The study protocol was developed in accordance with the Swedish Ethical Review Act and was approved by the Ethical Review Authority (Dnr: 2020-03891).

Result

The analysis is presently ongoing. Preliminary results show small increases in problems with high work-pace and unreasonable demands during the pandemic. More results, regarding the work environment and compliance to patient safety guidelines, will be presented at the conference.

Conclusion

The preliminary results shows few and small increases in work environment problems at the Department of Internal Medicine and Geriatrics during the Covid-19 pandemic. Considering the extreme demands on the health-care system during the pandemic this result indicates that SMET, as an OHS method for support in SWEM, can contribute to work environment resilience during extreme working conditions. The positive results may also have an effect on patient safety.

The authors declare no conflicts of interest.

Promoting cemented fixation of the femoral stem in elderly hip arthroplasty and hip fracture patients – a collaboration from The Norwegian Arthroplasty Register and the Norwegian Hip Fracture Register

Thursday, 29th September - 15:00: Oral presentation 7 (Konferensrum K12) - Oral

Ms. Anne Marie Fenstad¹, Dr. Geir Hallan², Ms. Eva Dybvik³, Dr. Jan-Erik Gjertsen³, Dr. Daniel Nilsen⁴, Dr. Ove Furnes¹

1. Norwegian National Advisory Unit on Arthroplasty and Hip Fractures, 2. The Norwegian Arthroplasty Register, 3. The Norwegian Hip Fracture Register, 4. Department of Surgery, Voss Hospital, Voss, Norway

Introduction

Finding the optimal implant fixation in total hip arthroplasty and hemi arthroplasty has been the subject of much debate among orthopedic surgeons over the years. The discussion addresses to fixate the implant parts with or without the use of bone cement. Research has showed that cemented stem fixation for the elderly total hip arthroplasty (THA) and hemi arthroplasty (HA) patients reduce risk of revisions. A revision is an extremely burden for the elderly patients. We describe a national quality improvement project that aimed at having surgeons use cemented stem fixation in these patients.

Objectives

The objective was to achieve that 95% of the hip fracture patients aged 70+ and 90% of total hip arthroplasty female patients aged 75+ would receive a cemented stem fixation within end of 2021.

Methods

We used data from the Norwegian Arthroplasty Register and the Norwegian Hip Fracture Register to map the methods used for stem fixation in female THA patients aged 75+ years and HA patients aged 70+. Departments (n=15) with a low proportion of cemented stem fixation were identified and these were invited to join the project. The departments were followed for five years, 2017-2021. During this period, departments were encouraged to use cemented stem fixation. Analyses on the use of cemented stems and survivorship were performed annually. Results were discussed at internal project meetings, presented at annual national meetings and international conferences.

Results

The proportion of female THA patients 75+ receiving a cemented femoral stem increased from 63% at project start to 88% in 2021. The proportion of hip fracture 70+ receiving a cemented femoral stem increased from 80% to 97%. Concurrently the survivorship after three years follow-up of THA and HA for the patient groups studied improved from 95.5% to 97.5% for THA and 95.0% to 96.5% for HA respectively.

Conclusion

A nationwide register-initiated quality improvement project was successful in turning departments towards better clinical practice. The proportion of cemented femoral stem fixation increased with 17%-25% in the study period for both groups of patients. Overall survivorship in participating hospitals improved.

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Balancing the protection of privacy against the duty of care in telehealth: a governance framework.

Thursday, 29th September - 15:16: Oral presentation 7 (Konferensrum K12) - Oral

Prof. Henning Boje Andersen ¹

1. Technical University of Denmark

Introduction. Developments in demographics are leading to a big increase in the number of frail older people living at home and in need of oversight. Telemedical and telehealth technologies including sensor-based monitoring systems make it possible to detect critical deviations in health status or abnormalities in daily activities. Sensor-based monitoring can provide not only timely detection of critical changes in health and behaviours but also reduce anxiety and worries by frail elderly citizens, their families and care givers. Nevertheless, the use of these technologies for monitoring daily activities also pose ethical challenges. Care organisations (e.g., municipalities, district health services) therefore need ethically well-founded and practically useful guidelines.

Objectives. Building on the results of a pre-standard guideline (1) and extant recommendations by professional committees (2), we seek to develop a model for attaining a balance between the duties of care and respect for the privacy and dignity of citizens who are in need of monitoring.

Methods. The study has reviewed recent frameworks and guidelines for the protection of privacy in telemedicine and technology enabled healthcare to develop a governance framework and a practical model.

Results. Our project has resulted in a model, comprising an ethics governance framework and a practical guideline, that adapts and expands the internationally widely recognized process of informed consents. The framework supports the development of consent on full information about (a) what can be detected and responded to and what cannot (limitations on monitoring; or response); b) what types of care response can be expected; and (c) what the safeguards and limitations are to protect privacy, confidentiality. The framework is accompanied by an implementation guide adaptable to differences in cognitive capacities of individual care receivers or patients represented by proxy or surrogate. It is also stressed that patients' tradeoff points between care needs and privacy will vary with increasing care requirements and, therefore, a given agreement about the scope and limit of monitoring must be dynamically updated when the patients need for care increase or decrease.

Conclusion. The use of telemedicine services, including video communication, has grown substantially during the Covid pandemic. At the same time, sensors systems and detection algorithms are becoming increasingly more advanced. It would appear that a public discussion is needed of how to achieve A practical model based on an ethically well-founded, technology governance framework would seem to fill a timely need.

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Electronic Health Records on the Top of Medical Device Incident Reports in Finland

Thursday, 29th September - 15:32: Oral presentation 7 (Konferensrum K12) - Oral

Prof. Tuija Ikonen¹, Dr. Krista Kumpuvaara¹, Mrs. Tarja Vainiola², Dr. Vesa Jormanainen³

1. University of Turku and Ostrobothnia Wellbeing Services County, 2. Finnish Medicines Agency, 3. Ministry of Social Affairs and Health

Introduction:

Submitting a medical device incident report in Finland is a legal obligation for professional users. Reporting an incident applies to all medical devices and requires health of a person being in danger and a problem in relation to a medical device, and situations that could possibly have endangered a person's health. By definition, Parts of the Electronic Health Records (EHR) belong to medical devices. In Finland, technology related patient safety incidents have been studied in a hospital district's or regulatory authority's registers [1] but rarely comprising all medical device incidents [2].

Objectives:

We aimed to assess frequencies of top ten medical device incidents reported by professional users into the nationwide medical device incident database at Finnish Medicines Agency (Fimea), the regulatory authority responsible for incident repository.

Methods:

Professional users report medical device incidents to Fimea via email, fax, by post or in cases of emergency, by telephone. The incident reports from professional users contain data on user and affiliation, the medical device concerned in detail, type and severity of harm and additional device details (e.g., device maintenance, etc.). As part of the Prime Minister's Office development project [3], we analyzed professional users' medical device incident reporting data reported between January 1, 2014 and August 10, 2021. We processed these incident registry data according to the European general data protection regulations (GDPR).

Results:

Our study material consisted of 5,897 medical device incident reports from January 2014 to August 2021. Ten most often reported medical device incident categories made up to 29.3% (1,725/5,897) of all incidents reported. Of the ten most often reported categories, EHR had the highest number of reports (n=332; 5.6%), followed by hip artificial joint (n=294; 5.0%) and patient bed (n=202; 3.4%). Micro implant (n= 180; 3.1%) and imaging device (n=175; 3.0%) were the next two categories. Patient lifting device (n=133; 2.3%), CT scanning device (n=118, 2.0%), Glucose sensor (n=108; 1.8%), Infusion pump (n=92;1.6%), and native x-ray device (N=91;1.5%) were the others among the top ten devices.

Conclusions:

In Finland, the ten most frequently reported devices consisted almost 30% of all incident reports, of which EHRs were the most frequent. Healthcare service providers use various EHR systems. Standardization of data structures, classifications and codes are inadequate. User interfaces are suboptimal for daily use, and systematic user education is a challenge [4]. Finland has introduced national, centralized, shared, integrated and interoperable electronic data system services for standardization and interoperability [5]. Further analyses are required to identify the root causes of reported medical device incidents.

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Implement it! Investigating implementation of patient safety interventions in primary and specialised health care: A multimethod study in progress.

Friday, 30th September - 10:15: Oral presentation 9 Quality improvement research (Rydbergsalen) - Oral

Dr. Jonas Torp Ohlsen¹, Prof. Miriam Hartveit², Dr. Hilde Valen Wæhle¹, Prof. Stig Harthug¹, Prof. Eirik Søfteland¹

1. Haukeland University Hospital, Bergen, 2. Helse Fonna HF and University of Bergen

Introduction: A vast majority of patient harm could be avoided or limited if implementation of evidence-based patient safety interventions were more successful. Results of implementation efforts vary related to compliance to guidelines, penetration and sustainability, causing limited return of investments by health services, hence hindering provision of high-quality health care. This problem is general across fields of medicine and health service levels, still much of implementation knowledge is developed in the context of hospital units. We need more knowledge on cooperative implementation, involving cooperating partners.

Objectives: To improve implementation success by developing a model for systematic implementation support across all levels of health care. We will investigate how implementation of patient safety intervention-bundles in primary and secondary health care settings can be improved. By studying implementation of antibiotics stewardship programs (ASP), rapid response systems (RRS) to detect deteriorating patients, and medication reconciliation (MR), we aim to develop and further test a model for successful implementation.

Methods: A multimethod stepwise study design; 1) a scoping literature review of implementation strategies and factors as reported on ASP, RRS and MR implementations. Review findings will be further elaborated employing qualitative methods and observational studies using validated surveys to investigate actual care providers' experiences in implementation efforts. 2) developing a generic model for implementation support and 3) testing the model for its impact on implementation outcomes in a controlled trial.

Present results: We are conducting a scoping review (step 1) and expect to continue to step 2 by autumn 2022.

Funding: Norwegian Research Council (12 mill NOK/1.2 mill Euro for four years)

Cooperation: The research group represents Helse Bergen Health Trust, Helse Fonna Health Trust, Patient and user panel for research Helse Fonna Health Trust, Department of Global Public Health and Primary Care, University of Bergen, Department of Primary Care, University of Oslo University of Oslo, King's College and Karolinska Institutet.

