



THE EUROPEAN ASSOCIATION OF NEUROSCIENCE NURSES

EANN Congress

May 25 - 27 2023 in Reykjavik Iceland



Book of Abstracts



Young adults' experiences with self-initiated technologies in everyday life with epilepsy. A qualitative study.

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*Young people and adults with Epilepsy – contributing to quality of life and better service, Hall A, May 25, 2023,
10:30 - 12:00*

Technology and digital solutions can revolutionize people's access to healthcare services and information. The use of apps has been shown to have a positive correlation with the individual's ability to manage symptoms, which in turn strengthens the positive long-term effects on health outcomes.

OBJECTIVE: To explore young adults' experiences with self-initiated technologies in everyday life with epilepsy.

MATERIAL & METHODS: This study used a qualitative design. Individual interviews were conducted with 12 young adults 18-29 years of age. Data analysis was inspired by the hermeneutic phenomenological methodology of van Manen.

RESULTS: Young adults self-initiated technologies in everyday life with epilepsy is illuminated in two main themes: 1) Controlling a self-willed illness, and 2) Loneliness IRL (In Real Life) vs an online community. Control was described as the fear of having unpredictable seizures and trying to manage them by living everyday according to guidelines created from the participants' meaning of illness. These guidelines are generated by information from healthcare professionals and online platforms, such as websites and social media groups for people with epilepsy. The support from online communities contrasts with the loneliness the participants experience in everyday life with illness.

CONCLUSION: Self-initiated technology provides young adults with tools in responding to the existential impact epilepsy have to their lives. Their every-day life is characterized by an all-dominant structure caused by the high maintenance epilepsy requires. Online they find like-minded people, providing them with the experience of being part of a community, which contrasts with the experience of loneliness IRL.



Educational project dedicated to school teachers for the correct management of epileptic seizures in school-age children

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Young people and adults with Epilepsy – contributing to quality of life and better service, Hall A, May 25, 2023, 10:30 - 12:00

Objective: Educate the school staff to correctly handle epileptic seizure increasing the safety of young people at school and promoting the administration of emergency drugs.
Reduce hospitalization in ICU for prolonged uninterrupted crises in time and revolving doors in the hospital.

Methods: Two-hour nurse training meetings with school staff dedicated to illustrating the illness and the correct handling of seizures. During meetings two questionnaires will be distributed: one ex ante for information on epilepsy, willingness to administer the drug and anxiety in facing crisis; and one ex post to control the knowledge acquired.

After a year, we interviewed the trained teachers to ask them if and how they handled seizures in the school environment. A lot of data have shown increased understanding and reduction of the social stigma towards epilepsy.

Results: We have held numerous meetings in Rome and the province and we have distributed 740 questionnaires between January 2016 and November 2018. From the analysis we highlighted an increase in knowledge of correct behavior to be taken during an epileptic crisis, a reduction in anxiety by 60% post and an increase in willingness to administer drug emerged until to 90%. From interviews 17 seizure emerged and only in 2 cases was admitted.

Conclusions: Through a semi-structured interview to schools which have participated in the training, the project noticed a high efficacy by increasing the safety of children with epileptic seizures at school. Call to the emergency medical number decreased, and, as a consequence social cost lowered. Furthermore, it showed greatly reducing the revolving doors after one year of training, with a significant increase in patients' quality of life



Epilepsy nurse telephone service. A review within a large teaching hospital in Ireland.

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Young people and adults with Epilepsy – contributing to quality of life and better service, Hall A, May 25, 2023, 10:30 - 12:00

Background: For patients with chronic diseases such as epilepsy, the Telephone Advice Line (TAL) can supplement direct patient contact, improve medication management and provide quicker responsive care, all tailored to meet patients individual needs. In 2014, The Irish Epilepsy Nurse Association completed a first ever multi- centered Audit of Irish Nurse led Epilepsy Telephone Advice services.

Objectives:

- 1.To audit phone calls received (in authors Adult hospital only) during a 4 week period in 2021
- 2.To compare this audit to prior hospital audit findings from 2014.
- 3.To review current patient satisfaction around the telephone service.

Methodology:

- 1.All phone interactions between 1st June 2021 to 30th June 2021 were identified from our Epilepsy Electronic Patient Record (n= 232).
- 2.Data from each interaction were categorized and findings were then compared to the 2014 findings.
- 3.Additional data categories were also reviewed – who made the call; epilepsy diagnosis and whether the patient had learning disability.
- 4.Systematic sampling was applied to 10% of calls for qualitative data (satisfaction rating) (n=23)

Results: Within the 4 week audit, 232 calls were reviewed. Similar to the 2014 findings, the most common reasons for calling the telephone advice line were - an increase in seizure activity 27% (n=63) and 24% (n=57) of calls related to anti seizure medication (ASM), of which 13% (n=31) were related to ASM side effects. Of the 232 calls received, only 11% (n=26) necessitated a discussion with Neurology team compared to 37% in 2014. The Advanced Nurse Practitioner (ANP) made ASM changes from 33% (n=76) of telephone calls compared to 20% (n= 46) in 2014. The audit found the most common caller to the phone service was the patient themselves at 49% (n=113).

Ninety-one percent (91%) (n= 20/22) were either very satisfied or satisfied with the TAL experience

Conclusions:

While the most frequent reasons to use the telephone service remain consistent over the years, this audit demonstrates the clinical expertise and knowledge of the Epilepsy ANP within the current service and shows the ANP's ability to confidently manage ASM changes through their increased prescribing pattern. This phone service has reduced patients need to attend face to face Neurologist led clinics (i.e. reducing waiting lists) and also attendances to Emergency Department (ED) as ASM changes and side effects are managed over the phone.



Experiences and self-care needs of adolescents with epilepsy (AWE) in transition from pediatric to adult hospital care: a systematic review of qualitative evidence

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Young people and adults with Epilepsy – contributing to quality of life and better service, Hall A, May 25, 2023, 10:30 - 12:00

Background/Objective: Epilepsy, the third most common brain condition worldwide, affects over 70 million people. Epilepsy is also the most common neurological condition in adolescence, with a prevalence of five in 1,000 children and an incidence of approximately five to seven cases per 10,000 children from birth to 15 years of age. There is a lack of research into AWE's experiences and self-care needs in the transition from child to adult care. The transition to adult services often results in loss of follow-up for AWE and poor patient and parent satisfaction. Further, it is often associated with deterioration in the health of AWE. This knowledge is required to improve our understanding and provide a foundation for improving clinical practice.

The objective was to synthesize evidence of AWE experiences and self-care needs in the transition from pediatric to adult hospital care.

Material & Methods: We used the Joanna Briggs Institute methodology for systematic reviews of qualitative evidence. We considered all types of qualitative studies of any design or methodology and text and opinion sources that included AWE (age 12-22 years) experiences, views, expectations, and self-care needs in the transition from pediatric to adult hospital care.

A comprehensive search and screening process was followed, and the four databases searched included PubMed (incl Medline), CINAHL (EBSCO), Scopus (incl Embase), and PsycINFO (Ovid). The search strategy aimed to locate both published and gray literature, including dissertations and theses using qualitative methodology. Databases were searched from their inception to the present date.

All identified citations were collected and uploaded into Covidence, where two independent reviewers screened titles and abstracts for assessment against the inclusion criteria for the review.

Results: The literature search identified 3016 citations; 20 studies met eligibility criteria. Two independent reviewers used the standard JBI critical appraisal checklist for qualitative research to critically appraise the eligible studies' methodological quality. Two independent reviewers extracted qualitative data from papers included in the review using a standardized data extraction tool adapted from JBI SUMARI. Using the meta-aggregation approach, findings were retrieved verbatim, along with illustrations, and a level of credibility was assigned.

Conclusion: Meta-synthesis in progress will be presented at the conference along with categories of experiences and self-care needs that will be subjected to synthesis to produce a single comprehensive set of synthesized findings that can be used as a basis for evidence-based practice.



Making space for care: Locating the role of nursing in a neuro-oncology clinic

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Advanced decision-making in complex patients, Hall B, May 25, 2023, 10:30 - 12:00

Background

Hospital ambulatory care services absorbed the groundswell forces of the Covid-19 pandemic, resulting in substantial alterations to ambulatory clinic practices and nursing staff turnover. In the evolution towards “post-pandemic” ambulatory care, the nursing constituent of the Montreal Neurological Hospital Brain Tumour Clinic can build upon its solid foundation of neuroscience nursing expertise and develop its service to uphold the hospital’s vision of transforming neurological care to change the lives of patients and their caregivers.

Objectives

In this session, we will touch on the limitations of remote clinical encounters in the context of caring for patients with primary brain tumours and their caregivers. We will explore the benefits of re-establishing in-person nursing encounters at pivotal points in the course of care to best assess complications and psychosocial issues and address the need for patient education and symptom management across the trajectory of the disease.

New Knowledge, Competencies, and Community of Practice

The talk will illustrate nursing initiatives undertaken to meet the benchmark of neuroscience nursing best practices including the use of patient-reported outcome measures to screen for symptoms causing distress to the patient, facilitate communication about these symptoms, and to monitor changes over time as well as the effect on symptom management. In addition, we will analyse the impact of these initiatives on stakeholders including physicians and caregivers.

Finally, we will invite the voices of our neuroscience nursing peers and mentors to share their challenges, successes, and ambitions to improve their practice.



Neuroscience Benchmarking Challenging Behaviours in Neuroscience in the UK

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Advanced decision-making in complex patients, Hall B, May 25, 2023, 10:30 - 12:00

Background

- To provide an overview of the work of the National Neuroscience Benchmarking Group and discuss the impact of benchmarking on affecting change in Neuroscience nursing
- To discuss the audit results from the NNBG benchmark on the management of challenging behaviour
- Share best practice in relation to the management of challenging behaviour

For over 30 years, the neuroscience benchmarking group (NNBG), has been benchmarking a number of neuroscience nursing practice areas, one of which is the management of challenging behaviour. Currently there is a repository of over 17 completed benchmarks, each one containing a set of evidence-based statements that identify the 'gold standard' for that particular intervention. It enables practitioners to recognise what is best practice in their area of work, through a process of sharing, comparing, and learning from each other. It promotes change and delivers improvements in quality patient care and patient satisfaction.

Methods

A pre-requisite of any benchmark is that we audit our standards for best practice. I will present the findings from 4 of our hospitals in the UK. Results showed commonalities which were reassuring to practitioners, knowing that we all experience the same concerns and we are not alone in our gaps in service provision or failings.

Conclusions

This presentation discusses essential aspects of this benchmark to enable healthcare practitioners to debate and share ideas to optimise patient care.



The empathetic involvement of Nurses in the contexts of Neuroscience: a mixed-method study

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Advanced decision-making in complex patients, Hall B, May 25, 2023, 10:30 - 12:00

Background: Thanks to new researching methods, Neuroscience has delved into researching the anatomy and physiology of empathy.

The ability to understand others' emotions without precise knowledge of the root cause constitutes the emotional component of the feeling of empathy.

This emotion is a strong motivator that assists a person in social cohesion and aids in the development of emotional bonds with others.

Nurses often feel unease when witnessing others' sufferings. Thus, they unknowingly employ 'avoidant' coping strategies. Over time and with repeated exposure, a nurse's susceptibility to emotions tends to diminish if not supported, cared for and guided to enhance emotional awareness.

Aim: This study aims to investigate an individual's responsiveness to others' emotional expressions, to feel their emotions and stories, in accordance to Neuroscience.

Sample and method: 211 Italian Neuroscience nurses were enrolled as voluntary participants. They were recruited thanks to online forms by the National Neuroscience Nursing Association (ANIN). Quantitative data was gathered by using the Balanced Emotional Empathy Scale (BEES) created by Albert Mehrabian (1972), and used to anonymously investigate a person's responsiveness to other people's emotions through two different factors. Qualitative data, was gathered thanks to a semi-structured interview created for this study. Fifteen nurses who work in Neuroscience areas were interviewed. Social and registrational variables of all participants were gathered.

Results: Qualitative analyses found that emotional involvement is a result of perception and each person's sensations. It is linked to the will to resist certain situations and to one's own emotional awareness. Many nurses usually avoided emotional involvement and shifted their focus onto more technical and practical parts of their job in order to cope. The common theme of being abandoned by management and a lack of awareness on coping with stress derived from tasking jobs emerged. This is confirmed by analyzing quantitative data, with no significant differences between nursing settings. Newly graduated nurses tended to be more susceptible than more experienced nurses. Age seems to be an important variable to consider when studying susceptibility to emotional involvement.

Conclusions: Nurses in Neuroscience areas witness emotionally tasking situations, often employing ineffective coping strategies. Furthermore, nurses need support from healthcare administrations in the order to learn to manage their emotions in a healthy manner. We hypothesize that nurses may become more aware of their emotional state with advancing age, though many use 'avoidant' coping strategies. This research confirms the data found in literature articles.



Assessing Mental Capacity in the UK Addressing Dilemmas in Practice

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Advanced decision-making in complex patients, Hall B, May 25, 2023, 10:30 - 12:00

Background

- To provide an overview of the Mental Capacity Act (MCA) including the five Statutory Principles
- To introduce the historical and legal context to the MCA
- Explain how the Mental Capacity Act protects both the service user and the public
- To present case studies for audience discussion and participation

The Mental Capacity Act (MCA) is designed to protect and empower individuals who may lack the mental capacity to make their own decisions about their care and treatment. It is a law that applies to individuals aged 16 and over. Examples of people who may lack capacity include those with dementia, a severe learning disability, acute brain injury, a mental health condition or following a stroke. Neuroscience nurses frequently care for these patients and just because a person has one of these conditions does not necessarily mean they lack the capacity to make a specific decision. Since the introduction of the MCA, we now conduct an assessment of capacity before we can restrain the person and deprive them of their liberty, commonly referred to as Deprivation of Liberty Safeguards (DOL's).

Conclusions

Best interest decision making meetings are now more commonplace but often create frustrations and dilemmas for medical and nursing staff, particularly when despite the patient legally having capacity, they are still deemed as vulnerable and a danger to themselves or others..

I have no legal background so this presentation is from a nurses perspective, reviewing case studies that I'm sure will be familiar to the audience.