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Implementation through translation: translation work in the implementation of quality improvement collaboratives

Friday, 30th September - 10:31: Oral presentation 9 Quality improvement research (Rydbergsalen) - Oral

Ms. Kathrine Carstensen¹, Ms. Anne Mette Kjeldsen², Ms. Stina Lou¹, Ms. Camilla Palmhøj Nielsen¹

1. DEFACTUM, Public Health and Health Services Research, Central Denmark Region, Aarhus, 2. Department of Political Science, Aarhus University, Aarhus

Introduction

Quality improvement collaboratives (QICs) are used extensively to implement quality improvement in health care and current research is demonstrating positive yet contradictory evidence. To interpret effect results and determine replicability of the studies showing positive effects, more research in QIC implementation is needed. Particularly, there is a need for illuminating the dynamics of QIC implementation, the context dependence of intervention effects, and the translation processes embedded in the local QIC implementation.

Objectives

Using Scandinavian institutionalist translation theory as theoretical framework, this study aims to make two contributions. First, we provide insights into the dynamics of the translation processes inherent in QIC implementation. Second, we discuss the implications of the translation processes as experienced by participating actors.

Methods

We used empirical data from a qualitative case study investigating the implementation of QICs as an approach to quality improvement within a national Danish health care quality programme. We included two diverse QICs to allow for exploration of the significance of organisational complexity for the translation processes. Data comprised 39 qualitative interviews with stakeholders, professionals and managers involved in QIC implementation, participant observation of 32 meetings concerning QIC implementation at the national, regional and local levels, and collection of documentary material about the QICs and their implementation process. For the analysis of data, we used theoretically informed thematic analysis. According to Danish legislation, qualitative studies like the present do not require approval from the Committee on Health Research Ethics. The study was however approved by the register of public research projects in Central Denmark Region, thereby complying with data protection legislation. Furthermore, all participants were thoroughly informed about the study and informed consent was obtained prior to all observations and interviews. In the analysis and presentation of the collected data, all participating sites and individual participants were anonymised.

Results

Translation was an inherent part of QIC implementation. Key actors at different organisational levels engaged in translation of their implementation roles, and of the QIC content and methodology. They drew on different translation strategies and practices that mainly materialised as kinds of modification, e.g., integrating the QIC methodology with existing local methodologies for quality improvement or selecting among and prioritising among the QIC content. There were fewer examples of radical and copying practices. The translations were motivated by deliberate, strategic and pragmatic rationales, such as ensuring the largest possible outcome and minimizing resource. The rationales were contingent on features of the actors' organisational contexts, including: previous and concurrent improvement projects; existing methods and tools for quality improvement; available resources, time and competencies; and management priorities and organisational needs. Furthermore, the transformability and translatability of the QICs played a role, e.g., experienced leeway for local and regional adjustments of implementation roles, and of QIC content and methodology.

Conclusion

The findings point to a transformative power of translation, as different translations of the QICs lead to various

regional and local QIC versions. Such complexity may contribute to explain contradictory QIC effects. Furthermore, the findings indicate that translation affects the outcomes of the implementation process and the QIC intervention. Translation may positively affect the institutionalisation of the QICs and creation of professional engagement, and negatively influence the QIC effects. We encourage future research to further examine the relationship between translation and both professional engagement and organisational institutionalisation and the achieved QIC effects.

Physicians participate in quality improvement work to a higher degree when they have designated time: a cross-sectional survey

Friday, 30th September - 10:47: Oral presentation 9 Quality improvement research (Rydbergsalen) - Oral

Dr. Ellen Deilkås¹, Dr. Karin Rø², Dr. Judith Rosta³, Dr. Fredrik Baathe³, Prof. Eirik Sjøfteland⁴, Dr. Åse Lexberg⁵, Prof. Olav RÅise⁶

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Introduction

Lack of physician involvement threatens the success and sustainability of quality improvement work (1-4). Quality improvement work is complex and depends on structures and processes, cooperation between multiple professions, power distribution and the cultures and values of an organization (5-8). Quality improvement work also requires the active participation of all healthcare professionals with contextual insight into the workplace that is to be improved (8, 9). Few studies have assessed physicians' interests and opportunities to be involved in quality improvement work. It is therefore important to do so, both in hospital and general practice.

Objectives

Aim was to determine the prevalence of physicians reporting active participation in quality improvement work and the prevalence reporting an interest (without participation) in quality improvement work. To understand the potential for improvement, we also needed to assess whether physicians' opportunity and designated time to participate in quality improvement work had an effect on their interest and active participation in quality improvement work. Our hypothesis was that designated time promotes participation in quality improvement work. This resonates with Donabedian's structure, process and outcome framework.

Methods

Cross-sectional postal survey on a representative sample of 2085 physicians in different job positions in Norway in 2019. The main outcome measured with four items were physicians' interest in, opportunities for, and active participation in quality improvement work.

Results

Response rate was 72.6% (1513 of 2085). A large proportion of physicians (85.7%) wanted to participate in quality improvement work, and 68.6% had actively done so in the last year. Physicians' active participation in quality improvement work was significantly related to the designated time for quality improvement work in their work schedule ($p < 0.001$). Only 16.7% reported designated time in their work schedule for participation in quality improvement work. Among those with designated time 86.6 % participated in quality improvement work, while 63.7% among those without designated time participated.

Conclusion

Physicians want to participate in quality improvement work. They participate to a higher degree when they have designated time in their work schedule. Leaders can increase physicians' participation in quality improvement work, by ensuring that time for this is part of their work schedule.

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Collaboratively seeking to improve contraceptive counselling at the time of an abortion

Friday, 30th September - 11:03: Oral presentation 9 Quality improvement research (Rydbergsalen) - Oral

Dr. Helena Kilander¹, Prof. Jan Brynhildsen², Dr. Siw Alehagen³, Dr. Johan Thor¹

1. Jönköping University, 2. Region Örebro län, Örebro University, 3. Department of Health, Medicine and Caring Sciences, Linköping University, Linköping

Title

Collaboratively seeking to improve contraceptive counselling at the time of an abortion

Introduction

Many women experience difficulties in finding a contraceptive method that suits them, reflected in increasing rates of repeat abortions. Sweden has one of the highest recorded rates of repeat abortions (45%) in western Europe. There is a gap between clinical practice and evidence for how to prevent repeat unintended pregnancies, including counselling and better use of Long acting reversible contraception (LARC).

Objective

To describe and evaluate a Quality Improvement Collaborative (QIC) designed to enhance contraceptive services, with regard to changes in healthcare professionals' (HCPs') counselling in clinical practice, and in women's subsequent choice of, and access to, contraception.

Method

Three multi-professional teams involved in abortion services from three hospitals in Sweden, and two women with user experience, participated in the QIC during 2017. An interdisciplinary researcher group and an Improvement advisor developed, supported and studied the QIC. It employed the Breakthrough Collaborative model and promoted use of Plan-Do-Study-Act cycles, guided by a Driver diagram. The teams were introduced to four actionable primary drivers in the Driver diagram, based on previous findings in the project. Using a case study design; we collected and analysed both quantitative and qualitative data to describe and evaluate the QIC.

Results

The teams adopted shared QIC goals, including that 50% of women would start using LARC within 30 days after the abortion. They tested several evidence-based changes, informed by findings from previous studies in the project and by the two women's views. Participating healthcare professionals stated that they gained new competence in contraceptive counselling in the context of abortion. They also appreciated development of a new feedback system measuring women's post abortion contraception choices.

Nearly 90 % of the women chose effective hormonal contraception or LARC at the time of the abortion. While 60 % of the women chose LARC during the QIC, only 20-40 % received it within 30 days after the abortion due to operational and capacity challenges. Timely access to LARC post abortion thus remains a challenge in present setting.

Conclusion

The QIC, integrating user feedback, helped HCPs to expand capacity in providing contraceptive services in the context of an abortion. Fast track and appropriate access to LARC remains a challenge in the present setting.

Examining the pace of change in contraceptive practices in abortion services - a follow-up case study of a quality improvement collaborative (QIC).

Friday, 30th September - 11:19: Oral presentation 9 Quality improvement research (Rydbergsalen) - Oral

Dr. Helena Kilander¹, Prof. Jan Brynhildsen², Dr. Siw Alehagen³, Dr. Johan Thor⁴

1. Department of Health, Medicine and Caring Sciences, Linköping University, Linköping, Sweden and Department of Obstetrics and Gynaecology, Region Jönköping County, Eksjö, Sweden, 2. Department of Biomedical and Clinical Sciences, Linköping University, Linköping, Sweden and Department of Obstetrics and Gynecology, Faculty of Medicine and Health, Örebro University, Linköping, Sweden., 3. Department of Health, Medicine and Caring Sciences, Linköping University, Linköping, 4. Jönköping Academy for Improvement of Health and Welfare, Jönköping University, Jönköping.

Introduction

Repeat induced abortions are increasing in Sweden as in the UK, despite an increased understanding in women's needs for respectful contraceptive counselling and fast track to long acting reversible contraception (LARC). There is growing support for the benefits of Quality Improvement Collaborative (QIC) and of user involvement when improving women health care services. Few studies have evaluated the longer-term impact of QICs, particularly on contraceptive services in abortion care.

Objectives

Drawing on Batalden and Davidoff's definition, this study aimed to evaluate the evolution and impact of QIC changes in regard to patient outcomes, system performance, and professional development over 12 months after a QIC designed to enhance contraceptive services in the context of abortion.

Methods

This is a 12 month follow-up of a previous case study (abstract 1) regarding the time after a QIC, performed in abortion services at three hospitals in Sweden. Using a case-study design, we integrated qualitative data with quantitative data regarding the monthly proportion of women initiating LARC, analysed in statistical control charts from before the QIC up until 12 months after its conclusion.

Results

System performance and patient outcomes

Two teams increased the average proportion of women who initiated LARC within 30 days postabortion in the 12 months after the QIC; Team A 16–25%; Team B 20–34%. Team C succeeded more than 50% in individual months but not constantly in the Post-QIC period.

System performance and professional development

All teams reported improved system performance and professional development, over the post-QIC period. Participating HCPs reported continued focus on how to create trustful relationships when counseling women. They described a sense of meaningfulness and confidence regarding improving contraceptive services. They also reported experiencing better team work, improved support from leaders and better impact on organizing the abortion and contraceptive services after the QIC.

Conclusions

A QIC can enhance contraceptive services at the time of an abortion. The timeliness of women's access to LARC improved over the 12 months post-QIC. It took time beyond the QIC for the teams to integrate better ways of working into regular practice, reflecting the complex nature of clinical practice and contemporary health systems. QIC teams improved patient care, system performance in women's access to LARC, and HCPs' development.

Healthcare professionals' experiences of being observed regarding hygiene routines: the Hawthorne effect in vascular surgery

Friday, 30th September - 11:35: Oral presentation 9 Quality improvement research (Rydbergsalen) - Oral

Dr. Francis Rezk¹, **Dr. Margaretha Stenmarker**², **Prof. Stefan Acosta**³, **Ms. Karoline Johansson**⁴, **Dr. Malin Bengnér**⁵, **Dr. Håkan Åstrand**⁶, **Prof. Ann-Christine Andersson**⁷

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Background: The Hawthorne Effect is the change in behaviour by subjects due to their awareness of being observed and is evident in both research and clinical settings as a result of various forms of observation. When the Hawthorne effect exists, it is short-lived, and likely leads to increased productivity, compliance, or adherence to standard protocols. This study is a qualitative component of an ongoing multicentre study, examining the role of Incisional Negative Pressure Wound Therapy after vascular surgery (INVIPS Trial). Here we examine the factors that influence hygiene and the role of the Hawthorne effect on the adherence of healthcare professionals to standard hygiene precautions.

Methods: This is a qualitative interview study, investigating how healthcare professionals perceive the observation regarding hygiene routines and their compliance with them. Seven semi-structured focus group interviews were conducted, each interview included a different staff category and one individual interview with a nurse from the Department for Communicable Disease Control. Additionally, a structured questionnaire interview was performed with environmental services staff. The results were analysed based on the inductive qualitative content analysis approach.

Results: The analysis revealed four themes and 12 subthemes. Communication and hindering hierarchy were found to be crucial. Healthcare professionals sought more personal and direct feedback. All participants believed that there were routines that should be adhered to but did not know where to find information on them. Staff in the operating theatre were most meticulous in adhering to standard hygiene precautions. The need to give observers a clear mandate and support their work was identified. The staff had different opinions concerning the patient's awareness of the importance of hygiene following surgery. The INVIPS Trial had mediated the Hawthorne effect.

Conclusion: The results of this study indicate that the themes identified, encompassing communication, behaviour, rules, and routines, and work environment, influence the adherence of healthcare professionals to standard precautions to a considerable extent of which many factors could be mediated by a Hawthorne effect. It is important that managers within the healthcare system put into place an improved and sustainable hygiene care to reduce the rate of

Continuity of care through the chronic care trajectory –patients, familycarers and professionals perspective

Friday, 30th September - 13:00: Oral presentations 10 General quality (Rydbergsalen) - Oral

Mrs. Linda Ljungholm ¹, Dr. Charlotte Klinga ², Dr. Anette Edin-Liljegren ³, Prof. Mirjam Ekstedt ¹

1. Linneaus university, 2. Karolinska Institutet, 3. Umeå university

Introduction: Healthcare delivery designed for single diseases are poorly fit for patients with chronic diseases. Safety risks identified in the chronic care trajectory concern gaps in communication and information transfer, poorly coordinated or limited access to care, often associated with wrong diagnoses, omitted or inappropriate treatments, and adverse drug events. (1). Continuity of care, meaning meeting the same physician or a team of professionals, (2) is a hallmark of quality, safety, and efficiency in healthcare. Continuity of care can increase safety in healthcare by reducing risks of adverse events such as drug interactions, duplications of drugs and side effects, and may also improve communication and documentation.

Objectives: The aim of the studies was twofold: 1) to describe essential aspects of care continuity from the perspectives of persons with complex care needs and their family carers; 2) to investigate prerequisites for how continuity of care can be realized for people with complex care needs from an interprofessional perspective.

Method: Sixteen patients with one or more chronic diseases, 12 family carers and 34 healthcare professionals from different disciplines (nurses, physicians, physiotherapists, social workers, nurse assistants etc.) and different care providers (specialized, primary and municipal care) were interviewed. The two aims are analysed with constructed grounded theory and thematic analysis respectively Results from the two analyses has been compared with respect to similarities and differences between patients/family carers respectively healthcare professionals experiences of continuity of care.

Result: The two studies show similarities in both patients, family carers and healthcare professional's experiences. To gain continuity of care all parties believe that it is important to spend time building relationships and understanding for each other. Patients often move between care environments, which increases the requirement that the information available on the patient must follow the patient's care trajectory through common documentation systems to facilitate the transfer of information and increase transparency of what other care providers have done. For patients to understand the information it needs to be tailored so they know what 's going to happen. When relational continuity was lacking trust in care was founded on getting the same information regardless of who performs the care. Common goals and cross-disciplinary teams working together across borders and being able to follow the patient's care trajectory through joint care planning, improves team- and relational continuity. Clear roles and multi- professional collaboration, knowing who is responsible for the care, availability and flexibility based on patients' needs further highlight the importance of continuity for patient safety.

Conclusion: Patients, family carers, and healthcare professional's perceptions of care continuity are associated with the experience of a safe and secure care where access to information about the patient is available along the patient's care trajectory, and where time and space create trust and a mutual understanding, as well as interprofessional collaborations across borders. These results can provide an understanding of how continuity is experienced and constructed

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The National Medication Safety Programme of Community Pharmacies in Finland

Friday, 30th September - 13:16: Oral presentations 10 General quality (Rydbergsalen) - Oral

Ms. Tiina Koskenkorva¹, Ms. Emilia Mäkinen², Ms. Marianne Kuusisto³, Ms. Henna Kyllönen¹, Dr. Anna Schoultz⁴, Prof. Marja Airaksinen², Prof. Anna-Riia Holmström², Dr. Charlotta Sandler¹

1. The Association of Finnish Pharmacies, 2. University of Helsinki, 3. Finnish Centre for Client and Patient Safety, 4. Punavuori pharmacy, Helsinki

Introduction: Medication errors are a leading cause of patient safety issues in health care systems across the world¹. A little attention has been paid to medication safety research and risk management of medication use process in outpatient care, even though most of medication is carried out at home and in outpatient settings. Finnish community pharmacies are responsible for outpatient medicine supply, distribution and importantly, ensuring safe and rational use of medicines in Finland. Pharmacists working in community pharmacies detect and resolve medication errors that have occurred in different stages of medication use process². Until now the information of medication errors and risks recognized in pharmacies, has not been systematically documented, communicated or utilized in development of safe medication practices and procedures within and between health and social care organizations regionally.

Objectives: The aim of the National Medication Safety Programme of Community Pharmacies (2021-2026) is to support safe medication treatment pathways of Finnish patients. The programme promotes collaboration between health and social care providers and community pharmacies.

Methods: The present report describes the National Medication Safety Programme of Community Pharmacies as a national intervention directed to community pharmacies. We also introduce the theoretical framework of the programme and the action plan for 2021-2022. Systematic description of the programme was generated by using a tool designed for programme evaluations (RADAR: Evaluation Planning Tool)³.

The programme is a joint effort between Finnish Centre for Client and Patient Safety and the Association of Finnish Pharmacies. Other stakeholders are University of Helsinki, Pharmaceutical Learning Centre and Awanic Oy.

Results: This report describes the first two-year action plan (2021–2022) of the National Medication Safety Program of Community Pharmacies.

The action plan 2021–2022 consists of four actions to be implemented in parallel:

1. Introducing a patient safety incident reporting system (HaiPro) to Finnish community pharmacies. HaiPro is the most widely used safety incident reporting tool in Finnish health and social care organisations. Common incident reporting system enables reporting of medication incident and risk information between community pharmacies and health and social care organisations.
2. Developing medication safety culture in community pharmacies and Finnish community pharmacists' competence in medication risk management.
3. Coordinating collaboration in a network of community pharmacies and between regional health and social care organisations and community pharmacies.
4. Creating a research strategy (2023–2026) for the programme.

Conclusion: Improving medication safety in outpatient care requires national guidelines, regional safe medication practices and collaboration between all health care providers, including community pharmacies.

To our knowledge the National Medication Safety Programme of Community Pharmacies in Finland is a unique project to promote safer medication for outpatients. Research on the importance of the programme in improving medication safety in outpatient care in the future is needed.

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Quality aspects within hospital foodservice: A scoping review

Friday, 30th September - 13:32: Oral presentations 10 General quality (Rydbergsalen) - Oral

Mrs. Emma Wilandh ¹, Dr. Malin Skinnars Josefsson ¹, Dr. Christine Persson Osowski ², Prof. Ylva Mattsson Sydner ¹

1. Uppsala University, 2. Mälardalen University

Introduction

Hospital foodservice has been criticized for many years and for various reasons, foremost for not fulfilling the nutritional needs of vulnerable patients. Based on this, a variety of research and development projects have been carried out to improve different quality aspects within this field. However, there is no overall picture of what is considered as quality aspects in the multidimensional area of foodservice, therefore we suggest that this would be possible to achieve by conducting a scoping review.

Objective

The aim of the present study is to identify, analyze and classify quality aspects within hospital foodservice to patients.

Methods

Scoping reviews are often used within healthcare research to identify and synthesize relevant literature within a field, usually covering broad topics. In the present study, searches were conducted in four online databases, including CINAHL, PubMed, Scopus, and Web of Science, with MeSH terms and terms in title/abstract in three search strings. Articles that were published 2000-2021 were included. A modified version of Batalden and Davidoff's model was used for classification of the identified and analyzed quality aspects according to different domains: *system performance*, *professional development* and *patient*, as well as an overarching *leadership* required to coordinate them.

Results

The literature search generated 3514 hits and a final inclusion of 96 articles. Most common were quantitative observational studies and articles from English speaking countries dominated by Australia and United Kingdom. The classification of quality aspects showed that a majority of the publications focused on aspects related to the domain *system performance*, including for example flexible systems for meal ordering and delivery. Moreover, systems for structures and routines, for instance standards, recommendations and feedback were often included. Quality aspects in relation to offered meals on the menu systems were also common, for example a broad variety of food and meals, food items high in energy and protein, fortified food, in-between meals and enhancement of sensory aspects of meals. Quality aspects related to the domain *professional development* were foremost staff education and training. Additionally, securing of adequate competence and presence of interprofessional teamwork were emphasized. Identified quality aspects classified to the *patient* domain were personalized service, meeting patient requirements and providing information and guidance to patients. Patients' possibility to choose when, what and how much to eat was another identified quality aspect within this domain. Few quality aspects were found that pertained to leadership, of which most were related to initiation of quality improvements. However, supportive and engaged leadership was identified as an important aspect for future work.

Conclusion

This scoping review showed that quality aspects within hospital foodservice in the scientific literature ranged from a structural level to personalized patient service. Most quality aspects and quality improvement work described in the included articles were about system performance, such as specific systems for order and delivery of meals, systems for structures and systems for menus. On the other hand, leadership, which is a more abstract feature, was only included to a limited extent. This review may serve as a knowledge base in foodservice

management for quality improvement and development of best practice. However, more research is needed in order to in depth understand how the multidimensional quality aspects are used and in what way they are intertwined.