Decision-making of end-of-life care for neurological patients in an acute hospital ward

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Symposium: Amyotrophic lateral sclerosis decision-making and lived experiences, Hall A, May 25, 2023, 13:00 - 14:30

Background: The aim of this research is to describe the process of decision-making of end-of-life care within an acute hospital ward and especially the transition to end-of-life care of patients who have progressive advanced diseases, particularly neurological diseases. Nurses are often involved in the decision-making of end-of-life care and are frequently faced with pressing questions and ethical issues. For instance, the pressure to continue usual care when a transition to end-of-life care might be more relevant and whether or not to continue providing usual care when it should be withdrawn. End-of-life care for patients with neurologic diseases may be particularly challenging for nurses to be involved in, because of the often-co-occurring presence of cognitive impairments, behavioral instability, communication problems, and motor symptoms. In spite of these foreseen challenges, few studies exist to guide care development.

Material and methods: A retrospective study looking at how clinicians document potential clinical indicators which may guide decision-making at end-of-life and how these indicators influence the care/treatment orientation. 271 patient health records from January 2011-August 2020 were analyzed using descriptive statistics.

Results: The mean age of patients was 78 years. Of those 51% were women, 55% were married or cohabiting, and 83% lived at home before admittance to the neurological unit. The decision of end-of-life care was made relatively late, for 50% of the patients in the last 48 hours of life. Stroke, Parkinson's, and ALS patients were the main patient groups. When comparing the patient groups there is evidence that ALS patients differ significantly from the other patient groups in signs of impending death, i.e., loss of consciousness, and impaired communication. All patients showed a progression of their disease. IV antibiotics and fluids were frequently used. Patients received pain and sedative medication in adherence to local PC guidelines. Family meetings were common. Documentation of the need for end-of-life care in the patient health records was more frequent from physicians than from nurses.

Conclusion The result shows that the timeframe between end-of-life care decisions and patients' death was very short. All the patient groups had high signs and symptoms of imminent death and the hospital ward practice was to provide invasive medical interventions, concurrently adhering to palliative care guidelines. Experiences and attitudes towards end-of-life care of healthcare professionals of this particular patient group warrant investigation.



The experience of having a spouse with Motor Neurone Disease – from diagnose until death: A qualitative study

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Symposium: Amyotrophic lateral sclerosis decision-making and lived experiences, Hall A, May 25, 2023, 13:00 - 14:30

Background: Motor Neuron Disease – or in daily speech labelled MND, is an incurable neurodegenerative disease diagnosed in 5-6 people per year in Iceland. The average survival from diagnosis is two to five years. Being the spouse of an individual with MND involves psychosocial and physical challenges.

Objective: To gain insight into the experiences of spouses of individuals with MND from diagnosis until life after their loved one has deceased.

Program description: In-depth interviews were conducted with six individuals (mean age 58) who had lost their partner due to MND. The informants were asked to describe initial symptoms, how the diagnosis was provided, and give an account of the progression of the disease. The interviews lasted from 1 hour up to 2 ½ hours. At the time of diagnosis, the age of the MND patients were 49 to 65 years and they lived from 8 months up to 7 years after the diagnosis. Time from death when the interviews were conducted was 1 to 7 years.

Clinical outcomes: A reflexive thematic analysis was used to generate four themes: a) Being in free fall, b) taking responsibility and downplaying own needs, c) being in the maze of the welfare system, and d) dealing with a changed reality. Collectively the themes illustrate how spouses adapted to their changed lives, they took one day at a time and solved the challenges that arose despite profound unpredictability. Meeting and monitoring the needs of the spouse was a priority. Both through illness and after death, an emotional void surfaced.

Recommendations to the field: The findings highlight important factors that help healthcare professionals to provide targeted services and support to the spouses of MND patients. Such specialized support is particularly needed immediately after diagnosis, when the disease worsens and after the MND patient has passed away. Findings furthermore underscore a need to improve

education and teaching for those who treat MND patients both in primary healthcare and within institutions.

Keywords: MND, nursing, experience, qualitative research, interviews, support to relatives



The Impact of Specialised Neurointensive Care Units Compared to General Intensive Care Units on In-Hospital Mortality of Adult Patients with Traumatic Brain Injury

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Assessment, surveillance, and management of patients in the ICU and neurosurgery, Hall B, May 25, 2023, 13:00 - 14:30

Background: Traumatic Brain Injury (TBI) is a leading cause of death among trauma patients worldwide. Rigorous diagnosis with time-based interventions is crucial in reducing mortality. Admitting or transferring patients to specialised neuro centres is often dependent on neurosurgical procedures.

Objective: To determine the impact of specialised neurointensive care units compared to general intensive care units on in-hospital mortality of adult patients with severe TBI

Material and Methods: The studies were reported based on the guidelines of the Preferred Reporting Items for Systematic Reviews and Meta-Analysis. Articles were identified from four electronic bibliographic databases for systematic review. Data were extracted using a pre-designed table and the quality of the studies was appraised using the Evidence-Bases Librarianship Critical Appraisal Checklist.

Results: Five articles were selected from 1417 studies varying between 2015 and 2019. The heterogeneity between the studies has led to different conclusions. Overall, the studies supported the significance of specialised neurointensive care units on the clinical outcomes overall but did not always agree on the impact on in-hospital mortality.

Conclusion: There is robust evidence that specialised care can have an essential role in patients' clinical outcomes. However, further research is required to find an irrefutable conclusion about the benefits of patients with TBI being cared for in specialised neuro intensive care units instead of general intensive care units.



Development of Care Bundles for Patient Surveillance in a Neurosurgical High-Dependency Care Unit

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Assessment, surveillance, and management of patients in the ICU and neurosurgery, Hall B, May 25, 2023, 13:00 - 14:30

Background: The Neurosurgical Department of Landspítali, University Hospital opened a high-dependency care unit in 2019. It is well-known that changing clinical practice is challenging. To be successful, it is mandatory that guidelines are clear and easily understood. Use of care bundles is widely recommended. Care bundles typically consist of three to five critical recommendations that, when followed, increase the quality of nursing and prevent diversity in caregiving. Implementation of care bundles in an Icelandic context requires special consideration because the department services all types of neurosurgical patients. Therefore, the care bundles need to pertain to many different conditions.

Aim: Can be divided into two sequential steps. Step 1. To develop care bundles for the Neurosurgical high-dependency care unit. Step 2. To identify facilitating and inhibiting aspects associated with the implementation of the care bundles and to describe the experiences of healthcare professionals working in the high-dependency care unit.

Method: (1) Evidence-based knowledge was sought in existing clinical guidelines. An expert group of healthcare professionals reviewed the care bundles throughout a three-wave development. After each wave, recommendations for improvements and subsequent amendments were made. (2) To obtain insight into healthcare professionals experience of working within the high-dependency care unit and to gain insight into their opinion of the care bundles, two focus groups interviews were conducted with registered nurses, assistant nurses, physicians, and students (n=13). Prior to the interviews, staff were asked to familiarize themselves with the draft of the care bundles. Interviews were analyzed with content analysis. Additionally, 13 standardized questions were posed to 26 healthcare professionals about the facilitating and inhibiting aspects of the intended implementation of the care bundles.

Results: (1) Eight care bundles were developed pertaining to: patient admission, head injury, coiling, subarachnoid hemorrhage, craniotomy, subdural hematoma, spinal cord injury, and family support. The care bundles were presented in an educational book labelled “Recommendations on procedures at the Neurosurgery high-dependency care unit”. (2) The healthcare professionals’ experiences of working in high-dependency care unit was categorized into, (a) Initiation and attitudes, (b) Environment, (c) Training and staffing, and (d) Attitudes of staff.

Conclusion: Healthcare professionals shed light on important issues that could be used to further strengthen quality of care in the high-dependency care unit. There is a need to establish ongoing ways to evaluate the effectiveness of the care bundles.



Nursing management of discomfort experienced by the neurosurgical patient during the awake craniotomy surgery.

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Assessment, surveillance, and management of patients in the ICU and neurosurgery, Hall B, May 25, 2023, 13:00 - 14:30

Objective: The physical and emotional discomfort experienced by the neurosurgical patient during the awake craniotomy is one of the main problems which could lead to negative outcomes. The main discomforts that may occur are: discomfort in maintaining the obligatory position; pain; nausea and vomiting; itching; perception of noises, smells, disturbing images and temperature; agitation and fear; anxiety due to psychological pressure. There are interventions that can be applied, particularly by nurses, to prevent and manage each of these issues. Aim: To identify and investigate the most critical moments of discomfort for the patient in the pre- and intra-operative phase; to summarise all the interventions applied for the prevention and management of the problem, also to update the present literature.

Materials and methods: The study was characterised by 3 different phases: a) a review, concerning the applied interventions suggested by the literature; b) a descriptive observational study phase, through semi-structured interviews with the nurses and the neuropsychologist; and c) a direct observation phase of the interventions implemented by the healthcare professionals, useful to investigate the causes and manifestations of discomfort and the interventions.

Results: The comparison between the problems found in the literature and those emerged from the observational-descriptive study led to a mutual confirmation of the compared data, with the addition of consistent elements to be integrated to the literature. With regard to the applicable interventions aimed at preventing and managing the discomfort, significant elements emerged with regard to the positioning of the patient, the appropriate administration of anaesthesia and pain medication, nausea and vomiting, and the external stimuli annoying the patient and can be eliminated by removing the physical trigger: in addition there are those related to sense-perception (sight, hearing, touch), thermo-perception, and that related to the emotional sphere. The study shows how important it is to pay attention to emotional discomfort.

Interventions that can be implemented in this area include: introducing oneself to the patient, demonstrating readiness to manage comfort by highlighting changes, using para-verbal and non-verbal language that reveals calmness, interest, and understanding of discomfort.

Conclusions: Implications for clinical practice concern the reported synthesis of interventions. Given the scarce literature on the topic, it would be interesting to perform more observational studies with a larger patient population to confirm and extend the results of this study.



Depth of Anesthesia Monitoring in Norway: a web-based survey

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Assessment, surveillance, and management of patients in the ICU and neurosurgery, Hall B, May 25, 2023, 13:00 - 14:30

Background: Bispectral index (BIS) is the most frequently used EEG-based depth of anesthesia (DoA) monitor in Norwegian hospitals. There is sparse knowledge regarding the extent and clinical consequences of its use, and how anesthesiologists and nurse anesthetists use the information provided by the DoA monitors in clinical practice.

Method: This cross-sectional survey on the use of DoA monitors in Norway used a web-based questionnaire distributed to anesthesia personnel in all hospitals in Norway. Participation was voluntary and anonymized, and the web form could not track IP-sources or locality of respondents. We used STATA/SE 16.1. for data analysis.

Results: Three hundred and ninety-two nurse anesthetists and anesthesiologists (324/67) responded. Among the EEG based DoA monitoring tools, the Bispectral (BIS)-index is most often used to observe and assess patients' DoA (98%). Raw EEG-waveform analysis are seldom used (10%), EEG-spectrogram 9%, Spectral edge frequency (SEF) 3% , and suppression rate (SR) 10%. The ability to recognize burst suppression pattern on EEG and its significance are scarce among most Anesthesia personnel (27%). Clinical observations are considered more reliable than the BIS-indexes. Anaesthetic dosage is more often titrated up because of high BIS-index values than down because of low BIS-index values.

Conclusion: This study has revealed that despite extensive use of DoA monitoring, Norwegian anesthesia personnel do not use all the information the DoA monitors provides, and its potential to aid the titration of anesthetics. Thus, anesthesia personnel would generally benefit from additional knowledge on how EEG-based DoA monitoring can be used in order to assess the individual patients' need for anesthetic medication.



Storm in a Teacup? The challenges and complexities of the management of Paroxysmal Sympathetic Hyperactivity described through a casestudy

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Impact of brain injury and patient support and outreach, Hall A, May 25, 2023, 14:30 - 16:00

Objectives:

The objectives of this paper are to review what is currently understood about Paroxysmal Sympathetic Hyperactivity (PSH) in severe traumatic brain injury. Diagnosis and current treatments will be reviewed and discussed in the context of a patient case study. A 21year old male pedestrian knocked down by a car who sustained a severe traumatic brain injury with grade III diffuse axonal injury.

Materials and Methods:

A literature review was carried out to identify clarity of this condition and consensus management. A systematic search was conducted of PubMed, Medline and the Cochrane Library.

Results:

The literature identified that until recently there was still confusion surrounding this condition. Perkes et al (2010) recommended that the term PSH should be adopted as it reflected more readily the condition characterised by tachycardia, hypertension, tachypnoea, diaphoresis, fever, and tonic posturing.

Baguley et al (2014) developed "PSH-Assessment Measure" (PSH-AM) to establish a standardised diagnostic tool and help the clinical management of PSH. This has two components; a clinical feature scale which is scored on the level of severity and a diagnosis likelihood tool with one point scored for each feature present. This tool could provide an index of treatment efficiency in patients with PSH particularly in the critical care setting where concomitant diseases can confuse the picture.

There was little evidence that these tools have been adopted in routine care.

Treatment was identified as twofold. Firstly to avoid triggers such as bladder distention or overuse of endotracheal suctioning. At the same time providing fluid resuscitation, nutritional support and fever management. Secondly pharmacological therapy. Shald et al (2020) identified that monotherapy was ineffective and suggested that a combination of opiates such as morphine to abort the attack and β blockers such as propranolol to prevent the attacks had proved useful. There was no evidence of consensus on this or any proforma that could be followed to ensure best effective practice.

Conclusion:

As out of hospital care continues to improve with more seriously injured patients surviving to reach hospital and subsequently surviving intensive care more research and education is required to raise awareness and knowledge of this condition. Failure to recognise PSH in a timely manner results in prolonged treatment, delays in rehabilitation and worse outcomes which are reflected in the case study.



Nursing interventions to manage delirium in a neurosurgical context

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Impact of brain injury and patient support and outreach, Hall A, May 25, 2023, 14:30 - 16:00

Objective; The incidence of delirium after neurosurgical interventions is 32% with hydrocephalus, dementia, epilepsy and stroke as predisposing factors. Neurovascular surgery has the highest risk with up to 42% at developing delirium postoperative. It is also known that intensive care and mechanical ventilation is predisposing factors and up to 82% of all patients leaving intensive care have an active delirium. There is none validate screening scale or bundle of care reported in a neurosurgical context and due to the cognition impairment that the patients often suffer from it can be hard to distinguish it from delirium. With the complexity of the neurosurgical patient we must consideration that not all the accepted interventions in regular somatic inpatient care can be applicated.

Aim: (1) To identify nursing interventions to prevent or treat delirium in somatic inpatient care, and (2) to evaluate which nursing interventions are applicable in the neurosurgical context.

Method: The author made an integrative review, and the articles were included based on P – adult patients in somatic care, I – nursing interventions preventing or treating delirium, C – intervention group and control group, O – occurrence of delirium and T – controlled randomized trials and quasi-experimental design.

Result; Nine articles were included in the result. The nursing interventions described and found were quite similar in all the articles and the majority with inspirations from Modified Hospital Elder Life Program (m-HELP) including major themes as re-orientation, mobilization, circadian, cognitive training and optimizing the possibility of visual and auditory stimuli. All the intervention groups had significant lower incidence of delirium and are assumed to work in a neurosurgical context after modified. There is a need to modify mobilization and customizing nursing interventions so they do not have effect on intracranial pressure (ICP) and the strict need for monitoring.

Conclusion; Nursing interventions to prevent and treat delirium in somatic inpatient care can be applicated in a neurosurgical context. The interventions need modification to be optimized for the neurosurgical context.



Building a scientific database of traumatic brain injury in Iceland: Strategy and preliminary results nested within a big dataset

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Impact of brain injury and patient support and outreach, Hall A, May 25, 2023, 14:30 - 16:00

Background: Traumatic brain injury (TBI) is one of the leading causes of death and disability. Much of today's research on TBI is fraught with limited background knowledge of the study participants. Conversely, the studies frequently lack statistical power when background information is sufficient due to small sample sizes.

Aim: To build a sustainable database containing key variables important for scrutinizing characteristics and outcomes of patients with TBI.

Methods: We have extracted data through the data warehouse on all patients with TBI admitted through the emergency department of Landspítali - The National University Hospital of Iceland between the years 2010-2021 (n=54000) and gathered approximately 100 variables on each participant. The data contain broad information on the cause of injury, triage, clinical symptoms (i.e., consciousness), length of admission, and investigations performed, such as results from Computerized Tomography or other brain scans. Moreover, we have extracted the number of sessions and type of neurorehabilitation provided to each person visiting the Landspítali - The National University Hospital of Iceland, and recorded the number of visits and readmissions. With these aggregated numbers, both predictions and detailed analysis become possible. The multilayered research questions that can be answered by exploiting the data set can, amongst others, be used to describe characteristics and the magnitude of challenges related to TBI. Results also have pragmatic implications by gauging procedures and protocols that need improvement. Furthermore, they can be used to apply for funding to research, treat, and rehabilitate TBI patients.

Results: We are currently in the process of data cleaning. In our presentation, we will outline the process of acquiring "big data", and the lessons learned about data accuracy and completeness. In addition, the conference attendees will be introduced to research questions that have arisen and a few preliminary results. Now, one year into the project, our initial research group has expanded and includes a large group of healthcare professionals, experienced researchers, and a group of undergraduate, graduate, and post-graduate students, who all work on designated parts of the project.

Discussion: The project is an interdisciplinary team effort to build a state-of-the-art research database that leverages the electronic medical record system used in Icelandic hospitals. The database may inform both basic and applied research. We need to make better, and more systematic use of existing data to help optimize the prioritization of treatment and care.



An evaluation of the peer support service provided by patients and carers following subarachnoid haemorrhage through participation in online and face-to-face support groups.

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Impact of brain injury and patient support and outreach, Hall A, May 25, 2023, 14:30 - 16:00

Objective: Peer support services allow people to interact, share their stories, create supportive network, and alleviate issues associated with neurological conditions (NHS, 2019). With the evidence supporting peer involvement, this project evaluated the peer support provided by this established support group. The end goal is to better understand the user experience within this group to establish the value of peer support, and identify any ongoing care requirements.

Material & methods: A service evaluation was deemed the most suitable approach to determine the shared experiences of the group. A mixed methods questionnaire enabled a comparison of themes including age, gender and length of time since haemorrhage, against perceived recovery and overall satisfaction with the service. Thematic analysis was used to identify patterns within the qualitative data, enabling the generation of codes to create patient and family themes. The quantitative data was analysed using descriptive statistics and displayed using graphs.

Results: A total of 35 patients responded.

83% (n=29) were still experiencing long-term problems following SAH such as fatigue, reduced concentration, anxiety and changes in their way of thinking. 80% (n=28) found these symptoms did reduce their ability to carry out day-to-day activities. 89% (n=31) felt being a member of the group helped them to understanding their problems better.

Four themes were identified for the patient.

1. Talking to others who have a similar experience helped in understanding the condition better.
2. Not feeling so alone.
3. Increased confidence
4. Better coping strategies.

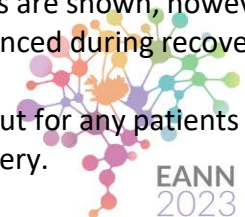
Support group benefits for family were;

1. Learning how other carers cope
2. Better insight into their relatives condition.

Conclusion: 100% (n=35) felt the group had helped with their ongoing issues. 86% (n=30) of respondents felt the group had been a positive experience for them, with 100% (n=35) stating they would recommend the group to others. 48% (n=17) of respondents felt the group had helped their family have a better understanding of their recovery.

The need for continued support has been identified following this evaluation, and has demonstrated that peer support groups can help with these needs. Following this evaluation no new outcomes are shown, however it has corroborated with surrounding literature regarding the ongoing problems experienced during recovery and the benefits of support groups.

This service evaluation could help to shape future practice, not just for SAH patients but for any patients and families in need of support in understanding their condition and managing their recovery.



Dancing with my Partner, not Mr. Parkinson

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Improving positive experiences and safety for patients with Parkinson's disease, Hall B, May 25, 2023, 14:30 - 16:00

Objective:

Dance therapy for Parkinson's disease, has become a popular activity worldwide and in many countries, dancing has become a rehabilitation offer for people suffering from Parkinson's disease.

A growing amount of literature supports that dance therapy for Parkinson's disease has a positive effect on both motor symptoms and psychosocial aspects of living with Parkinson's disease.

Well known is the "dance for PD" where participants explore movements and music in enjoyable and creative ways, another well-known type is Parkinson Ballroom fitness, which is not only offered to people with Parkinson, but quite often spouses, partners or another relative is invited to attend as well. Thus, PD dance is an offer that couples can attend together. However, the qualitative literature on the meaning of dance for everyday life with PD is still limited, thus the aim of this study was to unfold the experience of how dancing together may affect everyday life with Parkinson's disease, as a couple.

Methods

The study was designed as a hermeneutic phenomenological study inspired by the methodology of van Manen, to explore the lived experience of attending "dance with Parkinson" as a couple.

Fourteen couples were included in an interview study. All couples attended a "dance with Parkinson's" class in the form of "ballroom fitness", while one couple also attended a "PD dance" class.

Results

Attending PD dance classes were overall experienced as an activity producing joy and a zest for life.

Several aspects contributed to that overall feeling, such as a togetherness and intimacy created through dancing with one's partner in life, but also making new relations with other couples at the dance class, and feeling the effect of exercising on one's body and sensing what music can do, not only for your movements, but also for your mood. In the presentation we will unfold the experience of attending PD dance classes from a couple's perspective. Preliminary themes, among others, are Dancing as a zest for life, The coffee break, The instructor and Feeling the body loosening up.

Conclusion

It seems that attending dance therapy for Parkinson's disease is a positive experience that is highly valued by the couples. Not only do the couples experience a bodily wellness. They also experience a togetherness and gaining new valuable friendships. Thus couples prioritise attending the dance classes.



Home-based titration with Duodenal infusion of Levodopa in People with Parkinson's disease: an observational feasibility study

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Improving positive experiences and safety for patients with Parkinson's disease, Hall B, May 25, 2023, 14:30 - 16:00

Background: Studies of duodenal infusion of levodopa (LCIG) on groups of parkinsonian patients (PD patients) have reported beneficial effects on motor complications. The testing and titration of the right levodopa equivalent dose has usually been completed during a hospital admission over a week. However, dose adjustment depends on home environment, emotional stress, and normal physical activity in everyday life, which is why home titration could be beneficial. Little is known about the patient profile, the rationale and indications for LCIG-infusion in a home-based setting. Therefore, primary objectives were to assess the feasibility of LCIG home titration with use of telemedicine-assisted (TM) technology, and evaluate the effect of the treatment on clinical parameters and patient/caregivers satisfaction. Secondly, to establish practical recommendations for a home-based titration (HBT) including characteristics for PD-patients suitable for home titration.

Material and methods: An observational feasibility study assessing feasibility and safety of treatments with home-titration of levodopa duodenal infusions with use of self-reported questionnaires and clinical outcome measures. All eligible participants were screened consecutively from Movement disorder Clinic at Rigshospitalet, Denmark, from October 2017 to February 2022.

Results: 10 PD-patients were included (6 male and 4 females). They all fulfilled the criteria of LCIG-treatment, lived in private homes and nursing homes respectively, had a mean age of 74 years, PD-duration on 12.9 years, and varied in severity of cognitive impairments. PD-nurses spent in average 1 hour and 34 minutes at the participants' homes and made 3.2 video calls during the period. Assessed on self-reported questionnaires, it showed that the PD-patients (mean 36.2, score 0-40) on average were more satisfied with the HBT-program than the caregivers (mean 31.8, score 0-40). Descriptive statistics of the outcome measures at baseline and at two months follow-up indicate that the treatment is sufficient as the score in all clinical outcomes improved. Additionally, facilitators and barriers in completing a HBT-program were identified.

Conclusion: This "real life" feasibility study indicates that TM-assisted HBT-programs are feasible, and rated satisfactory and safe by PwP and caregivers, and may be a substitute to in-hospital treatment. Overall, it was concluded feasible due to numbers of contacts, time spent in PwPs private homes (based on individual needs) and quality of TM-assisted contacts. It was viewed safe with regard to the high satisfaction-level for both PD-patients and caregivers, however, an extended focus and support should be given to the caregivers in both the decision-making and during the HBT-program.



Medication administration in acutely admitted Parkinson's patients in non-neurology wards at Landspítali University Hospital – Evaluation of a quality improvement intervention

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Improving positive experiences and safety for patients with Parkinson's disease, Hall B, May 25, 2023, 14:30 - 16:00

Objective: Patients with Parkinson's disease (pwPD) are commonly admitted acutely to hospitals outside specialized neurological departments. It is well-known that the correct administration of Dopaminergic medications is critical to the welfare of pwPD. Delayed and omitted medicine doses lead to increased morbidity, mortality, and extended hospital stays. Nevertheless, medication errors are far too frequent in the context of hospital admissions. Therefore, we launched a quality improvement project at Landspítali University hospital in Iceland to rectify this.

The aim of the project was to increase the number of pwPD receiving their first Dopaminergic medication dose with ≤ 1 -hour delay after acute admission to the cardiology and thoracic surgery wards to 70% and lower the median delay of the first received dose to ≤ 1 hour.

Methods: Improvement was evaluated by scrutinizing the medical records of all pwPD admitted acutely to either the cardiology or the thoracic surgery wards between January 2020 to February 2022. We examined the delay of the first Dopaminergic medication dose after hospitalization compared to the prescribed medication schedule before and after our multifactorial intervention, i.e., more accessible access to Dopaminergic drugs, staff education, and increased collaboration with clinical pharmacists.

The first intervention wave took place in October 2021. We adhered to the Model for Improvement by using a process map, 5 Why's analysis and fishbone analysis, using descriptive data.

Results: The median delay of the first Dopaminergic dose administered after acute admission to the cardiac and thoracic wards decreased from 1,3 hours (n=35) pre-intervention to 0,3 hours (n=15) hours post-intervention by Feb. 2022. The proportion of patients receiving their first Dopaminergic medication dose with a maximum of 1-hour delay in the cardiac and thoracic wards went from 33% (n=35) pre-intervention to 79% (n=15) post-intervention.

Conclusion: Improved access to Dopaminergic drugs and education about proper administration resulted in higher care quality for pwPD. Our positive results of implementing the interventions underscore how crucial interdisciplinary work is to succeed in quality improvement projects. Looking to the future, we plan to provide interventions targeted towards junior doctors and expand our interventions and evaluations to other wards of Landspítali. Optimizing care for pwPD in less specialized hospital settings is a never-ending task important for Parkinson's nurses to engage actively in.



Mobilisation in the acute stages after stroke – effects on the patient’s functional outcome: a literature review

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Stroke – acute management, Hall A, May 25, 2023, 16:20 - 17:00

Objective: Mobilisation in the acute stages after stroke is a complex matter where the nurse must consider several confounding variables, such as hemodynamic stability, pulmonary function, stroke type, -severity and post treatment complication risk factors. There is insufficient state of evidence to support when and how the first mobilisation should occur after stroke, and there is often uncertainty in the decision making.

The aim of the study was to investigate whether mobilisation within 24-48 hours after stroke onset affects the patient’s level of functioning.

Materials & methods: The method used was a general literature review with an integrated analysis.

Results: 17 articles analysing the effect of early mobilisation on nursing-related outcome measures, published between 2015-2019, were included in the literature review. Sample, interventions and outcome measures varied between the different articles. Three of the articles included showed results suggesting that early mobilisation could have negative effects on the patient’s functional outcome after stroke. Among the remaining 13 articles there was an even distribution of positive effects from early mobilisation and results showing no effect on functional outcome. The results of this literature review imply that early mobilisation to some extent may contribute to improved basic functions as in managing the toilet, dressing and more instrumental features such as cooking and driving. Early mobilisation appears to be a safe nursing intervention in most cases if the patient is considered medically stable. However, stroke is a heterogenous diagnosis presenting with a numerous different feature and thereby risks. Therefore it’s impossible to apply a single nursing intervention on every stroke patient. The results of this study showed the need for further research, studying the effects from early mobilisation in varying stroke types, such as intracerebral haematoma, acute ischemic stroke, large vessel occlusions, minor stroke etc.

Conclusion: The conclusion to be drawn from this literature review is that nurses, through their main responsibility for nursing care can influence the patient’s functional outcome through the decisions made regarding the first mobilisation in patients hit by acute stroke. The future challenge is to determine which stroke patient benefit from early mobilisation, and which patient had better wait.