Conflict of interest: None

Geographic variation in hip fracture incidence and care-processes: a comparison between Ireland and Denmark

Friday, 30th September - 13:00: Oral presentations 11 Quality improvement... (Konferensrum K11) - Oral

Dr. Mary Walsh¹, Prof. Jan Sørensen², Prof. Cathrine Blake¹, Prof. Soeren Paaske Johnsen³, Dr. Pia Kristensen⁴

1. UCD School of Public Health, Physiotherapy and Sport Science, 2. Healthcare Outcomes Research Centre, 3. Aalborg University Hospital – Psychiatry. Department of Psychiatry. Denmark, 4. Aarhus University

Introduction: There is generally low variation across the rate of hip fracture surgery within developed countries. Large variations have been found however in the type and quality of care received after hip fracture. Ireland and Denmark both have established hip fracture audits that drive quality improvement nationally. Comparisons between the countries would allow for international benchmarking of practice. However, different definitions, inclusion criteria, and patient demographics pose a challenge.

Aim: To explore geographic variation of care quality in Ireland and in Denmark and to facilitate between-country comparisons of rates and practice by aligning definitions and methods.

Method: Patients aged ≥65 years treated surgically for hip fracture in Ireland from 2017 to 2020 and in Denmark from 2016 to 2017 were included from the Irish Hip Fracture Database (n=12,904) and the Danish Multidisciplinary Hip Fracture Registry (n=12,924). The rate of hip fracture surgery per 1,000 older persons (>64 years) and the proportion of patients achieving 14 care indicators was calculated with 95% confidence intervals, standardized for age-group and sex against denominators from the Irish census (2016) and dataset. Geographic variation was explored based on hospital area (5 regions in Denmark, 6 Hospital Groups in Ireland). Systematic Components of Variation (SCV) were calculated for each indicator and country.

Results: The average annual standardized incidence of hip fracture surgery per 1,000 older population was 4.7 in Ireland and 5.7 in Denmark. There were notably different patterns of intracapsular fracture repair (Hemiarthroplasty: Ireland=85%, Denmark=52%) and very high variation for total hip arthroplasties (THA) in both countries (SCV Ireland=10.6, Denmark=97.9). Ireland achieved lower rates of surgery within 36 hours (59% versus 84%), nutritional assessment (27% versus 84%), and pre-discharge mobility recording (52% versus 92%), with latter measures showing high within-country variation (SCV=19 and 25, respectively). Ireland showed longer hospital stays (median 12 versus 7 days), but lower 7-day (1.0% versus 3.1%) and 14-day (2.0% versus 5.5%) mortality.

Conclusion: Ireland and Denmark have similar hip fracture incidence, but different patterns of intracapsular fracture repair. High variation in THA provision needs further exploration in both countries. Ireland should improve care in relation to early surgery, mobility, and nutrition assessment. Between-country differences in length of stay and mortality require further investigation.

“Increased social disparity in patients with Chronic Obstructive Pulmonary Disease during the COVID-19 pandemic - a Danish nationwide study”

Friday, 30th September - 13:16: Oral presentations 11 Quality improvement... (Konferensrum K11) - Oral

Ms. Anne Mette Falstie-Jensen¹, Dr. Tina Olesen¹, Ms. Nathalie Lindgaard Petersen¹, Dr. Anders Løkke Ottesen², Dr. Henry Jensen¹

1. The Danish Clinical Quality Program - National Clinical Registries (RKKP), Denmark, 2. Department of Pulmonary Medicine, Vejle Hospital, Denmark

Introduction

During the COVID-19 pandemic, a decrease in outpatients' contacts and admissions was observed among patients with COPD in Denmark. However, little is known to whether the decrease have had a greater impact on patients with lower socioeconomic status, consequently, but unintendedly, increasing disparity.

Objective

The aim of the study was to examine change in characteristics and clinical outcomes among in- and outpatients with COPD during the COVID-19 pandemic in comparison with previous years.

Method

The Danish Register of Chronic Obstructive Pulmonary disease (DrCOPD) was used to identify patients with hospital contacts for COPD from 01 January 2015 to 15 December 2021. Socio-economic characteristics included age, sex, marital status, ethnicity, educational level, income, comorbidity level, and smoking status. Clinical characteristics included lung function, MRC dyspnoea scale, number of exacerbations, and BMI, only available for outpatients. Clinical outcomes comprised of number of contacts for outpatients' and NIV-treatment, number of admissions and acute re-admissions, length of hospital stay (LOS) and 30-days mortality for inpatients.

We defined six time periods in accordance with the governmental responses to the COVID-19 pandemic in Denmark, as follows: a pre-pandemic period (1/1/2015 to 31/12/2020), a pre-lockdown period (1/2-10/3/2020) and three COVID-19 pandemic periods: pre-lockdown period (1/2-10/3/2020), 1st lockdown (11/3-15/4/2020), 1st re-opening (16/4-15/5/2020), 2nd lockdown (16/12/2020 to 27/2/2021), and 2nd re-opening (28/2/2021-15/12/2021). First we analysed change in socio-economic and clinical characteristics during the COVID-19-pandemic compared with the pre-pandemic period using Chi-square test. For characteristics with significant change, we used a generalised linear model with log link for the Poisson family with robust standard errors to estimate prevalence ratios and 95% confidence intervals comparing the periods after vs before the pandemic began in Denmark (11 Mar2020). Second, clinical outcomes among in- and outpatients were compared by the specific periods of the pandemic using a similar model.

Results (Change in characteristics, only)

In total 124,257 outpatients were included, 97,879 before and 26,378 during the pandemic. During the pandemic, outpatients were slightly older (median 72 vs 71 years, $p<0.001$), more likely to be married ($p<0.001$), be higher educated ($p<0.001$), or to have a higher income ($p<0.001$). Outpatients more often consulted virtually (30.8% during the pandemic vs 17.8% before the pandemic, $p<0.001$). Outpatients also had less exacerbations during the pandemic than before ($p<0.001$).

In total 149,879 inpatients were included, 123,370 before and 26,509 during the pandemic. During the pandemic, inpatients were slightly older (median 75 vs 74 years, $p<0.01$), more likely to be married ($p<0.01$), to have intermediate educational level ($p<0.01$), or to have a higher income ($p<0.01$). Inpatients were more often admitted acutely (98.9% vs 94.5%, $p<0.01$), while the LOS was slightly shorter (median hours 74.4 vs 75.1, $p<0.01$). There were fewer acute re-admissions during the pandemic (17.1% vs 18.4%, $p<0.01$) while more patients died within 30 days after admission (11.0% to 12.3%, $p<0.01$).

The adjusted risk estimates and the results related to clinical outcomes and are in preparation and will be presented at the conference.

Conclusion

Initial analyses suggest that both out- and inpatients during the covid-19 pandemic are older and better socio-economical affluent than before. Also, that the inpatients could be more prone to die within 30 days of admission. The planned analyses will establish whether the pandemic has had an unwarranted negative consequence for patients less socioeconomically affluent.

Characteristics of patients marginalised from the labour marked after a hospital contact for back or neck pain with or without radiculopathy - a Danish nationwide study

Friday, 30th September - 13:32: Oral presentations 11 Quality improvement... (Konferensrum K11) - Oral

Mr. Martin Bruhn¹, Prof. Berit Schiøttz-Christensen², Mr. Mikkel Mylius Rasmussen³, Ms. Anne Mette Falstie-Jensen¹

1. The Danish Clinical Quality Program - National Clinical Registries (RKKP), Denmark, 2. Department of Regional Health Research, University of Southern Denmark, J.B. Winsløws Vej 19, 3, 5000, Odense C, Denmark., 3. Department of Neurosurgery, Aarhus University Hospital, Aarhus N, Denmark.

Introduction

The Danish Spine Database (DaRD) use evidence-based indicators to monitor quality of care among all patients with new-onset back or neck pain with or without radiculopathy treated at any Danish hospital. One of the indicators reflect labour market attachment, because high-quality, evidence-based treatment are to reduces disability and increase activity and participation including maintaining the ability to attend work. However, the first computation revealed that 19% of the patients in 2018 experienced a decline in labour market attachment a year after their diagnosis. Little is known about whether this change in connection with the labour market is associated with specific characteristics that can advantageously be the focus of intervention so that this change is avoided

Objective

The aim of the study was to examine the distinct characteristics of patients with back pain that experienced a decline in labour market attachment.

Method

DaRD was used to identify patients between 30 to 60 years that were fully employed a year prior to their diagnosis from January 2018 to January 2021. Fully employed was equivalent to 30 workhours or more and derived from the Danish Register for Evaluation of Marginalization (DREAM).

Employment outcome was fully employed one year after the diagnosis. For patients not fully employed one year after, employment rates were further divided into: Benefit (zero hours including a benefit), 0 hours (zero hours with no benefit), 0-9 hours, 10-19 hours and 20-29 hours.

Clinical characteristics included the patients' primary diagnosis and defined in three categories: Neck (M50, S13), Low back pain (M42, M43, M47, M48, M495, M51, M96) and Other (M54, M809, M99). Sociodemographic characteristics included age, and gender at time of their diagnosis. Age groups were divided into: 30-40 years, 41-50 years, and 51-60-years.

First we present descriptive statistic for employment outcome and subsequently employment rates for patients not fully employed one year after. Second, we examined the difference in clinical and sociodemographic characteristics according to employment outcome. By September further analysis looking into employment rate stratified by diagnosis category, age-groups, and gender will be presented.

Results

In total 78,307 patients were included, of which 16 % were diagnosed neck pain, 35 % with low back pain and 49 % with other, respectively. Less patients were aged 30-40 year (26%), and 51% were male.

Of the included patients, 22,254 patients (26%) declined from full employment prior to their diagnoses to working less than 30 hours one year after their diagnosis. Of these 22,254 patients, 68 % were completely disassociated from the labour market, either being on a benefit (23 pct.) or registered with zero working hours (45 pct.). For the rest, 18% had reduced their workhours to 20-29, 7% to 10-19 workhours and 7% to less than 9 hours.

Of the patients diagnosed with neck pain, more patients maintained fully employed (77%) than patients diagnosed with low back pain or others (73% and 72%, respectively). Fewer younger patients (30-40 year) maintained fully employed (70%), than patients between 41-50 years and 51-60 years (76% and 74%, respectively). No difference was seen according to gender.

Conclusion

These preliminary data indicate that there are some interesting differences in characteristics, especially in regards to younger patients, that requires further analysis to understand and improve the quality indicators for patients with new-onset back or neck pain with or without radiculopathy.

Posters

Identifying arguments for implementing person-centredness as a quality improvement measure in homecare services. A literature review.