Post-stroke seizure nursing assessment and priorities

Cynthia Bautista¹

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Stroke – acute management, Hall A, May 25, 2023, 16:20 - 17:00

Objective/Background

Stroke is the most common cause of new-onset seizures in older adults. Seizures occurring within 24 to 48 hours or within one week after a stroke is an early seizure, which are associated with more complications. Post-stroke seizures may increase the rate of mortality in stroke patients if they are not recognized and untreated. Seizures immediately following a stroke are associated with increased resources utilization, prolonged length of hospital stay and increased mortality. Stroke nurses may not be prepared or have the confidence to assess and care for the stroke patient who is having a seizure.

Materials and Methods

Appropriate management can begin when the stroke nurse can identify risk factors for post-stroke seizure so appropriate management of these patients can occur. Stroke nurses need to have the competencies to recognize symptoms of a seizure and to prioritize interventions to promote patient safety during a seizure.

Results

This presentation will start with a review of what is known about post-stroke seizures. It will assist stroke nurses to assess and set appropriate nursing priorities when caring for a post-stroke patient at risk for or having a seizure.

Conclusion

Stroke nurses should have an increase in knowledge about how to assess and care for the stroke patient who is seizing. With this knowledge, they will be able to improve their seizure assessment skills and provide evidence-based nursing interventions for the stroke patient who is experiencing a seizure. Accepting the challenge to care for these stroke patients will allow the stroke nurse to gain confidence in caring for the post-stroke seizure patient.



Experience Of Nurses Caring For Patients With Anosognosia: An Exploratory Qualitative Study

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Exploring "hard to grasp" experiences- Sleep and anosognosia, Hall B, May 25, 2023, 16:20 - 17:00

Objective

Investigate the experience of nurses caring for patients with anosognosia.

Anosognosia is a condition in which a person with a disability is cognitively unaware of having it. It negatively impacts on patient's independency, on rehabilitations, on nursing cares and on the care givers' quality of life. Although it is a common condition, it is not largely investigated by nurses.

Material and methods

We made a qualitative study, based on a semi-structured interview. Data has analysed using the qualitative thematic analysis (Braun and Clarke, 2021). The participants were involved purposefully and sequentially. The study setting was the Institute of Rehabilitative Medicine "Gervasutta", part of the Udine Teaching Hospital (Italy).

Results

15 nurses were involved. The analysis of the interviews identified nine domains: 1- Disorder of perception, 2- Risks management, 3- Strategies, 4- Hemi spatial neglect, 5- Difference between patients with or without anosognosia, 6- Difference in caring to oriented and disoriented patients, 7- Caregivers' role on patients' improvement, 8- Relationship between patient and caregivers, 9- Hospital discharge planning.

From these domains emerge as conceptual dimensions: 1- nurses' perceptions and experience and 2- care interventions; them has been focused both on patients and caregivers to better highlights the results of the study

Conclusions

The results of the study suggest some interventions for taking charge of the anosognosic patient and his caregiver. In the clinical practice, surveillance and danger prediction have been indicated as optimal strategies to compensate for the unpredictability and impulsivity typical of anosognosia people. The importance of the nurses' role both as a mediator between patient and caregiver and as counselor to the caregiver were also underlined.



A qualitative study on post stroke sleep: Floating in a space between being awake and asleep

Ms. Ida Kathrine Westh

Exploring "hard to grasp" experiences- Sleep and anosognosia, Hall B, May 25, 2023, 16:20 - 17:00

Background; Despite the growing body of evidence showing that sleep disturbances are common after stroke, sleep disturbances are neglected in the stroke rehabilitation guidelines, and research on the patient perspectives of the phenomenon, is scarce.

Aim; To explore the experience of sleep, and tiredness after stroke.

Materials and Methods; As part of a descriptive study on post-stroke sleep using mixed methods, fifteen qualitative interviews were carried out in 2021 and 2022. Eight women and seven men, with acute National Institute of Health Stroke Scale (NIHSS) between 0 and 6 (average: 2,1; SD: 1,8) were included at the Rehabilitation Unit, and the Outpatient Clinic at Aarhus University Hospital. Informants were interviewed 3 months after stroke onset in their homes, by the first author. Attempts were made to include informants with different perspectives on the overall phenomenon of post-stroke sleep, and with different locations and types of stroke. A Ricoeur- inspired analysis method, focussed on moving from a surface interpretation- the naïve reading – to an in-depth interpretation through structural analysis and critical discussion, was used.

Results; The informants described a change in the way they experienced sleep, to a more superficial and interrupted sleep pattern. In the theme: "A mental state of mind being between awake and asleep - floating through the night" experiences of sleeping under the surface, with open eyes were described. They experienced that this affected daytime energy, and described symptoms like headache, a bathing cap feeling, a cold feeling on the head, dizziness and feelings of losing control, when overwhelming exhaustion was approaching. This unfolds in the theme: "Exhaustion hits like a hammer - losing control". The everyday life post-stroke was described as living with a new kind of exhaustion. Accepting not being able to overcome the same activity level as prior to the stroke incident was experienced as a journey towards a new self- image, which was unfolded in the theme: "On the pathway to a new self-image- not overcoming it all". Informants in this study had mild strokes and no informants with hemorrhagic stroke were included, which may limit the transferability of our findings. **Conclusions;** Stroke survivors have a coherent perspective on the phenomenon of post-stroke sleep, including both sleep, affected daytime energy, tiredness and exhaustion. Descriptions of their experience, can inspire guidelines and programs. More research in the treatment of post-stroke sleep disorders is needed.



Implementing Dysphagia Screening for Acute-Stroke Patients

Mrs. Johanna Martin¹, Mrs Inkeri Hutri¹, Ms Jaana Kotila¹

¹HUS, Helsinki, Finland

Dysphagia and meeting complex nutritional challenges., Hall A, May 26, 2023, 10:30 - 12:00

Background: In Finland, approximately 24,000 people faces with Stroke every year. Cerebrovascular accidents are the third most costly national disease for society. Stroke patients may experience dysphagia.

Difficulty with swallowing causes significant psychosocial, health and financial problems for people with cerebrovascular diseases. In the identification and treatment of swallowing difficulties, multiprofessional cooperation is emphasized, in which the nurse plays a key role.

Purpose: Evidence-based guidelines for screening dysphagia (2021) has been produced for the identification of dysphagia, the aim of which is that nurses treating a patient with Stroke in the acute stage know how to perform a swallowing screening and what should be considered in the screening.

This "White paper" focuses on the implementation of the treatment recommendation in the neurological and neurosurgical acute inpatient wards of Helsinki University Hospital, HUS. Altogether there are 12 wards belonging to the catchment area of HUS Neuro Center.

Methods: Current practices in dysphagia screening were resolved via a survey for nurses working in neuro units. Outcomes brought up the varying practices used. Half day education sessions were organized for health care professionals to teach more about dysphagia and unify the practices. A follow-up for a change in practice will continue for two years with a survey done every six months and then yearly to ensure the continuity of standardized practice.

After sessions, a survey was repeated. Also, other relevant parties (expert nursing groups, teaching nurses and skilled nurses) were included in the process of implementing the practice.

The latest result of implementation will be presented in the congress.

Conclusions: Implementing evidence base practice guidelines into nursing requires commitment and motivation. Adding information and justifying the meaning of evidence-based practice in nursing is essential for implementing.

Firstly, this is to reduce hospital born chest infections and pneumonia. Secondly, to unify methods throughout the HUS Neuro Center.

Significance

Evidence-based guidelines for Stroke patients' dysphagia is value-added program for health care providers

Guidelines enhances the nurse's evidence-based skills and practices



The Effect of a Seminar on Dysphagia and Safe Nutrition in Stroke on the Knowledge Level of Nurses Working in Neurology Clinics

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Dysphagia and meeting complex nutritional challenges., Hall A, May 26, 2023, 10:30 - 12:00

Objective: The aim of this study was to investigate the effect of a seminar about dysphagia on knowledge level of safe nutrition in stroke among nurses working in neurology clinics.

Material & methods: The study was planned as a pre-test-post-test, quasi-experimental study. The sample of this pretest-posttest study consisted of 42 nurses working in a neurology clinic of a university hospital. The nurses participated in a four-hour seminar including swallowing difficulties in stroke. Sociodemographic questions and a knowledge test questioning dysphagia and safe nutrition practices in patients with stroke was developed by researchers and applied to the participants before, immediately after and six months after the seminar. There were 41 questions on the test, including true/false, multiple-choice, open-ended, and multiple-answer questions. The highest possible score is 84 points, with 2 points for open-ended questions and one point for all other questions (one point for each correct item for questions with multiple answers).

Results: Nurses 71.4% (n=30) were working in the neurology ward, and 28.6% (n=12) were working in the emergency department of the neurology clinic. Of the nurses, 73.8% (n=31) were female, 47.6% (n=20) had a bachelor's degree, and 71.4% (n=30) were working in shifts. While the mean age of the nurses was 30.8±8.8 years, the average working year was 9.6±8.4 years. The mean duration of work in neurology clinics was 6.5±7.6 years. 78.6% (n=33) of the nurses stated that they attended an in-service education program on stroke. The majority of nurses, 88.1% (n=37), had experience inserting a nasogastric feeding tube, and 92.9% (n=39) reported that they provided care for patients with dysphagia and 81% (n=34) did bedside swallowing assessments. The pre-test mean score of the nurses increased significantly from 50.4±10.1 to 65.1±8.7 points after the seminar (p=0.033); the mean of the test administered at the sixth month was found to be 59.2±9.1, significantly higher than the pre-test scores (p=0.016). However, it was found to be lower compared to the post-test performed on the day of the seminar, although the significant difference was preserved.

Conclusion: The knowledge test scores of neurology nurses about dysphagia and safe nutrition in stroke patients increased significantly at the end of the seminar. The decrease in the mean scores in the tests performed after six months indicates that the theoretical knowledge can be forgotten and the trainings should be repeated.

Keywords: stroke, dysphagia, knowledge level, safe diet, complications of dysphagia



Undernutrition following acquired moderate to severe brain injury: A longitudinal study across sectors

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Dysphagia and meeting complex nutritional challenges., Hall A, May 26, 2023, 10:30 - 12:00

Objective

The WHO defines malnutrition as deficiencies, excesses or imbalances in energy and/or nutrient intake, resulting in undernutrition, micronutrient-related malnutrition and overweight. Patients with acquired brain injury (ABI) risk disease-related undernutrition due to increased metabolic state, difficulties in purchasing, preparing, chewing, swallowing and delivering food to the mouth in conjunction with confusion, decreased alertness, fatigue and depression. Loss of weight and muscle tissue is associated with an increase in complications, length of stay and mortality; a decrease in functional outcome leading to dependency on public services after discharge. Upon referral to a rehabilitation hospital, nearly half of patients fulfil the global clinical nutrition community (GLIM) malnutrition criteria and 10% remained malnourished after four weeks of rehabilitation. Furthermore, long term undernutrition persists in about one third of community-dwelling ABI patients. However, longitudinal studies of nutritional state during the rehabilitation trajectory after ABI, is largely non-existent.

Aim

To describe the nutritional status from hospital admission to one year after injury in patients with ABI at risk of undernutrition at discharge from rehabilitation hospital. Secondly to identify the prevalence, disease burden and demographic characteristics of this group. Third to map the interventions conducted by the primary health care during the first year after onset to address the groups individual nutritional needs one year after onset and discharge to own home

Method/Material

Descriptive longitudinal study.

Data extracted from the hospitals business intelligence (BI) system (2015-2020 ~ 2800 patients) in combination with data from primary healthcare sector extracted from the care platforms used in the 11 participating municipalities. Risk of undernutrition are defined as FIM score ability to eat 1 and/or undernourished patients using the GLIM criteria of BMI <20 if < 70 years and 22 if > 70 years

Results

The prevalence of undernutrition will be calculated at admission and at discharge from in-hospital neurorehabilitation. Longitudinal nutritional status, disease burden, demographic characteristics and nutritional interventions conducted by primary health care will be calculated in relation to patients at risk of malnutrition at discharge from rehabilitation hospital.

Conclusion

In progress. Will be presented at the conference



Eating with dignity.

Exploring how eating can be improved for people with amyotrophic lateral sclerosis, with focus on pureed diets.

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Dysphagia and meeting complex nutritional challenges., Hall A, May 26, 2023, 10:30 - 12:00

Background: Amyotrophic Lateral Sclerosis (ALS) is an incurable aggressive neurodegenerative disorder. Malnutrition is common in people with ALS (pwALS) and can lead to neuromuscular weakness and negatively affect patients' quality of life and survival. It is thus important to increase the knowledge of eating experiences when a pureed diet is needed and to identify facilitators that can potentially lead to increased eating-related well-being.

Method: Qualitative study. Three focus group interviews with healthcare professionals (n=13), service providers (n=7), and semi-structured individual interviews with pwALS and their spouses (n=5). All the interviews and observations were recorded and transcribed. We used inductive content analysis to analyze the data.

Results: One overarching theme was generated, "Eating with dignity during ALS – being a step ahead of time," which contained three subthemes: a) Physical and emotional impact of eating difficulties – loss of eating abilities and seeking a personal adjustment to a downward trajectory. b) social impact of eating – attitudes and assistance from others, meaningful social events, and maintaining dignity. c) Context-related features – the setting of eating, access to equipment and healthcare, financial and other support. We provide a model of the dynamic interaction between different components of the findings.

Conclusion: It is clear that much can be done to improve the food environment of people with dysphagia. Easy access to attractive molded pureed diets in hospitals, nursing homes, home-food delivery, and supermarkets is important. Awareness must be raised among health professionals, service providers, pwALS and their relatives, and the larger community. Education needs to be established and policies to become clear, i.e., drawing up care pathways and using quality indicators. Finally, access for pwALS to a higher quality of pureed food is urgently needed.



Supporting the person with MS through their journey: Pharmacological treatments

Mr. Piet Eelen, Dr. Jörg Kraus, Dr. Giampaolo Brichetto

Symposium: Multiple sclerosis care and the evolving role of the nurse, Hall B, May 26, 2023, 10:30 - 12:00

Overview

As new research and emerging therapies change the treatment paradigm for MS, the nursing role and its associated demands are also changing. The introduction of new MS therapies has led to an increased need for nurses to be involved in counselling patients on treatment decisions and providing education on treatment initiation, as well as monitoring and managing any side effects, assessing treatment outcomes, and encouraging patients to adhere to their treatment regimens. The MS nurse therefore requires a highly specialist clinical expertise and a developing knowledge of a wide range of drugs and therapies, along with the detailed monitoring and follow-up processes some of these treatments require, if they are to successfully and proactively support people with MS.

An overarching philosophy of nurse education should be one that promotes self-management. Shared decision-making incorporates the person's values and preferences into medical decisions and puts the person at the centre of care. The MS nurse helps to provide individuals with the tools and support they need to feel confident to actively manage their personal care. Ensuring that the person with MS understands the available treatment options and goals will lead to more informed decision-making, helping the person with MS feel empowered, in control, and more motivated to adhere to the treatment regimen.

The objective of this presentation is to provide an overview of the different ways that the MS nurse can support people with MS in their treatment journey, with a discussion of all of the points raised above.

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Work Difficulties and Related Factors in Patients with Multiple Sclerosis

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Symposium: Multiple sclerosis care and the evolving role of the nurse, Hall B, May 26, 2023, 10:30 - 12:00

Aims: Numerous variable symptoms such as motor, somatosensorial, balance/coordination, visual, cognitive and psychiatric disorders seen in multiple sclerosis (MS) can cause important problems in the family, social and working lives of the patients. The difficulties faced by MS patients in their working life is an issue that has gained importance in recent years. This research was carried out as a descriptive study to determine the difficulties of working life in patients with MS and to examine the relationship between factors such as cognitive problems and fatigue with the difficulties in working life.

Material and methods: The sample of the study consisted of 141 patients with MS, who were registered to the neurology outpatient clinic of Goztepe Prof Dr Suleyman Yalcin Sehir Hospital, were employed, and met the inclusion criteria. To collect data, patient information form, Working Difficulties in Multiple Sclerosis Questionnaire (MSWDQ-23), Work Productivity and Activity Impairment Questionnaire: Multiple Sclerosis V2.0 (WPAI: MS), Montreal Cognitive Assessment Scale (MOCA), Hospital Anxiety and Depression Scale (HADS), Modified Fatigue Impact Scale, MS-Related Symptoms Scale and EQ-5D-3L General Quality of Life Scale were used. Questionnaires were applied to the patients by face-to-face interview method.

Results: Most of the patients participating in the study were female (53.2%) and the mean age was 39.52. Almost half (45.4%) of the patients stated that they are the person who undertakes the most financial responsibilities in the family. The type of work of 19.9% of the patients changed due to MS and 12.8% of them had difficulty in finding a job due to MS. The mean score of Patients' Working Difficulties Questionnaire was 33.11 ± 21.27 (range 0-89.77); The mean score of the Questionnaire for Loss of Work Productivity Due to MS was 56.41 ± 29.03 (range 0-100). Working difficulties and work productivity were correlated with sociodemographic and clinical factors (educational level, EDSS, anxiety, depression, fatigue, cognitive problems, MS symptom burden, sleep quality) and quality of life ($p < 0.05$).

Conclusions: Many clinical factors affect working life in patients with MS. Employment loss is a major problem and concern for them. It is recommended to conduct studies on difficulties of individuals with MS in working life and to provide improvements in vocational rehabilitation.

Keywords: Multiple Sclerosis (MS), Work life difficulties, employment, work productivity.



Nursing care and support throughout the journey of a person living with MS

Dr. Giampaolo Brichetto, Mr. Piet Eelen, Dr. Jörg Kraus

Symposium: Multiple sclerosis care and the evolving role of the nurse, Hall B, May 26, 2023, 10:30 - 12:00

Overview

MS is a chronic, unpredictable disease that can have a significant impact on the person's functional abilities, physical and emotional well-being, and quality of life.

As MS is commonly first diagnosed in young adults, disease progression often occurs in the prime of life and can have a negative impact on key life events including employment, relationships, and family planning. This can lead to financial hardships, strained family relations, and feelings of social isolation, all of which require effective coping strategies.

Specialist MS nurses have a fundamental role in helping people living with MS with their ongoing wellbeing and day-to-day disease management. The MS nurse is a supportive presence providing comprehensive, evidence-based information, responding to questions, clarifying communications to and from the physician, navigating to useful resources, and empowering the person with MS to help them become a self-determined participant in their care.

The MS nurse often serves as the hub of communication, education, advocacy, and counselling for people with MS, their caregivers, and their families. As an advocate for the person with MS, the MS nurse is a constant source of support, advice, and encouragement. Establishing a good rapport with the person with MS and providing up-to-date information about current research and developments can help the person deal with their diagnosis and provide them with hope for the future.

The objective of this presentation is to provide an overview of the different ways that the MS nurse can support people with MS in their journey with MS, with a discussion of all of the points raised above.

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Supporting the person with MS through their journey: Management of symptoms

Mr. Piet Eelen, Dr Joerg Kraus, Dr Giampaolo Brichetto

Symposium: Multiple sclerosis care and the evolving role of the nurse, Hall B, May 26, 2023, 10:30 - 12:00

Overview

Symptom management is a critical part of care of those with MS; left untreated, symptoms can significantly impair the person's quality of life and their ability to fully engage in day-to-day activities and continue in their work. In addition, symptoms can also lead to the development of additional symptoms; for example, fatigue will likely lead to decreased exercise, which in turn can lead to spasticity, constipation and also depression. Bladder dysfunction, another common symptom in people with MS, can affect sleep patterns which in turn can affect cognition and aggravate depression. While some symptoms are easy to see, others (e.g., fatigue, emotional changes) are less visible, making the management of these symptoms even more complex. It is important for MS nurses to ask about and address all symptoms as part of the comprehensive management of the person with MS. The nurse can then explore in detail and support the person with MS to find strategies to help them cope with symptoms they are experiencing.

When it comes to managing these symptoms, an individualised approach is required focusing on the needs of the person with MS and may include pharmacological treatments as well as other more supportive approaches. The MS nurse is an important member of the multidisciplinary team, helping to ensure an individual person's needs are effectively addressed.

Improving symptoms can maintain quality of life and the ability of the person with MS to undertake activities of daily living and ability to maintain employment. In order to provide optimal support and advice as appropriate to people with MS-related symptoms, the MS nurse must be aware of available treatment options and management strategies, including an understanding of the likely benefits from pharmacological therapy, knowledge of the common dose regimens and possible adverse events the person may experience.

The presentation will provide an overview of some of the common management strategies for the more frequently reported symptoms experienced by people with MS.

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Neuroscience education – Evaluating the impact of a bespoke University validated ‘Neuroscience Care and Management’ course.

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Issues and everyday concerns in specialized nursing assessment in neurology, Hall H, May 26, 2023, 10:30 - 12:00

Background

Literature reviews and Department of Health documents establish a clear need for post graduate specialist education to maintain patient safety. Prior to 2017 the Neuroscience degree course in the West Midlands was not sustainable, so through the British Association of Neuroscience Nurses network a relationship with Buckinghamshire New University was established and a new post graduate module was developed. Challenges in its creation and delivery included ensuring it met the needs of healthcare professionals from a range of Neuroscience clinical settings and that the course was financially viable for attendees, the National Health Service (NHS) Trust delivery it and the University. As the programme was to be delivered in an NHS setting, at distance from the University it was important that academic support and regulation could still be maintained. These challenges were overcome by utilising local networks, regular review of feedback from the course and through quality assurance of lectures. The course evaluated extremely well after its first run, with staff stating how it would improve the care they provided on return to their clinical areas. Five years on, the programme team felt it would be appropriate to formally evaluate the impact of the course on the students and their practice.

Materials and methods

A student experience questionnaire has been developed by our team and distributed to students who completed the course. The questionnaire poses questions to evaluate changes students have made in their practice including changes to knowledge and attitude. Impact of the course on career progression is also discussed. The questions addressed organisational priorities by asking students about the impact of the course on staffing retention and patient safety. Finally, open-ended questions asked for comments and suggestions about the highlights and development needs of the course to allow the students to expand the feedback on their educational experience.

Results

This presentation will be the first time the results have been made public. Data collection is in process and thematic analysis of these will be presented.

Conclusions

These findings link to the theme of Neuroscience education and will add to the existing body of work on how post graduate education is key to the future development of Neuroscience Nursing. The information will not only develop practice locally but will support educators across the speciality in developing ideas about the impact of education on practice and individual development, as well as provide guidance for neuroscience programme development and evaluation

What is that neurological exam telling me?

Cynthia Bautista¹

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Issues and everyday concerns in specialized nursing assessment in neurology, Hall H, May 26, 2023, 10:30 - 12:00

Background

Neuroscience nurses are at the bedside caring for the brain injured patient and need to be aware of any neurological changes. Timely assessments are an important quality of neuroscience nursing care. A neurological event can happen to any brain injured patient at any time. Neuroscience nurses can be influential in avoiding irreversible brain damage by recognizing subtle changes from the patient's baseline that could indicate a crucial deterioration.

Materials and Methods

This presentation will describe the essential components of the nursing neurological assessment. Performing a neurological assessment can be challenging, so several tips will be provided to help the neuroscience nurse to recognize early neurological changes. Knowledge of neurological anatomy and pathophysiology will be reviewed which will assist the nurse to focus on aspects of the neurological assessment.

Results

Focused neurological assessments and observations are vital in ensuring early recognition of deterioration. Neuroscience nurses can comprehensively gather assessment data about their patient to reveal evidence of a neurological deficit. They will be able to recognize early neurological changes with their patient and provide timely interventions. Serial assessments should be performed to document changes over time so that appropriate interventions can be implemented.

Conclusion

Although there are challenges to carrying out a neurological assessment, using a standardized method can help the neuroscience nurse recognize changes that may affect outcomes. Having confidence to perform a neurological assessment can guide the neuroscience nurse to identify neurological changes in the brain injured patient. With a rapid detection of neurological changes, the neuroscience nurse can initiate interventions promptly.



Neurological observation education in pre-registration Nursing: Who, what and how? The launch of an international survey of nurse academics.

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Issues and everyday concerns in specialized nursing assessment in neurology, Hall H, May 26, 2023, 10:30 - 12:00

Objective: The importance of accurate assessment of neurological observations to maintain patient safety has been well established in literature (Hickey, 2019). More recent work has also identified variations in nurses' proficiency and confidence in performing neurological observations as well as differences in how and when education and training is delivered (Cook et al, 2022). The Nursing and Midwifery Council (2018) standards for proficiency state that registered nurses should be able to perform neurological assessment; what this assessment consists of and criteria for competency to be achieved is not specified. In the United Kingdom, pre-registration Nursing curricula currently lacks a standardised method of education of Neurological Assessment.

Materials & Methods: Development of a literature review search strategy is currently in progress and ethical approval from the Higher Education Institution of the authors is being sought. A review of databases including CINAHL and MEDLine will be performed to identify current evidence base for how, when and by whom neurological observation education is delivered to pre-registration nurses across paediatric, adult, and general nursing internationally. From the literature review variations and standardisation in practice will be identified. This will subsequently inform the creation of an online survey for nurse educators and academics and piloted – with a view to launching the survey during the EANN congress.

Results: The results of the literature review will be presented initially to generate discussion within the congress setting. The survey will then be launched with a view to publishing results in early 2023. It is hoped results from the survey can be used to inform and develop the education of Neurological assessment in pre-registration Nursing courses.

Conclusion: This provides an exciting opportunity within advancing practice in Neuroscience nursing to ensure a more standardised approach to neurological observation education internationally. The findings from presented from the literature review and the launch of the survey provides an opportunity for nurse educators and academics to share knowledge and examine practice across Europe.

Cook, N, Braine, ME, O'Rourke, C, Nolan S. (2022) Assessment of Limb Strength by Neuroscience Nurses – Opportunities and Challenges from a Snapshot UK and Irish Study. Presented at British Association of Neuroscience Nurses Conference, 7th October 2022 – Glasgow.

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Assessment of limb strength by neuroscience nurses – variations in practice and associated challenges from a UK and Irish survey.

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Issues and everyday concerns in specialized nursing assessment in neurology, Hall H, May 26, 2023, 10:30 - 12:00

Objective

The assessment of limb strength has long been an established component of neurological assessment. However, no research has existed that illustrates what tools and practices exist within the UK and Ireland about this aspect of professional practice. The study aimed to determine which tools are used by UK and Irish neuroscience nurses in the assessment of limb strength and the associated challenges and variations in practice.

Materials and Methods

This study used a descriptive survey design. No suitable pre-existing instrument was identified to meet the aim and objectives of this study. Thus, an online self-reported 16-item questionnaire was developed drawing on variables from the literature and guidance from an expert panel from the executive board of the British Association of Neuroscience Nurse (BANN).

Results

Data revealed varied practices with a dominance of two tools being used in practice: the Medical Research Council (MRC) scale and the Normal Power to No Movement (NP-NM) scale. Most respondents used the same tool across all conditions with over half of respondents reporting challenges around interrater reliability. The study also revealed a disconnect between motor and sensory assessment with a wide variation in practice regarding assessing both elements of neurological functioning together.

Conclusion

This is the first study to capture the voices of nurses in these aspects of practice and highlights variations in assessment practice and the absence of a sound evidence base behind the choices of motor limb strength assessment tools used. Additionally, the results illustrate the absence of cohesive approaches to assessment and the need for further research into other aspects of neurological assessment, including sensory assessment



Evaluation of Pregnancy, Delivery and Postpartum Experiences of Patients with Multiple Sclerosis.

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Complex and diverse issues related to patients with a neurological disorders, Hall A, May 26, 2023, 13:00 - 14:30

Background: It is important to follow up the pregnancy processes in patients with multiple sclerosis (MS). According to current research, pregnancy may actually have positive impacts on the course of MS rather than negative ones. This study was conducted to discover how gestational periods are affected by multiple sclerosis.