Thursday, 29th September - 09:45: Speed-poster presentations 1 (Rydbergsalen) - Poster

Mrs. Ingvild Idsøe-Jakobsen ¹

1. University of Stavanger, SHARE - Centre for Resilience in Healthcare

Introduction:

In recent years, person-centred care has become a key pillar high care quality. Literature shows that patient experience is positively associated with both clinical effectiveness and patient safety, and it is even claimed that empowerment and participation in healthcare must be considered as ends in themselves. There are diverse ways of conceptualizing person-centredness and therefore a need to better understand this diversity and their underlying arguments.

Objectives:

The objective of this literature review is to identify how person-centredness is presented as a quality improvement measure in homecare services. The research question guiding the literature review was:

What different perspectives of and arguments for person-centred care as a quality improvement measure in homecare services are prominent in recent research literature?

Methods:

The study was designed as a literature review. Search words included home care, quality, quality improvement, person centredness and a diverse combination of related words. The literature search was conducted in January 2022, using the electronic databases CINAHL, Academic Search Premiere and Scopus.

Studies exploring the description or definition of person-centred care in homecare services were included. Articles included had to be in full text, in English and published in a peer reviewed journal. Start year in the search was set to 2010. Articles were excluded if they included several contexts, were anecdotal or descriptive reports, had an economic orientation solely, or were related to a specific condition or specific illness treatment.

The included studies were analysed by using thematic analysis.

Results:

The review included 14 articles. The study designs varied from systematic reviews, literature synthesis and empirical qualitative studies. No study included involved the use of a control group or a randomised control trial.

The results identified a knowledge gap in terms of a clear perspective and emphasis on the patient's experience and empirical research on the correlation between person-centred care and achieved quality of the offered care.

Three categories of arguments were identified as described in the following:

1. Person-centredness as an efficient and economically favourable model

The literature emphasised the assumption that person-centredness in homecare services is more cost-effective, equitable and sustainable than the traditional biomedical mindset.

2. The justice and equality in person-centred care

There were few descriptions of why person-centred health care is chosen and justified by the homecare services and how it improves care quality. Furthermore, there was no available overview of the extent of person-centred healthcare within the homecare service.

3. Care as a mutual and respectful relationship between the care-receiver and the care-giver

It was emphasised in the majority of the studies that more research must be conducted with an implementation orientation to succeed in applying the model of person-centredness in practice. More research is needed on how person-centred care can be translated into homecare services and how nurses can be educated and trained in central abilities and tools in person-centred care.

Conclusion:

Summarised, the application of person-centred care in homecare seems to still be at the early stage of implementation. There is neither a shared set of concepts nor terms to easily guide homecare services when implementing person-centredness as an intended quality improvement measure.

Patterns of mortality risk among patients with substance use disorder: an opportunity for proactive patient safety?

Thursday, 29th September - 09:45: Speed-poster presentations 1 (Rydbergsalen) - Poster

Mr. Jakob Svensson¹, Dr. Per Becker¹, Dr. Johan Bergström¹, Dr. Martin Kåberg²

1. Division of Risk Management and Societal Safety, Lund University, Box 118, SE-22100 Lund, 2. Karolinska Institutet, Department of Global Public Health

Introduction:

Patients with substance use disorder (SUD) suffer from excess mortality compared to the overall population. However, studying patterns in patients revisiting healthcare provides an opportunity to detect risk factors for premature mortality in specific patients' groups. This paper is inspired by resilience engineering and detection of system drift into failure and see safety as an emergent property of everyday variability.

Objectives:

The aim of this study is to first identify patterns in death rate among patients with SUD visiting a psychiatric emergency ward, and then to explore whether this knowledge can be used as input to identify patients at risk and increase patient safety.

Methods:

Hospital visit data to a dependency ward were collected between 2010 and 2020 through anonymized medical records. The data included information about gender and age as well as the time of death. Participants were included if they had been diagnosed with mental and behavioral disorders due to psychoactive substance use, and the psychiatric taxonomy of ICD-10 was used to differentiate between types of substance use. The death rates for each year of age among the patients were analysed in relation to the base mortality rate for the Stockholm County during the same period. Pearson's Chi-squared test with Yates' continuity correction was used to test between binary categorical variables and the Kruskal-Wallis rank sum test was used to test between ordinal variables. Risk ratio was used to quantify the difference in mortality risk across binary categorical variables or between each step in ordinal variables. All statistical tests were two-sided with a 95% confidence interval and a minimum significance level of 0.05.

Results:

The male patients in the study group had 41.1-59.0% higher mortality risk than the female patients and the study revealed an average death rate of 0.14 among all patients during the study period. Although patients with an alcohol diagnosis constituted 73.66% of the cohort, having an opioids or sedative hypnotics diagnosis was clearly associated with the highest death rates; 29.4-51.7% and 46.7-74.4% higher mortality risk than without such diagnoses. The results also revealed that number of visits to the emergency ward as a critical risk factor. This was particularly pertinent for patients with an alcohol diagnosis, with rapid exacerbation of mortality risk already from the first visit to the highest mortality risk at around 18 visits.

Conclusion:

The results of this study demonstrate that data from visits to emergency wards for dependency disorder can be used to identify mortality risk factors, such as gender, age, type of diagnosis, number of diagnoses, particular combinations of diagnoses, and number of visits to the emergency ward. The results suggest more complex mechanisms that defy linear thinking and complicate the triage work in the psychiatric emergency wards.

A decision support tool that is integrated in the electronic medical records could allow clinicians to focus on the present visit of the patient, yet provide evidence-based input to the triaging of the patient's required level of care based on automated analysis of how his or her current diagnoses and demographics combine with the full medical history in relation to the overall patterns of mortality risk in the county.

Title: Translation and psychometric testing of the Norwegian version of the “Patients’ Perspectives of Surgical Safety Questionnaire” and patients’ perception of surgical safety.

Thursday, 29th September - 09:45: Speed-poster presentations 1 (Rydbergsalen) - Poster

Prof. Sissel Eikeland Husebo¹, Mrs. Mona Olden², Ms. Malinn Pedersen², Mr. Jan Porthun³, Mrs. Randi Ballangrud³

1. University of Stavanger, SHARE centre for Resilience in Healthcare, 2. Stavanger University Hospital, 3. Norwegian University of Science and Technology

Introduction: Patients’ perception of surgical safety is recognized as important in reducing medical errors in the surgical trajectory. However, there is still a need for culturally adapted and validated questionnaires that examine patient safety perceptions in surgery.

Objective: To translate the Patients’ Perspectives of Surgical Safety (PPSS) questionnaire into Norwegian and test it for psychometric properties. The further aim was to describe the patients’ perception of surgical safety in a Norwegian hospital.

Methods: A cross-sectional study was performed. A sample of 218 surgical patients in a university hospital in Norway completed the PPSS questionnaire. The original 20-items PPSS questionnaire was translated to Norwegian according to a model of translation-back translation. We assessed content validity via a pretest with 20 surgical patients. The psychometric analysis included item characteristics, and structural validity was evaluated by exploratory factor analysis (EFA). Internal consistency was calculated using Cronbach’s alpha. Descriptive statistics were conducted to describe respondents’ characteristics.

Results: We successfully translated and adapted the Norwegian PPSS questionnaire. The completion rate was 74 %. Missing values were less than 5% and all 20 items had a high skewness (≥ 15 %) ranging from 52.8% to 95.9%. The EFA yielded two significant factors that explained 45.15% of the variance. The Cronbach’s alpha for Factor 1 “Surgical safety” was 0.88 and for Factor 2 “Patient’s ID safety”, 0.82. Overall, most patients reported a high sense of surgical safety.

Conclusion: The first Norwegian version of the PPSS measuring surgical patients’ perception shows promising psychometric properties regarding structural validity and internal consistency. However, the PPSS should be further validated and tested in other populations of surgical patients. To improve the safety of the surgical trajectory, it is necessary to pay more attention to patients’ perceptions of surgical safety.

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Keywords: Surgical patients’ perspective, psychometric properties, surgical safety

Developing contraceptive services for immigrant women postpartum – a case study of a Quality Improvement Collaborative in Sweden

Thursday, 29th September - 09:45: Speed-poster presentations 1 (Rydbergsalen) - Poster

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Introduction

Contraception has a wide range of benefits for women's reproductive autonomy. Immigrant women have a higher risk of induced abortions and choose less effective contraceptives. Little is known of how interventions in counselling enable immigrant women's choice of contraception and reproductive autonomy. Maternal health care services offer a central opportunity to prevent unintended pregnancies, pregnancy related events and improve contraceptive services, especially among immigrants.

Objective

To improve contraceptive services for immigrant women postpartum, through health care professionals' (HCPs) counselling and a more effective choice of contraceptive methods.

Methods

Using an organisational case study design, we included both qualitative and quantitative data collection and analysis. Midwives at three maternal health care units in Sweden participated in a Quality Improvement Collaborative (QIC). In addition, two recently pregnant women and a couple provided user feedback. Data on women's choice of contraception at the postpartum visit were registered in the Swedish Pregnancy Register over 12 months.

Results

The participating midwives decided on the goal, to increase the proportion of immigrant women choosing an effective contraceptive method postpartum. Evidence-based changes in contraceptive services, supported by user feedback, were tested in clinical practice during the QIC. Among immigrant women, the choice of an effective contraception increased from 30% to 47% during the study period. Midwives reported that their counselling skills had enhanced during the QIC, and they found using a register valuable for evaluating women's choice of contraception.

Conclusions

Immigrant women's choice of an effective contraception postpartum increased during the QIC. The QIC, supported by a register and user feedback, helped midwives to improve their contraceptive services during the pregnancy and postpartum periods.

Studying patient harm by application of Global Trigger Tool in surgery

Thursday, 29th September - 09:45: Speed-poster presentations 1 (Rydbergsalen) - Poster

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Introduction

Since 2010 all health trusts in Norway have mapped patient harm on an executive level by doing retrospective record review according to the Global Trigger Tool (GTT), developed by the Institute for Healthcare Improvement (IHI). Admissions with harm detected varied from 16 % to 12 % from 2010 to 2018, but little is known about the variation of harm across hospital departments. To know levels of patient harm the Surgical Division implemented GTT- analysis on a department level in 2018. That year 14.478 of a total of 60.413 inpatient admissions at Akershus University Hospital, were in the Surgical Division.

Objectives

The objective was to evaluate the level of patient harm in the Surgical Division, and identify types and frequency of injuries in the various surgical patient groups, to reveal areas for improvement.

Methods

Patient harm was measured with GTT from January 2019 to June 2021, in six surgical specialties; breast/endocrine surgery (BES), urology (US), vascular- and noncardiac thoracic surgery (VTS) and gastroenterological surgery (GES) and ear-nose-throat (ENT). Ten patient records from each surgical specialty were randomly drawn biweekly and reviewed retrospectively by a GTT team. All GTT teams underwent standardized training in the GTT method for record viewing prior to the project, as recommended by IHI guidelines. The records were reviewed by each GTT team, identifying predefined triggers indicating that harm had occurred. If so, the harm was categorized by severity level and type of injury, as described by the Norwegian GTT manual and the National Coordinating Council for Medication Error Reporting and Prevention Index (NCC MERP). The physician of the team was consulted if harm was identified or in the case of disagreement of trigger findings between the two nurses of the team. The teams had monthly meetings, going over the results and discussing triggers and harm findings. The participants were encouraged to suggest additional surgical triggers for future exploration of specific surgical harms. As a result, the teams reviewed patient journals according to a locally adjusted GTT manual from January 2020.

Results

2220 records were reviewed according to the locally adjusted GTT-method. 529 injuries were identified ranging from severity type E to G, indicating a surgical injury rate of 23,8 %, and varied from 18,4 % in the BES patients, 13,2 % in the GES patients, 34,7 % in the US patients, 25,7 % in the VTS patients and 23,3 % in the ENT patients. Overall hospital rate of harm measured was 9,6 % in 2019 and 10% in 2020. The most frequent harm in the surgical patients was other infections, postoperative infections and urinary tract infections. At executive level the most frequent harm was urinary tract infection, medication event and any surgical complication.

Conclusion

The results confirm a higher proportion of harm in surgical patients compared to the general hospital population. The study also detected a variation in the pattern of harm across the different surgical specialties. Monthly follow up of all teams and results to avoid procedure drifting and ensure the reliability of the data collected, was paramount for the implementation and application of the GTT method on subspecialty populations.

Safe Medication of Elderly through development and evaluation of a new complex intervention targeted patient safety culture: Protocol of a mixed methods study with participatory approach (SAME study)

Thursday, 29th September - 09:45: Speed-poster presentations 1 (Rydbergsalen) - Poster

Ms. Marie Haase Juhl ¹

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Introduction

Medication safety of nursing home residents remains an unsolved challenge to overcome. High age, multimorbidity and polypharmacy are risk factors of medication errors that are highly prevalent within the population of nursing home residents. Medication management is delivered in complex settings under the responsibility of nursing home general practitioners, overall implicating multidisciplinary, cross-sectoral stakeholders. Evidence on effectiveness of interventions to improve medication safety in nursing homes is sparse and inconclusive. Yet, patient safety culture is acknowledged as a key link to patient safety. Using multifaceted safety-strategies and involving residents and their families could be beneficial.

Objectives

The primary objective of the “SAfe Medication of Elderly” (SAME) study is to develop and evaluate a complex intervention targeted patient safety culture in nursing homes to improve medication safety of nursing home residents.

Methods

We will apply an explorative, sequential mixed methods design with participatory approach- embedding a randomised controlled trial. Safety II Theory and the Medical Research Councils’ (MRC) guidelines on developing and evaluating complex interventions will guide this study. External expertise in co-creation will be implicated in the explorative and developmental process. Firstly, exploration of patient safety culture will be done through qualitative focus group interviews (Stage 1). Findings from Stage 1 will inform the development of a complex intervention in a multidisciplinary panel including stakeholders- and end-users of the medication management process (Stage 2). Thirdly, a randomised controlled trial to evaluate the intervention will be set at nursing homes within a larger Danish municipality (Stage 3). Currently, 36 nursing homes are registered within the Municipality of Aalborg. We expect a minimum of 22 nursing homes to be eligible for inclusion. Data on primary outcome will be collected at baseline before roll-out of the intervention and at 6-9 months follow-up according to intervention roll-out start at individual participating nursing homes.

Results – data analyses

Qualitative data will be collected through field-notes and audiotaping, transcribed, and analysed thematically. The primary outcome in the randomised controlled trial will be changes in mean scale score of SAQ-DK, the Danish “Safety Attitudes Questionnaire” (SAQ-DK) for use in nursing homes. An evaluation of the new complex intervention will be done through comparison of primary- and secondary outcomes between the intervention- and control-group of the trial at baseline and follow-up. Results will be presented as SAQ-DK mean scale scores and standard deviation in a multilevel 2-level-model. Finally, a mixed methods integration of qualitative and quantitative data on patient safety culture in nursing homes will be done.

Conclusion - perspectives

Through the SAME study we have the possibility of gaining new knowledge on patient safety culture in nursing homes including core elements via different datasets. This could lead to development of new theory on patient safety cultures in Danish nursing homes.

Parent experiences with a new complementary consultation for families with children with complex health complaints

Thursday, 29th September - 09:45: Speed-poster presentations 1 (Rydbergsalen) - Poster

Ms. Ragnhild Lygre¹

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Introduction:

Children with complex and compound health complaints are often referred by their general practitioner to several different departments in specialist healthcare for assessment and treatment(1). This may result in fragmented care, higher risks of medical errors, and sub-optimal health outcomes (2). Several studies recommend multimodal, individually adjusted treatment for complex health complaints based on the biopsychosocial model, however, few such treatment options have been evaluated (2). We have developed a complementary and structured consultation for children with complex health complaints, based on available research, user involvement and prestudies (1, 3, 4) systematically analyzing care pathways, referral patterns, diagnoses and experiences with healthcare for children with complex health complaints (5). The consultation aims for early identification and intervention for children with complex health complaints, and is based on a biopsychosocial and systemic model for working with somatizing children and their families, developed by Kozłowska (6).

Objectives:

To investigate parent experiences with a complementary consultation for children with complex health complaints.

Methods:

The study was preformed at Haukeland University Hospital in Bergen, Norway. Children with complex health complaints and their parents were offered the consultation, and the parents completed two questionnaires; before the consultation, concerning their experiences with previously received healthcare, and after the consultation, concerning their experience with the complementary consultation. Descriptive analyses in SPSS were used to describe the parent experiences. Approved by the Norwegian Regional Committee for Medical and Health Research Ethics (REC 2018/344) and registered on www.clinicaltrials.gov (ID NCT04652154). The parents consented orally via telephone to be include both themselves and their child in the study, and written consent was obtained from the parents right before the consultation.

Results:

Preliminary results indicate that the parents had mixed, both negative and positive, experiences with previously received healthcare, and more positive experiences with the complementary consultation.

Conclusion:

These preliminary results suggest that a complementary consultation is acceptable to parents with children with complex health complaints.

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Comorbidity in patients with hip fracture; current trends in prevalence and association with 30-day mortality – a population-based cohort study

Thursday, 29th September - 09:45: Speed-poster presentations 1 (Rydbergsalen) - Poster

Dr. Pia Kristensen¹, Dr. Thomas Johannesson Hjelholt¹, Mr. Morten Madsen¹, Prof. Alma Pedersen¹

1. Aarhus University

Introduction: Treatment of hip fracture patients is challenging, partly due to their high comorbidity burden. As a result of the aging population, we would expect an increasing trend in the comorbidity burden of hip fracture patients. It is unclear if different comorbidity indices are equally efficient in capturing comorbidity in hip fracture patients and if a difference in the association with postoperative mortality exists.

Aim: To examine the current trend in the prevalence of comorbidity measured with different indices and the magnitude of the association between comorbidity and 30-day mortality.

Method: From the Danish Multidisciplinary Hip Fracture Registry we included 31,443 hip fracture patients (2014-2018). As a measure of comorbidity we used two hospital diagnosis-based indices; the Charlson Comorbidity Index (CCI) and the Elixhauser Comorbidity Index, and a prescription-based index; RxRisk. We categorized patients as having no -, moderate -, severe - or very severe comorbidity. We calculated sex and age adjusted odds ratios (aORs) for 30-day mortality with 95% confidence intervals (CI).

Results: Measured with the CCI, 38% of the hip fracture population had no comorbidity, compared to 44% and 28% measured with the Elixhauser and RxRisk. The CCI measured 21% of the hip fracture population with very severe comorbidity, whereas Elixhauser and RxRisk measured 9% and 19%. The prevalence of comorbidity corresponding to the four categories; no, moderate, severe, and very severe comorbidity within each index, did not change over time from 2014 to 2018. Compared to patients with no comorbidity, patients with very severe comorbidity had aORs for 30-day mortality of 2.7 (CI: 2.4-2.9) using CCI, 2.6 (CI: 2.4-3.1) using Elixhauser, and 3.1 (CI: 2.7-3.4) using the RxRisk index.

Conclusion: More than 50% of hip fracture patients have one or more comorbidities at the time of hip fracture. The prevalence depends on the index used with RxRisk capturing most comorbidities. However, the prevalence of comorbidity was stable within each index during the study period. All indices had a dose-response association between comorbidity level and 30-day mortality, and the magnitude of the association was comparable between the three indices. All three methods for quantifying comorbidity seem robust for case-mix adjustment in mortality analysis among hip fracture patients, but considerable heterogeneity arises due to differences in the included diagnoses and the method utilized for capturing comorbidity (medication vs hospital diagnoses). Researchers are advised to consider these issues when deciding which method to use.

Shared decision making - Fashionable party dress or practical workwear? How does the specialist health service handle guidelines for shared decision making?

Thursday, 29th September - 09:45: Speed-poster presentations 1 (Rydbergsalen) - Poster

Mrs. Helena Paulsson Nilsen ¹

1. Sykehuset i Vestfold HF

Introduction

The dissertation is about the picture of shared decision making (SDM) that is presented in political guidelines, and how leaders in the specialist health service interpret and operationalize these guidelines based on their own organizational and clinical context.

Issue and research questions have emerged as a result of interest and the finding of an SDM - area where there is a lack of research..

Research in the field of SDM is relatively broad. Regarding patients' interest in SDM, research shows that patients want SDM but they worry that SDM will have a negative impact on the relationship with the doctor. Research on barriers and facilitating factors, the patient perspective shows need for a change of attitude, with better communication and a common understanding.

Clinicians' are positive to SDM. Especially in situations where clinicians themselves do not have specific preferences. Barriers to conduct SDM are linked to lack of time and competence and disagreement about when SDM should be used.

Implementation-research indicates that SDM-training measures must be directed at both patients and health personnel

It is difficult to make any conclusions about the effect of SDM since a wide variety of measurement tools have been used. However, it is interesting that there is little agreement between the clinician's and the patient's experience of completed SDM.

Research has been carried out which shows that SDM is complex and it is recommended that further research is related to SDM as part of a context

Problem statement:

How does the specialist health service handle guidelines for SDM?

Research questions:

What guidelines for SDM exist at a national level, a regional level and a local health trust level, and how is the concept presented?