Material and methods: 197 samples were used in this investigation, which was conducted between November 2019 and February 2021 in the MS clinic. Patient Information Form and Multiple Sclerosis Symptom Scale (MS-RS) were applied to the patients. The Expanded Disability Status Scale (EDSS) was utilized to assess the patients' physical disabilities. Result: In our study, a statistically significant difference was found between pre-pregnancy and postpartum EDSS values ($P < 0.001$). In our study, it was observed that the symptoms of MS decreased significantly during pregnancy, but increased in the postpartum period and returned to their prenatal level. In comparison to pre-pregnancy, there were significant alterations in motor, brain stem, sensory, neuropsychiatry, elimination, exhaustion, and sleep issues after birth. In terms of the annual relapse rate, it was shown that there was a clinically significant difference between the pre-pregnancy, pregnancy, and post-pregnancy periods. The relapse rate during pregnancy was found to be lower than in other periods.

Conclusion: It was discovered that multiple sclerosis generally progressed well and that the frequency of relaps decreased during pregnancy.

Keywords: Multiple Sclerosis, pregnancy, delivery, breastfeeding, Multiple Sclerosis-Related Symptoms Scale.



Retinal biomarkers in Parkinson's disease: Retinal oximetry, pattern electroretinography (PERG), visual evoked potentials (VEP) and optical coherence tomography (OCT)

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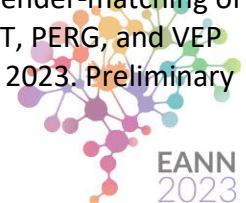
Complex and diverse issues related to patients with a neurological disorders, Hall A, May 26, 2023, 13:00 - 14:30

Background: With Parkinson's disease (PD) progression, α -synuclein-containing Lewy bodies spread and accumulate to different regions of the central nervous system (CNS), including the retina. Emerging evidence suggests that non-motor symptoms can be linked to the preclinical phase of PD as early as five years prior to the presentation of motor symptoms, which is the hallmark of the disease. Currently, there are no reliable diagnostic techniques or well-established biomarkers to identify PD in its preclinical stage. However, recent studies have shown the potential of measuring changes in the neurosensory retina as a new-generation biomarker indicating neurodegenerative brain disease. To exemplify, electrophysiological assessments, including electroretinography (ERG) and visual evoked potentials (VEP), have revealed decreased responses in PD. Likewise, optical coherence tomography (OCT) has shown significant retinal nerve fiber layer thinning, indicating loss of retinal and dopaminergic cells. Finally, spectrophotometric retinal oximetry can determine oxyhemoglobin saturation (SrO₂) in retinal vessels, noninvasively. Results of such retinal oximetry imaging in CNS diseases suggest that SrO₂ is altered in people with multiple sclerosis, mild cognitive impairment, and Alzheimer's disease. These results indicate that retinal oximetry may serve as a cutting-edge biomarker for PD. Using this measurement may also open new insight into the pathophysiology, diagnosis, and progression of CNS diseases, such as PD. Combining electrophysiological assessments and structure imaging offer objective parameters in the evaluation and detection of PD, but the potential of the retina as a novel biomarker has yet to be fully illuminated.

Aim: To determine whether retinal oxyhemoglobin saturation may serve as a novel biomarker in Parkinson's diseases

Method: The Oxymap T1 retinal oximeter (Oxymap ehf., Reykjavik, Iceland) is based on a conventional fundus camera coupled with two high-resolution digital cameras. It simultaneously acquires two monochromatic retinal images at 570nm and 600nm for spectrophotometric analysis. The absorbance of arterioles and venules is similar at the 570nm point, but the absorbance of arterioles at 600nm wavelength is less than that of venules. The specialized software automatically selects vessel points on the monochromatic images to calculate SrO₂. Subsequently, SrO₂ presents as a pseudocolor overlay on the fundus image. In the present study, we will measure SrO₂ in 60-80 patients with PD and compare it with age- and gender-matching of healthy controls. Pearson's correlation coefficient will be calculated between SO₂, OCT, PERG, and VEP

Results/Conclusion: Data collection is in its initial stages but will continue throughout 2023. Preliminary results will be presented at the EANN congress.



Home service solution for patients treated symptomatically with intrathecal baclofen

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Complex and diverse issues related to patients with a neurological disorders, Hall A, May 26, 2023, 13:00 - 14:30

Background: Patients with diseases of the central nervous system such as multiple sclerosis, cerebral palsy, and spinal cord injury may be affected by disabling spasticity, which is difficult to treat with oral spasmolytic. Intrathecal baclofen is a specialized and individualized treatment of spasticity via an implanted pump system. The treatment requires the patients to visit the hospital for refilling the infusion system and adjustment of the dose performed by a nurse.

Often severely immobilized and cognitively impaired patients are transported to the hospital in cars for the disabled or in an ambulance for treatment. A dialogue between the patient, their caregivers and the healthcare professionals are crucial for adjustment of the treatment according to spasticity and life circumstances but often patients are unaccompanied by their caregivers when they visit the hospital. The study aims to create knowledge about patients, caregivers and healthcare professionals' experiences with intrathecal baclofen treatment in hospital settings and the need for a sustainable home service solution.

Material and methods: A participatory design study in three phases. First, needs were identified by interviews and participant observations. Then a solution for the identified needs was designed and developed. Thereafter the solution was tested and evaluated with interviews.

57 patients, their caregivers and 6 healthcare professionals participated in the study.

Results: Phase 1 uncovered that time spent on transport was stressful and exhausting for patients. Most caregivers had difficulties prioritizing the escort of patients and some did not understand the importance of their information about the patient and the effect of the treatment. A home service solution was developed in iterations along with technology to help with route- and appointment planning. The tool helped the nurses with logistics and gave the patients a say. The time of a visit could be locked so the patients could attend physiotherapy and other appointments. Both patients, caregivers and nurses contributed with ideas and requests for the final solution.

Conclusions: Home visits were a relief for both patients and caregivers. Patients were spared strenuous transportation to the hospital and caregivers got a broader understanding of the treatment. The caregivers provided information about the patient's spasticity, which helped the nurses to specify if there was a need for adjustment of the treatment. The home visits required the nurses to work in a new way including time on transportation. The nurses got new insights into the patient's everyday life and experienced more holistic care.



Long Term Effects of Toxic Stress on the Growing Brain

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Complex and diverse issues related to patients with a neurological disorders, Hall A, May 26, 2023, 13:00 - 14:30

Objective

Identify the causes of toxic stress in children and the long-term effects
Describe the pathophysiology of the effect of toxic stress on the growing brain
Identify interventions and promote resiliency

Material & Methods

Repeated exposure to adverse childhood experiences (ACEs) in children under 18 years of age is a public health crisis that can cause a lifetime of negative mental and physical health consequences. ACEs are stressful or traumatic events such as abuse, neglect, and household dysfunction (divorce, alcohol and drug abuse) that can lead to a toxic stress response in children, putting them at risk for health and behavioral problems. Toxic stress has a neurobiological effect on the developing brains of children, activating the hypothalamic-pituitary-adrenal axis (HPA) resulting in alteration of brain structures, synapses, neurohormones, and how DNA is read. This presentation will discuss what neuroscience nurses need to know about how adverse childhood experiences resulting in toxic stress can negatively affect the health and behavior of children and adults.

Results

The landmark Adverse Childhood Experiences Study found that two-thirds of the population had at least one ACE and 12.6% had four or more ACEs. The study also found that the higher the ACE score, the worse the health outcomes for that person. The pathophysiology of brain development and the effect of the stress response on brain structure will be presented. Toxic stress is translated into disease by either exposure to chronic hypercortisolemia and cytokines, or the development of coping mechanisms such as overeating, smoking, drug use, and risky sexual behaviors. This can lead to negative adult outcomes of heart disease, diabetes, hypertension, stroke, suicide, asthma, cancer, and autoimmune diseases.

Conclusion

By attending this presentation, neuroscience nurses will be able to recognize the signs of toxic stress, describe the neuropathology involved, and screen for ACEs so they can intervene and promote resilience in vulnerable children. Early identification with the appropriate intervention can prevent the lifelong physical and mental health consequences.



What difference does a PD coordinator make for people with Parkinson's disease and family carers?

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New perspectives on Parkinson's disease – assessment and treatment, Hall B, May 26, 2023, 13:00 - 14:30

Objective

Parkinson's disease is a chronic neurodegenerative disease and disease management is known to be complex. One challenge experienced by people with Parkinson's disease and their family carers is to continuously being knowledgeable of the cross-sectional resources available to support better living with Parkinson's disease. The OPTIM-PARK project is an international project with partners from Denmark, Norway, Spain and UK. The project is a feasibility study focusing on optimisation of community resources and systems of support to enhance the process of living with Parkinson's Disease.

In the project we have tested the feasibility and meaningfulness of establishing an intervention delivered through a community-based Parkinson-coordinator. Part of the evaluation is to understand how people with Parkinson's disease and family carers experience the meaningfulness and acceptability of the intervention. The aim of this presentation thus is to illuminate the experience of the intervention from the perspective of people with Parkinson's disease and family carers.

Materials and methods

Five people with Parkinson's disease and five family carers from each participating country will be interviewed, using the same interview guide cross national (20 people with Parkinson's disease and 20 family carers in total)

Interviews will be analysed using thematic analysis in two steps. Firstly, a national analysis and secondly a cross-national analysis.

Results

Results from the interviews and cross-national analysis will be presented at the conference.

Conclusion

This study is expected to provide important knowledge of the experience of the intervention, that will inform further development and implementation of the intervention.



The impact of the Covid-19 pandemic on the evolution of functional dependence in patients admitted to a neuro-rehabilitation ward: a retrospective observational study

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Contemporary perspectives in neurosurgery and education, Hall H, May 26, 2023, 13:00 - 14:30

Objective: to describe the impact of the pandemic on the effectiveness and efficiency of rehabilitation in patients admitted to a neurorehabilitation ward as measured by the Functional Independence Measure (FIM) and Barthel Index (BI) scales.

Material & Methods: A retrospective observational study has been conducted in a Neurorehabilitation ward at the Institute of Physical Medicine and Rehabilitation in Udine. Two distinct cohorts of patients have been taken into consideration prior to the beginning and during the pandemic.

Results: The two groups of patients resulted homogeneous by features; the presence of a bladder catheter was significantly greater in the Covid-19 cohort upon entering the ward. There were no significant differences in terms of recovery of functional independence between the two groups (FIM: 74.33 vs 80.81, p 0.176; BI: 56.08 vs 58.70, p 0.589). The presence of a bladder catheter at the admission was highly correlated with a longer average length of stay and expected time between the event and the admission to the rehabilitation ward; the presence of aphasia at the admission increased the average length of stay. At logistic regression analysis, age, presence of tracheal stoma on admission, number of infections during hospitalisation, presence of bladder catheter on admission and coming from an intensive unit care explain the recovery of FIM and BI respectively of 42% and 49%.

Conclusion: The functional dependence of patients has not been compromised by the pandemic. The assessment scales FIM and BI have been found to be affected by were by some specific predictors.



The functional recovery of patients admitted to a neuro-rehabilitation ward: a retrospective observational study

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Contemporary perspectives in neurosurgery and education, Hall H, May 26, 2023, 13:00 - 14:30

Objective. Acquired brain injury is defined as damage to the brain parenchyma and contains a range of aetiologies, including traumatic, ischaemic, haemorrhagic, neoplastic, infectious and inflammatory brain injuries. These are among the main causes of disability and the increase in the number of survivors of these types of injuries creates a high demand within neuro-rehabilitation departments.

Objective: to describe the evolution of the effectiveness and efficiency of rehabilitation in patients admitted to a neuro-rehabilitation ward, analysing possible factors that may influence the extent and the timing of recovery.

Materials and methods. A retrospective observational study was conducted in the Severe Cerebral Lesions Unit/Physical Medicine and General Rehabilitation at the Gervasutta Institute of Physical Medicine and Rehabilitation of the Azienda Sanitaria Universitaria Friuli Centrale, Udine, Italy.

Results. The study showed a significant difference in the amount of recovery of patients presenting aphasia (Functional-Independence-Measure 81.69 vs 46.40; Barthel-Index 60.54 vs 28.56) and dysphagia (FIM 84.67 vs 47.14; BI 64.20 vs 27.98). Those who contracted a Urinary Tract Infection (UTI), recovered significantly less (FIM 79.77 vs 55.71; BI 60.08 vs 35.69) and remained hospitalised for more days on average (95.98 vs 80.02). The same emerged for pneumonia (113.38 vs 79.11). Stratifying the sample by the type of brain damage reported, differences emerged in age (p 0.002) and in FIM (p 0.001) and BI (p 0.000) values at admission. The ward of origin was found to be associated with the nature of the injury sustained (p value 0.005). Stratifying the sample by age group, it was noted that patients aged >65 years had significantly longer hospital stays (82.65 vs 93.12 vs 74.57) and lower FIM scores on exit (89.20 vs 76.45 vs 68.61). Indeed, an inversely proportional correlation was found between age and functional recovery calculated with the FIM (p value <0.001; P -0.250). In the same way, patients' awaited days on admission to the ward and days spent in hospital are inversely related to the FIM scale score reported on admission (p value 0.004, P -0.185; p value <0.001, P -0.485).

Conclusion. The effectiveness and efficiency of rehabilitation was found to be influenced by several factors, such as dysphagia, aphasia, presence of urinary tract infections, pneumonia, type of injury reported, ward of origin and age. These influence recovery time in terms of total hospital days and in terms of functional recovery index assessed with the Functional Independence Measure and the Barthel Index scales.



COVID-19 and Elective Spine Surgery: The Older Persons' Experience of Going it Alone

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Contemporary perspectives in neurosurgery and education, Hall H, May 26, 2023, 13:00 - 14:30

Background: Lumbar degenerative spine disease (DSD) often requires a surgical intervention to manage older adults debilitating symptoms. However, older adults undergoing spine surgery describe a circuitous process in their recovery. In general, older people describe feeling powerless, stigmatized, and receive depersonalized care during hospitalization. Institution of a no-visitor policy by hospitals to reduce the risk of viral spread may have caused additional negative consequences to older adults undergoing spine surgery. But little research has been conducted to explore how COVID-19 impacted the hospital/spine surgery experience of older people.

Purpose: The purpose of this secondary analysis of a larger grounded theory study was to understand experiences of older adults who underwent spine surgery in the early period of COVID-19.

Methods: Grounded theory guided this study of people ≥ 65 yrs undergoing elective spine surgery for degenerative spine disease. Fourteen individuals were recruited for 2 in-depth interviews at 2-time-points: T1 during hospitalization and T2, 1-3-months post-discharge. Four interviews were completed at T1 with a no-visitor policy and ten with a one visitor policy. Six interviews were completed at T2 rehabilitation setting with no-visitors. Discriminate sampling of data in which participants described their experiences with visitor restrictions due to COVID-19 was used. Open, axial, and selective coding guided data analysis.