How do managers at the operational level experience the concept of SDM?

How do leaders at the operational level operationalize the concept of SDM?

Method

The thesis' issue and research questions have laid the foundation for the dissertation's method.

There has been conducted a two-part case study with two different methodological approaches. There has been conducted a discourse analysis of guidelines for SDM and qualitative interviews with managers at different levels of responsibility and units in a hospital.

Results

The document analysis of political guidelines shows that SDM is presented as a principle and a universal solution to a multitude of health policy issues, in a context that is influenced by several different welfare policy approaches

The interview survey shows that SDM is perceived as a principle, more than a practice, and that the phenomenon is shaped, interpreted and given its content, according to the context in which it is to be practiced.

Conclusion

The dissertation supports existing research and concludes with that organizational theoretical factors, both in a structural-instrumental approach and an institutional approach, makes it difficult to operationalize the concept of SDM

The dissertation follows up research that shows that the health service is positive to SDM, but that it is not implemented in practice.

The dissertation also follows up the recommended area of research - How SDM is shaped by the context in which it is to be practiced.

Further research should continue to focus on this topic. Investigations should be conducted in a broader range of clinical contexts. In this way, further findings and connections can be uncovered that can form the basis for a theoretical generalization.

A new special competence in health care quality and patient safety for Finnish physicians and dentists

Friday, 30th September - 09:30: Speed-poster session 2 (Rydbergsalen) - Poster

Dr. Maiju Welling¹, Prof. Auvo Rauhala², Prof. Hanna Kuusisto³, Dr. Sanna-Maria Kivivuori⁴, Prof. Tuija Ikonen⁵

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Introduction:

Patient harm due to unsafe care is a major healthcare challenge. As the awareness of patient safety is growing among health care professionals, a need for patient safety specialists has emerged. As a supplement to the academic specialization, the Finnish Medical Association (FMA) has introduced a number of special competences. These relate to specific specialty areas in which particular skills are required. A program for special competence in health care quality and patient safety was proposed to the FMA in 2020.

Objective:

To describe the planning and execution of a program for special competence in health care quality and patient safety in Finland.

Methods:

Initiative of a special competence was made by a group of medical doctors with a professional career connected to patient safety. A working paper was produced to introduce the aim and content of the program, which initially concentrated on patient safety alone. A consultation process was organized among medical specialty societies and the proposal was then introduced to the professional division of the FMA. The proposal was edited based on the comments received. A major change was to extend the program to include all aspects of quality in health care. The Finnish Society for Patient and Client Safety's Medical Division and FMA's Department of Health Care Administrative and Chief Physicians agreed to act as supporting organizations for the new special competence. The final proposal of special competence in health care quality and patient safety was approved by the Board of the FMA in May 2020. Later, the Finnish Dental Association approved the special competence for its members, as well.

The contents of special competence follow the Canadian Medical Education Directives for Specialists (CanMEDS) roles as an expert. Achieved learning outcomes consist of nine requirements including legislation and administrative instructions, good practices, academic skills and networking, improvement projects, quality registries and metrics of patient safety. Furthermore, the management of patient reclamations and patient injuries, and learning from incident reports are included in the program. At least five years of working experience, of which two years with quality and patient safety related tasks is required.

Results:

After approval of the program, the two supporting organizations appointed a Competence Committee, consisting of 17 members and nine deputy members representing primary and secondary health care, private health care, and academy. The Committee has organized itself, decided the criteria for assessing competence, and prepared electronic forms for application and a website.

The application process contains three main steps. First, applicant fills up an application form and a portfolio with work history related to quality and patient safety assignments, and certificates about theoretical international, national and in-house education. Next, the Competence Committee evaluates whether the applicant has enough experience in quality and patient safety. If there are unmet learning outcomes, the Committee recommends additional learning or work experience. The Committee proposes those applicants who have fulfilled

the criteria to the FMA, which then issues the certificate in special competence.

The first application round ended in March 2022. We received 40 applications from experienced and competent applicants, among them the Committee members.

Conclusion:

The new special competence in quality of healthcare and patient safety has attracted a lot of interest and support. We recommend specific qualifications for all health care professional groups to increase the visibility of quality and patient safety expertise.

Cultural diversity in healthcare teams: an integrative review

Friday, 30th September - 09:30: Speed-poster session 2 (Rydbergsalen) - Poster

Prof. Timur Uman¹, Dr. Manuela Schmidt², Prof. Norbert Steigenberger³, Mr. Magnus Berndtson⁴

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Introduction

Teams are “an essential tool for constructing a more patient-centered, coordinated, and effective health care delivery” (1 p.3), and team-based work has been conceived as key to improving the quality of national health system, driven by the expectation that team-based work would improve delivery processes, patient outcomes and lower costs, compared to non-team approaches (2). Yet, healthcare teams face particular challenges, and adverse events in relation to team work account for up to a third of all incidents (3). Teams in healthcare are typically multi-professional and highly interdependent. They are expected to address complex issues through an integrative set of approaches, and they are often also diverse in other dimensions, such as regarding the team members’ cultural background. While cultural diversity offers a variety of benefits in relation to opportunities for patient care, based on the varied needs of a heterogenous population and learning opportunities entailed, it also manifests complex challenges for healthcare teams.

Objectives

The objective of this review is to systematically analyze the available literature to better understand the impact cultural diversity in healthcare teams has on team processes (e.g. communication, integration and conflict), as well as on team and patient outcomes (e.g. team performance and patient safety). The review also explores the conditions that enable or hinder these teams’ functioning. Based on the review, the paper develops a research agenda and outlines currently unaddressed questions.

Methods

This study builds on the input-mediator-output-context (IMO-C) framework. Based on multiple searches in major databases, 47 articles proved relevant for our research question. This study is part of a larger research project that has been reviewed by the Swedish Ethical Review Authority.

Results

Results of the review suggest that cultural diversity is primarily conceptualized in terms of ethnic, national and racial differences and that they have primarily negative effects on team communication and integration and increase team conflicts. The review also suggests that cultural diversity has both direct and indirect negative effects on team performance and team climate, as well as negative consequences for patient safety. Engaged and culturally sensitive leadership, cultural training as well as open and transparent procedures can serve as important mitigators to issues associated with cultural diversity in healthcare teams.

Conclusions

Structuring conclusions in line with SWOT (strengths/weaknesses/opportunities/threats), the study highlights the importance of a more nuanced approach to studies of cultural diversity in healthcare teams, and outlines: 1) the need for better operationalization of culture and cultural diversity, 2) improved theoretical and empirical modelling in exploring cultural diversity in healthcare teams, 3) diversification of methods used for exploration of this diversity’s impact on different outcomes, 4) increased focus on patient-specific outcomes such as patient safety and quality of care provided, and 5) further need for exploring of the conditions that allow culturally diverse healthcare teams to function.

A narrative synthesis of patient safety culture

Friday, 30th September - 09:30: Speed-poster session 2 (Rydbergsalen) - Poster

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Introduction

The importance of establishing a patient safety culture (PSC) to improve the problem of patient safety, has been widely acknowledged since the landmark report “To err is human”

Despite this early international focus on PSC the progress in making healthcare safer for patients has been slow. The rates of harm appear to have flatlined at 10% (3). This stagnation might be due to a lack of understanding of what constitutes PSC. The construct is not fully understood.

The primary research in PSC has focused around 3 other directions:

1. Measuring PSC through questionnaires, often administered to large samples.
2. Establishing relationship between PSC and patient safety outcomes.
3. Measuring PSC before and after an intervention.

Common to these directions is an implicit assumption that PSC is an established construct. Nevertheless, the foundation of what constitutes PSC remains elusive to health professionals. The concept is theoretically undefined, nor consistently applied and researched as the term PSC and patient safety climate is interchangeably used for the same concept. This calls the question what constitutes PSC.

Objectives

To summarize variables associated with PSC and identify any theories applied to PSC.

Methods

A narrative synthesis will provide summary of literature. Articles are identified through systematic searches of three relevant electronic databases: PubMed, CINAHL, PsycINFO. 1647 records were identified. Studies were included if their population were healthcare professionals, from a hospital setting and had any study design with PSC or patient safety climate as an outcome variable. The studies were excluded if not conducted between January 2011 and March 2021, not written in English or if they were not peer-reviewed. 21 studies were eligible.

Results

Quantitative studies n=17 qualitative studies n=4. > 50 unique predictor variables are derived from the quantitative studies and 20 themes are derived from the qualitative studies. Predictors and themes can be divided into 6 categories. 3 categories mutually overlapped

10 of the 21 studies included applies a definition. 10 different definitions is identified. 4 studies defined safety culture, 3 studies defined PSC and 4 studies defined patient safety climate.

18 out of the 21 studies used a validated questionnaire survey tools to construct the outcome variable measure of PSC or climate.

Conclusion

- Broad variety of variables -predictor and themes.
- Variables can be categorized in 6 categories, Quantitative and qualitative predictors and themes respectively mutually overlap in 3 categories.
- No agreed upon definition of patient safety culture
- Developing and using theory to guide the collection, analysis and evaluation of evidence is a neglected facet.

Literature

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Developing quality measures for rehabilitation in the primary health care setting for persons with chronic disease: a best-practice conceptual framework using consensus methods

Friday, 30th September - 09:30: Speed-poster session 2 (Rydbergsalen) - Poster

Mrs. Marie Louise Svendsen¹, Mrs. Tina Veje Andersen¹, Mrs. Lise Holten², Mrs. Hanne Søndergaard¹

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Introduction

The prevalence and the disease burden of chronic disease is increasing rapidly in many countries, and systematic assessment of the delivery of care is key to informing the organisation of services and facilitate improvements in the quality of care. The Local Government and the municipalities in Denmark are working to identify the best way to establish a nationwide quality assessment of rehabilitation for persons with chronic disease.(1)

Objectives

To develop nationally applicable quality measures for quality improvement of rehabilitation in the primary health care setting for persons with chronic disease in Denmark.

Methods

The project was designed in accordance with a best-practice conceptual framework for developing quality measures, and was led by methodologists.(2) The project ran from January 2020 to September 2021. An expert panel was established in order to yield consensus recommendations on quality measures based on the Danish national clinical guidelines for secondary prevention of chronic disease and rehabilitation in the primary health care setting. The applied methods were a modified RAND/UCLA method, surveys, and iterative structured table discussions.(3) The expert panel included 11 representatives counting a patient representative, health care professionals, a methodologist, and researchers within rehabilitation, chronic disease and cross-sectoral care. The consensus recommendations from the expert panel were finally approved by the panel and by a steering group including the Danish Ministry of Health, the Danish Regions, and the Local Government. No informed consent was required according to Danish law.