Results: Three categories, Worry and Waiting; Being Alone; and Being Isolated, emerged from the data. Participants had delays (waiting) in getting their surgery scheduled which produced worry that they would lose more function, become permanently disabled, have increased pain, and experience more complications such as falls. Participants described Being alone during their hospital and rehabilitation recovery, without physical or emotional support from family and limited contact with nursing staff. Being isolated often occurred due to institution policy that restricted participants to their rooms leading to boredom and for some panic.

Conclusions: Older adults emotional and physical burden seemed to result from worry while waiting for surgery as well as restricted access to family and social support during hospitalization and rehabilitation. To mitigate the emotional and physical burden for older adult patients living with and having surgery for degenerative spine disease, Neuroscience nursing research is needed on how to best avoid waiting and patient isolation in all phases of care.



A new protocol to reduce Interventional Neuroradiology elective cancellations post COVID

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Contemporary perspectives in neurosurgery and education, Hall H, May 26, 2023, 13:00 - 14:30

Data from public health Scotland demonstrated that 541, 891 elective surgeries were carried out between March 2018 and November 2019, that compared to 300,590 from March 2020 and November 2021 suggests that around 241, 000 patients will have had delays since COVID. By November 2021 the health board in Scotland recorded the highest ever cancellation rate with one in 20 planned procedures being called off due to COVID.

At the Glasgow Queen Elizabeth University Hospital in Scotland the Interventional Neuroradiology department (INR) has had a 40% cancellation rate for cerebral aneurysm patients, this is due to lack of neuro HDU beds in the Institute of Neurological Science (INS). Previously all elective patients would routinely be transferred to HDU post-operatively.

Our goal is to:

- Reduce INR elective cancellations
- Safely transfer patients to neurosurgical wards post-operatively
- Safely discharge patients 24 hours post treatment

Staff investigated how to reduce cancellation within INR without impacting other services within INS. It was recognised over the past year elective INR patients have been discharged successfully home from HDU. A test of change was carried out and assessed the suitability of elective patients being transferred to neurosurgical wards post-operatively after spending a prolonged period in theatre recovery. RTC provided evidence that endovascular treatment of aneurysm provides lower risk to patients than clipping. After benchmarking with other INR departments it was recognised that elective aneurysm patients, being sent only to HDU is out-with the majority of the neurosciences across the country. Further, this practice is not mandated at INS for patients who have had neurosurgical clipping (neurosurgical ward management is routine).

There is a strict inclusive criteria for this trial. Candidates must be:

- elective
- radial access site
- medically fit pre-operatively with no underlying health conditions.

Before this pathway, training was carried out to appropriate recovery & ward staff. We want to maximise the efficiency of current INS resources as all areas are struggling with issues post COVID.

This protocol has been in place since October 2022 and there has already been a 100% non-complication rate. INR will continue to collect relevant data to assess the efficacy and safety of this pathway. Our plan is to present the preliminary results to the surgical clinical governance committee at months 3 & 6, before final ratification.

INR want to reduce cancellation within the department while keeping patients safe and this new protocol will ensure that



Treatment decisions for acute ischemic stroke using advanced imaging

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Advanced decision-making and practices, Hall A, May 26, 2023, 14:30 - 16:00

Background: Assessment and imaging drive decisions for treatment in the acute ischemic stroke patient. While nurses are well equipped to assess stroke patients, they are often unaware of the advanced imaging used to determine treatment.

Material and Methods: This presentation will introduce computed tomography (CT) as a front-line imaging technique for ischemic stroke. Using images, nurses will learn to identify infarct, subarachnoid hemorrhage, intracerebral hemorrhage, and early signs of ischemic changes, including the hyperdense sign and dot sign. I will discuss the identification of clot location through CT angiogram and how the components of CT perfusion – cerebral blood volume, cerebral blood flow, and mean transit time – guide treatment decisions. The Alberta Stroke Program Early CT (ASPECT) score can be used when advanced imaging is unavailable. The role of magnetic resonance imaging (MRI) in stroke will be compared to CT, highlighting the pros and cons of each. **Results:** Using case studies, nurses will analyze advanced imaging methods to determine stroke patients' eligibility for treatment.

Conclusions: Neuroimaging is central to assessing stroke patients, yet nurses have limited knowledge of imaging techniques and their use in treatment decisions for ischemic stroke patients. This presentation will address this knowledge gap and introduce nurses to imaging in stroke patients.



Implementation of robot-assisted early mobilization in ICU nursing processes - data and experiences

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Advanced decision-making and practices, Hall A, May 26, 2023, 14:30 - 16:00

Objective:

Early mobilization positively influences the outcome of critically ill patients, yet in clinical practice, the implementation is sometimes challenging. In this project, an adaptive robotic assistance system will be used for early mobilization in intensive care units. The project aims to evaluate, what has to be considered for implementation and how feasible robotic assistance for mobilization in intensive care is for users and patients.

Material and methods:

The project includes preliminary studies and a interventional study. The preliminary studies were (I) a scoping review, (II) focus groups with nurses (n=29) about the state of the art of early mobilization and (III) international expert interviews (n=13) about facilitators and challenges experienced in implementing robotics. This approach follows the MRC's recommendations for developing complex interventions.

Within the interventional study, feasibility of the use of robotics in intensive care were evaluated during a six-month integration. Hereby, organizational feasibility, behavior and experience of mobilizing nurses as well as the effect on patients' outcomes were examined. 23 patients had been included into the intervention.

Results:

The preliminary studies showed, that no standardized schemes were used for early mobilization. Also, within literature the term "robotics" had been used for mechanical devices. Experts stated, that implementation depended on structural factors like the floor constructions and human factors like motivation. Within the interventional study, 16 of the 23 patients included could be mobilized using robotic assistance and nurses rated the device as feasible.

Conclusions: Implementing robotics in intensive nursing care is complex and in need of prerequisites and accompaniment. At this time, robotic assistance in mobilization is no standard in care and influences daily routines within wards.



External cerebrospinal fluid (CSF) drainage system: Monitoring adherence to best practice guidelines

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Advanced decision-making and practices, Hall A, May 26, 2023, 14:30 - 16:00

Background

External Ventricular Drains (EVD) and Lumbar Drains (LD) are temporary devices inserted into the ventricles of the brain and lumbar subarachnoid space respectively, as conduits for external CSF diversion and drainage.

We have monitored compliance with British Association of Neuroscience Nurses (BANN) and our trust best practice management since 2007 through periodic audit of patient care. The purpose is to provide objective evidence that patients are managed in accordance with best practice and to identify potential areas for improvement in preventing and/or minimizing complications relating to CSF management.

Methods

The fifth audit cycle was initiated on 1 Nov 2021. Patients with CSF drainage within neuroscience were identified and monitored daily. Data were captured on a pro forma audit form for each patient through direct observation of clinical practice and review of documentation from the electronic patient record (EPR) by the auditors.

Results and Conclusion

50 care episodes were monitored in 13 patients over an elapsed time period of 30 days (1st-30th Nov 2021) by the audit team.

Results demonstrate that all wounds were dressed where appropriate with occlusive, self-adhesive dressings in compliance with the standard. Wound sites where hair growth was evident were left undressed, again in compliance with the standard.

Drainage bag fill volumes were recorded at not more than 75% fill volume in 35 care episodes. In the remaining 15 episodes, bags were not changed at the fill volume limit as patients were either in the process of transfer to theatre for shunt insertion (hence bags clamped closed) or were clamped closed prior to removal. This was a change in practice, implemented following the 2015 audit.

Seven of 50 care episodes (14%) monitored did not have CSF height (pressure) recorded. This appeared to be driven by a level of confusion among staff. Historically, CSF management has been specified in terms of CSF manometer height (cmH₂O) and both guidelines and nurse training reflect this. However recently, CSF management for EVD and LD has, on occasion, been specified in terms of volume by some surgeons, causing confusion.

Overall, the results shows that the standards of care were adhered to and documentation maintained appropriately.



Hence we continue to ensure that each nurse receives education on CSF drainage management as part of their induction within the first month of clinical placement; and completes a CSF competency pack.

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Building an Ex-Vivo Model of Intracranial Dynamics to Examine External Ventricular Drain Management

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Advanced decision-making and practices, Hall A, May 26, 2023, 14:30 - 16:00

BACKGROUND: Prevention of secondary brain injury following severe TBI, stroke, infection, requires careful repeated neurological exams and frequently includes invasive intracranial pressure (ICP) monitoring. In the Neuroscience Intensive Care Unit (NSICU), nurses are tasked with ICP monitoring. As such, gaining knowledge regarding best nursing practice for ICP monitoring is essential. Given that it is impractical and often unethical to conduct ICP experiments on NSICU patients, we developed a benchtop model of the human skull and intracranial contents, enabling arbitrary manipulation of model ICP without risk to humans.

METHODS: This is a laboratory-based ex-vivo experiment without human or animal subjects. The model consists of a 1 L rigid acrylic container with several pressure-tight ports connected to external reservoirs or pressure transducers. Depending on the model iteration, the container is filled with saline (to mimic cerebral spinal fluid [CSF]), glycerin (to modify viscosity), porcine brain (to observe effects of brain particles traveling in system), and air (to mimic pneumocephalus). Model ICP was monitored with Codman external ventricular drain and collection system, strain gauge pressure transducer, and Phillips Intellivue MP50 monitor (standard-of-care devices in our NSICU). Data is stored for offline analysis utilizing a Phillips RS232 output MediCollector (Boston MA). We procured porcine brains from grocery stores to further study ICP measurements in a container with brain tissue, documenting ICP when particles of brain tissue was introduced into the EVD tubing to mimic conditions seen in real word settings. Each sequential experiment added one new variable to the model, lasting 48 hours.

RESULTS: There have been 57 iterations of the model. Each experiment, increased the complexity of the model, further advancing our ability to explore the mechanism of action for various abnormalities relating to patients monitored with an EVD. Thus far, we have successfully created sustained ICP elevation >100 mm Hg. We have controlled CSF flow into and out the acrylic skull, devised methods to simulate blood using viscous fluids, and pneumocephalus. We found inconsistencies in ICP value given manipulation of external, and internal variables. ICP ranged between -30 and 20s invariably.

CONCLUSIONS: The model construction continues to increase in complexity. The study has spawned two non-clinical trials, one recently published, along with a clinical trial to confirm our results. Our next aim is to successfully simulate surging volumes of arterial blood entering the skull during systole. Future iterations will test different approaches to CSF drainage and ventriculoperitoneal shunt management.



Comparison of communication between patients, relatives, and healthcare professionals during hospitalization for Neurological diseases: A qualitative Photovoice study.

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Friendly environments, person-centered quality improvement and communication technologies, Hall B, May 26, 2023, 14:30 - 16:00

Communication between patients, relatives and healthcare professionals (HCPs) at hospital helps to provide sufficient care. Patients with neurological diseases can have limited communication skills. HCPs often report patients having problems with understanding and expressing themselves verbally. There is a lack of evidence between the experience of communication seen from patients, their relatives, and HCPs. To address this gap, the objective is to compare the experiences of patients and relatives with HCPs.

MATERIAL & METHODS: A qualitative design was used with interviews supported by photos captured during interviews to illustrate important matters regarding communication between patients, relatives and the HCPs during hospitalization.

RESULTS: We will include one group of Danish-speaking patients (n~20) with neurological diseases and their relatives (n~10) with maximum variation of age, diagnoses, and length of hospital stay. The other group, we will interview, is HCPs with a maximum variation in occupation (E.g., nurses, physicians, physiotherapist, and neuropsychologist) (n~15). The analysis will consist of comparisons of the themes from these two groups. An initial analysis revealed three themes: Clear communication, personal prerequisites, and direction in a complex system. Patients and relatives viewed clear communication as direct answers on diagnosis, prognosis and care plans. HCP had focus on creating the right circumstances in the environment to have clear communication. Personal prerequisites covered having one's values included in the communication, such as respect, honesty, and being meet and welcomed. HCP experienced personal prerequisites as confidentiality, knowing guidelines, and self-reflection and using constructive criticism as tools for improvement. Direction in a complex system was experienced as confusion about direction at hospital both physical direction and directing their care plan/diagnosis, and the complexity of different HCPs in care. This may increase the likelihood of misunderstandings, not being listened to or engagement in care. HCPs described this theme to involve discontinuity due to changeable care plans, and HCPs had a secondary task of communication with the risk of misunderstanding patients, relatives and colleagues. Photos will be showed in an exhibition at the department.

DISCUSSION: We will contribute with valuable knowledge about communication. This comparison supported by photos can be a strong tool to elaborate on why and what is happening.

CONCLUSIONS: This study provides insight into the experiences of communication seen from patient, relatives, and HCP, respectively. We expect to generate hypotheses to improve communication in clinical practice. Effective communication is important to manage treatment and engage patients and relatives in care.



Hospitality in dementia-friendly environments is significant to caregivers during hospitalisation of their loved ones. A qualitative study

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Friendly environments, person-centered quality improvement and communication technologies, Hall B, May 26, 2023, 14:30 - 16:00

Background: Implementation of dementia-friendly communities and theories of person-centred care have shaped the political agenda within Danish society. Patients with dementia or cognitive impairment and their accompanying caregivers are challenged when someone with dementia is admitted to hospital. During hospitalisation, caregivers find themselves in a vulnerable state of mind. Thus, the implementation of a dementia-friendly environment and adherence to person-centred care in hospital settings leaves room for improvement.

With this study we wanted to explore what is meaningful to caregivers in relation to a dementia-friendly environment during hospitalisation of their loved ones with dementia or cognitive impairment.

Materials and methods:

Data were collected through 17 semi-structured interviews with caregivers at a sub-acute neurological ward. The study was guided by a qualitative, explorative approach. Thematic analysis guided by Braun and Clarke (2019) was employed to interpret data.

Results: Three themes were identified: 1) Being a watchful bystander. 2) Visiting an undefined and foreign environment. 3) Longing for kindness.