Results

The median ratings derived from the RAND/UCLA process demonstrated consensus in the expert group on the quality measures assessing whether the patients are offered participation in, and whether the patients adhere to, patient education, smoking cessation, physical exercise training, nutritional efforts, and preventive consultation on alcohol consumption. Furthermore, consensus was reached on quality measures assessing whether the patients participate in a closing rehabilitation meeting, and whether the patients are offered follow-up.

Conclusion

Consensus was reached on specific quality measures for rehabilitation in the primary health care setting for persons with chronic disease. When developing quality measures, it seems key that a close link exists between the rehabilitation practices in the primary health care settings, patient relevance, a strong evidence base through existing national clinical guidelines, and strategic professional and political partnerships.

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Trends in dispensing errors reported in Finnish community pharmacies in 2015–2020

Friday, 30th September - 09:30: Speed-poster session 2 (Rydbergsalen) - Poster

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Introduction: Medication errors are one of the most central endangering factors for patient safety¹. Reporting and analyzing of errors at both organisational and national levels is one of the key actions for effective medication risk management^{2,3}. Such a national registry for dispensing errors has been maintained by the Association of Finnish Pharmacies since 2012. After establishing the system, there have been several safety advancements made to the dispensing processes. Therefore, an up-to-date analysis about the dispensing errors in Finnish pharmacies is needed.

Objectives: To analyze trends in and characteristics of medication dispensing errors reported in Finnish community pharmacies during years 2015–2020.

Methods: This was a retrospective registry-based study, in which errors reported to the dispensing error register of the Association of Finnish Pharmacies for the period from January 2015 to December 2020, were analyzed. First, the incident reports (n=19 940) were handled by removing cases that did not fulfill the definition of a dispensing error (n=1 013), correcting false error types (n=2 528), and completing insufficiently entered cases (n=623). The rates, types, observers and contributing factors of dispensing errors were identified. Descriptive statistics (frequencies and percentages) were used to describe the data. Changes in annual absolute numbers and relative proportions of different error types were examined using Poisson regression and binary logistic regression.

Results: The final research data comprised 19 550 dispensing errors reported in 2015–2020. During these years, the annual number of reports had decreased significantly (n=3 913 in 2015; n=2 117 in 2020, p<0.001). The largest decrease occurred in wrong quantity or package size dispensed (n=545 in 2015; n=115 in 2020, p<0.001). The largest decrease in the relative proportion of errors per year was achieved in wrong strength dispensed (n=2121, 54% in year 2015; n=926, 44% in year 2020, p<0.001). The differences were greatest between the years 2018 and 2020. The most common error types were incorrect strength (50%, n=9 849) and incorrect quantity or package size (13%, n=2 512). Half of the errors (n=9 767) were noticed by the medicine users. Factors related to employee (25 %), similar packaging (18 %) and similar name of medicines (14%) were the most common ones contributing to dispensing error occurrence.

Conclusion: A decreasing trend was identified in the dispensing errors reported to the Association of Finnish Pharmacies dispensing error registry. This may be related to recent changes in dispensing process toward automation and digitalisation in the Finnish community pharmacies. This includes especially the national implementation of electronic prescription, medicines verification system that includes a functionality comparing the physical medication package to the selected one in the electronic pharmacy prescription processing system (introduced in the beginning of 2019), and dispensing robotics which all reduce the possibility of human error in the dispensing process. Further research is warranted to explore the effects of these safeguards on reducing dispensing errors in community pharmacies.

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Do we have a terminological problem in patient safety? - A comparative graph-based analysis of CIRS-Classifications in Germany and Swiss

Friday, 30th September - 09:30: Speed-poster session 2 (Rydbergsalen) - Poster

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Introduction

The question of how reports from Critical Incident Reporting Systems should be evaluated is the subject of heated debate. At the medical facility level, this is done on a case-by-case basis. However, at the level of the overarching reporting systems, some of which are national, the analysis of patterns and data aggregation is more critical.

A part of the analysis is classifying cases according to the WHO International Classification of Patient Safety (ICPS) from 2009. As various authors have noted, the ICPS is not a classification system in the strict sense. There are at least two reasons for this:

1. The ICPS has no codes representing a coding process (compare ICD10, ICF, OPS, etc.)
2. Coding rules and how and what should be coded do not exist. However, this sets different accents in terms of content.

Objectives

The present study analyzes five available data sets of different reporting systems related to their classification pattern. Furthermore, the questions were investigated, which consequences have the coding behavior and why are these differences.

Methods

This study includes data

- from Switzerland: CIRNET
- from Germany: CIRSmedical.de, Network CIRS Berlin, Hospital CIRS Network, and CIRS-NRW.

The frequency of the used classificatory terms and their combinations were examined. The relationship of the classified reports to the ICPS-terms is represented by a graph-based network. Graph properties are calculated (degree, different types of centrality).

Results

Currently, only the core classification items from the ICPS are used:

1. clinical administration
2. clinical process/procedure
3. documentation
4. healthcare-associated infection
- 5 Medication/IV Fluids
6. blood/blood products
7. nutrition
8. oxygen/gas/vapor
9. medical device/equipment
10. behavior
11. patient accidents
12. infrastructure/building/fixtures
13. resources/organizational management

There are significant differences in classification behavior between the reporting systems. For example, while only one or two classification entities are assigned in some systems, up to seven assignments are possible in other systems. This results in different association patterns between the classification terms.

Conclusion

The lack of definition of coding rules in a multidimensional problem such as patient safety leads to different approaches in the coding process itself. While some want to make as many associations as possible, others focus on only one or two coding items. In addition, it is not clear what should be coded: the process where the incident happened or the error itself.

However, the code graphs show different importance of relationships, and in consequence, the systems are not comparable in their results, even though classifications are intended to do just that. These results reveal problems with semantic interoperability.

Of course, data acquisition and management conditions are significantly different between the systems, but this diversity is additionally reinforced by different coding behavior.

However, the fundamental problem is the multidimensionality of a report in the reporting system: it may be a chain of medical tasks best described as a horizontal process. However, resource processes, such as providing sufficient, adequately qualified personnel, also affect the medical process. Such resource processes can be better described as vertical processes, indirectly affecting several medical procedures.

Independent and system-wide safety investigation in healthcare, establishing and testing a curriculum – a qualitative study

Friday, 30th September - 09:30: Speed-poster session 2 (Rydbergsalen) - Poster

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Objective and Setting: National, system-wide safety investigation represents a new approach to safety improvement in healthcare. In 2019 a new master's level course in *Safety Investigation in Healthcare* was established to support the training and development of a new team of investigators from an independent investigatory body. The course was established at one Norwegian university and a total of 19 students were enrolled and completed the course. The aim of this study was to qualitatively evaluate the course, and the objectives were to explore the students' needs and expectations prior to the course conduct, and their experiences and suggestions for improvements after course completion.

Design: The study design was a qualitative explorative study with individual- and focus group interviews. Data collection included five individual interviews prior to course participation and two focus group interviews, after course participation, with a total sample size of 13 participants Data were analysed according to thematic analysis.

Results: The results showed a need for a common conceptual foundation for the multidisciplinary team of safety investigators who were all employed in the same investigatory body. Course participation contributed to create reflexive spaces for the participants and generated new knowledge about the need for a broad range of investigatory tools and approaches. This contrasted with the initial aspiration among the participants to have a recipe for how to conduct safety investigations.

Conclusions: Course participation contributed to a common language among a highly multidisciplinary group of safety investigators and supported building a culture of collaborative learning. The need for additional activities to further develop a safety investigation curriculum in healthcare was identified. It is recommended that such a curriculum be co-created with independent investigators, safety scientists, patients and users, and healthcare professionals to ensure a strong methods repertoire and a sound theoretical backdrop for investigatory practice.

Notice: This abstract is based on a paper submitted to BMJ Open and is currently under review.

The effect of full-time culture on quality and patient safety in primary healthcare service - a literature review

Friday, 30th September - 09:30: Speed-poster session 2 (Rydbergsalen) - Poster

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Introduction:

A major challenge in primary care, is having enough qualified personnel to handle the increasing number of patients. One of the measures to get enough qualified personnel for the expected tasks is to increase the number of full-time employees and move towards a full-time culture. Having many part-time employees in the healthcare service have covered the need for staff on weekends. By increasing the position sizes, with the existing rotation schemes, there will consequently be a great shortage of qualified personnel on weekends. To solve this challenge, one must look at the rotation schemes and how they are organized. A result of this could be that employees must work weekends more frequently, or that they must work longer shifts on weekends, so-called long shift.

Objectives:

It is argued that full-time culture will have a positive effect on work environment, efficiency, and quality due to a better allocation of work tasks, predictable work schedule, reduced sick leave, and continuity in treatment and care. Safety, for patients or staff, is not mentioned as a factor or outcome in full-time culture. The objective of this literature review is to investigate the relationship between longer shift, work schedule, and quality and safety of care. The research is: *How can the introduction of full-time culture have a promoting or inhibiting effect on quality and patient safety in the primary healthcare service?*

Methods:

A systematic literature search was conducted searching following databases: Cinahl, Academic search premiere, Medline, Scopus and SveMed+. The search terms were “full time culture” and “quality and patient safety”. The search was also conducted in Norwegian language. To be included in this review, articles had to be written in English or a Scandinavian language and be published after 2010. The articles had to be about quality or safety outcomes for patients, or patients *and* staff, or factors that could affect the outcome of introducing full-time culture. A total of 42 articles were included in the study and analyzed by thematic analysis.

Results:

The analysis resulted in 4 main themes that could have a promoting or inhibiting effect on quality and patient safety when introducing full-time culture.

1. Length of shift

Working shift over 12 hours or more than 40 hours week is associated with increased adverse events and errors, lower quality patient care, less attention to safety concerns and more care left undone. Long shift gives health care personnel more flexibility and better quality-time off.

1. Fatigue/burnout

There is an association between long shifts and fatigue or burnout.

1. Autonomy/ empowerment

Having a choice and flexibility around shift patterns is a predictor of increased wellbeing and health.

1. System/structure

Several studies concluded that there is a relationship between work organization variables and outcomes, such as quality of care, patient safety, turnover, sickness absence and job dissatisfaction.

Conclusion

The results of this study show that a policy of moving to longer shift, or a full-time culture, to reduce overall workforce requirements could lead to unintended consequences and reduce the efficiency and effectiveness of the workforce in delivering high quality and safe care. When and if introducing a full-time culture by increasing shift length, leaders must be aware of the job demands this will have on healthcare personnel, the impact on the employee's health and engagement, and the outcome for patient safety and quality of care.