Conclusions: Hospitality expressed by staff towards caregivers is significant in allowing caregivers to experience hospital environments as 'friendly'. Dementia-friendly environments embrace existential aspects that go far beyond physical spaces; hence, experiences of kind acts shape caregivers' sense of safety and comfort during hospitalisation. Hospitality is an essential part of nursing in dementia care because caregivers are contextually vulnerable. Our study sheds new light on the provision of person-centred care to people with dementia and their families in healthcare.

The study concludes that nurses need to be aware that caregivers experience vulnerability and to involve caregivers in the care provided for patients with dementia. We recommend a permanent contact person to be appointed to follow patients throughout their admission period. Furthermore, systematic interventions focusing on phenomena such as hospitality and kindness may serve to form a person-centred clinical culture; an issue that warrants further investigation.



The use of next of kin and bereaved experience data for quality improvement in healthcare settings: a mixed method systematic review

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Friendly environments, person-centered quality improvement and communication technologies, Hall B, May 26, 2023, 14:30 - 16:00

Background

People with long-term chronic disease often have a lifelong adaptation process to manage their life and self-care. Families and friends supporting patients' self-care and conducting informal care often also need to adapt to manage various situations in their own life and the patient's life. The time they spend on handling life in presence of a long-term chronic disease is huge and the experience people build up is tremendous. Healthcare sometimes collect next of kin and bereaved experience data, but how this data is used to improve healthcare has not previously been described.

Objective

This study aimed to explore how next of kin and bereaved experience data are collected and used in quality improvement in healthcare settings and the following research questions were addressed:

1. Which methods are used to collect next of kin and bereaved experiences in healthcare for quality improvements?
2. Which quality improvement interventions do next of kin and bereaved experiences data lead to in healthcare?
3. Which are the effects of quality improvement interventions guided by next of kin and bereaved experiences data?

Material & methods

A mixed method systematic review has been conducted, using a convergent segregated approach (i.e. including quantitative, qualitative and mixed methods studies, separate and simultaneous analysis and synthesis of quantitative and qualitative data). Risk of bias (quality) assessment was prior to inclusion performed independently by two reviewers, using standard critical appraisal instruments. Studies with significantly methodological flaws or untrustworthy findings/conclusions were rejected.

Result & Conclusion

Data was searched in four data bases and a total of 5,178 records (after duplicates removed) were found. After screening titles and abstracts a total of n=53 articles were assessed for eligibility, and finally n=9 articles were included. During the conference, findings will be presented concerning the current evidence of using next of kin and bereaved experience data for quality improvement interventions in healthcare, in terms of methods used, interventions and effects.



Brain Computer Interface Technology Use With People with Disorders of Consciousness or Locked-in Syndrome: The Lived Experience of Families

Ms. Andrea Shepherd¹

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Friendly environments, person-centered quality improvement and communication technologies, Hall B, May 26, 2023, 14:30 - 16:00

Background:

Advances in emergency services, neurosurgery and intensive care medicine over recent years have improved the survival rate of people with severe traumatic brain injuries that can result in disorders of consciousness (DOC) or locked-in syndrome (LIS). A diagnosis of DOC or LIS has significant impact on the family, and they not only need to come to terms with the diagnosis but also the realisation that their family member may require long term care. Jox et al. (2015) identified that family members retain high hopes that their family member will eventually regain the ability to communicate with them.

Brain computer interface technology (BCIT) bypasses the normal neuromuscular communication pathways and may allow people with DOC/LIS to communicate without movement, possibly providing an alternative communication channel. The use of BCIT could be incorporated into rehabilitation programmes and daily life, thereby potentially improving the quality of life of the person and provide the much-needed communication channel desired by their family.

Whilst research regarding BCIT has expanded exponentially there remains a translational gap when bringing it to end users (Kubler et al. 2014). There is a paucity of detailed knowledge regarding the end-users of BCIT and the impact this human/computer interaction has on the physical, psychological and social facets of the person. The experiences of family members, where BCIT may offer hope that may be realised or lost again, has not been examined. An understanding of this experience is essential in meeting the needs of family as part of an ethical approach to care.

Objective:

To explore the lived experience of the family on the use of BCI technology on people with disorders of consciousness or locked-in syndrome to identify their needs.

Material & Methods

Data was collected using video diaries to capture the insights and experiences of families who have used BCIT
Results:

Tentative themes from data obtained to date are hopefulness v hopelessness, encouragement v disheartening

Conclusion:

It may be too soon to draw accurate conclusions, however early data suggests there are additional support needs for families whilst their loved ones are trialling BCIT in order that their emotional needs are attended in a person-centred manner. Emergent technologies yield great opportunities for enhancing human interaction, but also create a need for us to consider the wider impact and how their use must be supported in practice.



Master's Program in Clinical Nursing – Neuroscience Nursing.

Ms. Åse Humberst

Neurorehabilitation and health enhancing activities, Hall H, May 27, 2023, 09:00 - 10:30

Neuroscience nurses meet increasing requirements for professional care and constant quality improvement both in acute critical care, home-based care, neurological wards, neurosurgical wards, outpatient clinics and in rehabilitation institutions. The disease patterns and treatment methods change rapidly, and we see a great need for specialized neuroscience nursing at a level that the Bachelor in Nursing does not fulfill.

Since 2005, Western Norway University of Applied Sciences in Bergen, Norway, has been offering a part time Post Graduate Program for Clinical Nursing - specialization in Neuroscience Nursing (60 ECTS) over 4 semester. Since 2021, the program integrated in a Master of Science Program (120ECTS), still allowing the students to complete either 60 or 120 ECTS. So far we see that most students seek this competence to improve their daily clinical care around the patient's bed, and have less ambitions for a Master Program, jet an increasing number of nurses are requesting the possibility to add up to the Master's Level.

Elevating the education program to the Master's level also means conforming to national and international requirements. Sufficient research activity and research collaboration both nationally and internationally are among those requirements. We are very interested in discussing possibilities for international collaboration on curriculum for Post Graduate Programs/Masters Programs in Neuroscience Nursing, and research collaboration between institutions in Europe.



Temporal changes in demographic and injury characteristics of traumatic spinal cord injuries in Nordic countries - a systematic review with meta-analysis

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Neurorehabilitation and health enhancing activities, Hall H, May 27, 2023, 09:00 - 10:30

STUDY DESIGN: Systematic review with meta-analysis.

OBJECTIVES: To explore temporal changes in incidence rates, demographic and injury characteristics of incident traumatic spinal cord injury (TSCI) in Nordic countries.

METHODS: Peer-reviewed publications and periodic reports about epidemiology of TSCI in the Nordic countries (Denmark, Finland, Iceland, Norway, Sweden) are identified, reviewed and included in the meta-analysis. Data are stratified into 20-year intervals to allow for chronological comparisons. Pooled estimates are derived using random effects meta-analysis.

RESULTS: Twenty-three data sources are included presenting a total of 5416 cases. The pooled incidence rate for 2001–2020 is 15.4

cases/million/year compared to 17.6 and 18.3 cases/million/year during the two previous 20-year intervals. The proportion of cases

with TSCI in the 15–29 age-group decreases from 50% (1961–1980) to 20% (2001–2020), while it increases from 9% to 35% in 60+

age-group. Transportation-related injuries decrease from 44% (1961–1980) to 27% (2001–2020). Conversely, fall-related injuries

increase from 32% (1961–1980) to 46% (2001–2020). The proportion of individuals with incomplete tetraplegia increases from 31%

(1961–1980) to 43% (2001–2020), while complete paraplegia decreases from 25% to 16%.

CONCLUSION: The characteristics of TSCI in the Nordic countries have changed drastically over the last six decades, in line with

clinical experiences, and limited research evidence from other countries. These changes indicate the need for adapting research

focus, related injuries, and incomplete injuries in Nordic countries and other settings internationally where such changes occur.



Determining Return to Work Life, Work Productivity and Activity Impairment of Patients in the Early Post-Stroke Period

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Neurorehabilitation and health enhancing activities, Hall H, May 27, 2023, 09:00 - 10:30

Objective

Stroke affects functional status of the patient with problems such as motor, sensorial and cognitive impairment, fatigue, and depression and causes deterioration in activities of daily living. It can also directly affect patients' return to work. Problems related to work life after stroke are very important. The aim of this study is to evaluate patients' return to work life and work productivity and activity impairment of patients in the early period (3 months after stroke).

Material & methods

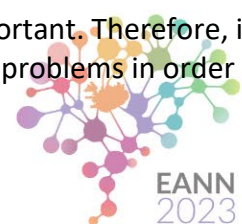
This study was carried out retrospectively with patients admitted to the Stroke Center of a university hospital. It was aimed to reach all patients working before stroke, rather than choosing a sample from the population. The data of the patients were obtained from their medical records. Information about the patients' return to work life at the 3rd month after stroke was obtained by calling them by phone. As data collection tools, patient information form, American National Institutes of Health Stroke Scale (NIHSS), Functional Independence Scale (FIM), Modified Rankin Scale (mRS), and Work Productivity and Activity Impairment Questionnaire were used.

Results

The mean age of the patients (n:26) was 45.96±12.07 (21-60), 92.6% were male and 44.4% were primary school graduates. 92.6% of the patients were independent at 3 months (mRS:1.04±0.98), 44.4% had mild stroke (NIHSS:1.52±2.05). 55.6% of the patients had middle-income, 92.3% were the person with the highest financial responsibilities in the family, and 61.5% worked in a job demanding physical endurance. 84.6% of them reported that they were working 8 hours or more per day, and 57.7% of them received salary based on performance. 23.1% could not return to work after stroke, 46.2% had to reduce working hours. After stroke, the patients' efficiency at work decreased by 25.5% (±28.94) and productivity by 23.5% (±25.81%), and their non-work activities decreased by 22.69% (±27.50). 38.5% of the patients stated that they had problems in finding a job after stroke, and 50% were worried about their future work life. Despite this, 69.2% of the patients stated that they intended to continue in their current job. The data collection in the study continues.

Conclusion

Work life difficulties after stroke is a major problem and will become increasingly important. Therefore, it is essential to screen individuals for returning to work after stroke and to evaluate their problems in order to initiate vocational rehabilitation.



HUMOUR AS A NURSING INTERVENTION

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Neurorehabilitation and health enhancing activities, Hall H, May 27, 2023, 09:00 - 10:30

Therapeutic humour is defined to be any intervention that promotes health and wellness by stimulating a playful discovery, expression or appreciation of the absurdity or incongruity of life's situations. This intervention may enhance health or be used as a complementary treatment of illness to facilitate healing or coping, whether physical, emotional, cognitive, social or psychological

Humour can be used in all kinds of ways or situations, to relativize, make tense situations less tense or it can be used to make life more pleasant. If a nurse uses humour as an intervention in complimentary care, certain patients may complain less. This presentation will look at Humour as a nursing intervention. The listener will be taken on a journey and examples of what humour is and how humour can be used in different situations.

At the end of the presentation the listener will be able to see that humour can be a tool to be used as a nursing intervention, but the listener will have to make up his or her mind and decide if he or she can use it.



Fundamentals of Care in national clinical quality databases in Denmark: What is monitored and is it related to nurse representation on the steering committee?

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Fundamentals of care and health enhancing care practices of neuro-nurses, Hall I, May 27, 2023, 09:00 - 10:30

Background: Healthcare systems regularly fall short of fundamental nursing care. Clinical quality databases is an established way of ensuring high and uniform quality of care, which is increasingly used in healthcare planning, organization and prioritization to improve patient outcome. However, little is known about the monitoring of fundamental nursing care in clinical quality databases.

Therefore, we identified indicators related to aspects of fundamental nursing care in national clinical quality databases, including the databases monitoring health care in neurological conditions and disorders (Neuro-Oncology, Sclerosis Treatment, Cerebral Palsy, Dementia, Stroke, and Spinal Cord Injury, respectively). We also examined the association between nurse representation on database steering committees and the presence of indicators related to aspects of fundamental nursing care in the databases.

Material and methods: Cross-sectional study. Data from the latest annual report of 71 national clinical quality databases was reviewed in April 2021.

For each database, we identified indicators measuring aspects of fundamental nursing care defined as the 12 nursing domains in the Danish Minimum Nursing Data framework. The association between nurse representation on the steering committee and the presence of indicators related to aspects of fundamental nursing care was examined using prevalence ratio.

Results: One third of the databases included indicators related to aspects of fundamental nursing care. Most common aspects were *Respiration and circulation*, *Nutrition*, and *Psychosocial conditions*. *Skin and mucous membranes*, *Elimination*, and *Pain* were rarely measured. *Sleep and rest*, *Sexuality*, and *Communication* were not measured. Databases monitoring health care in neurological conditions and disorders measured the aspects *Knowledge and development* (Stroke registry), *Psychosocial conditions* (Spinal cord injury database and Dementia database), *Nutrition* (Stroke registry), *Musculoskeletal system* (Stroke registry), and *Functional level* (Dementia database).

Nurse representation on steering committees was associated with presence of indicators related to fundamental nursing care (prevalence ratio 3.25, 95% confidence interval 1.65-6.37).

Conclusion: Fundamental nursing care was rarely monitored in Danish clinical quality databases. Nurse representation on steering committees of clinical quality databases indicates a feasible opportunity for decision-makers and nurse leaders to ensure a higher focus on fundamental nursing care for the benefit of patients.

The presentation will also discuss the clinical implications for patients with acquired brain injury and for patients with parkinsons disease, including potential monitoring of fundamental nursing care in future clinical quality databases for neurorehabilitation after brain injury and parkinsons disease, respectively.



Speech recognition a tool for nursing documentation

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Fundamentals of care and health enhancing care practices of neuro-nurses, Hall I, May 27, 2023, 09:00 - 10:30

-Objective

Speech recognition (SP) is much used as a tool for documentation by physicians. However, in nursing the use and research of SP is scarce. We wanted to test the usability of speech recognition (Lingsoft Speech Service) in the nursing context. We were also interested in RN's expectations and experiences.

-Material & methods

We recruited 11 registered nurses (RN) 2019 to use SP. We asked them to fill in SUXES (User Experience Evaluation Method for Spoken and Multimodal Interaction) evaluation first step expectations of the system. They were asked to dictate so many stories that they felt they administered the system. They were not allowed to use real patient data but dictate stories that could be true. After that, they were asked to fill in SUXES experiences form, SUS (System Usability Scale) form. RNs were also interviewed where we were mainly interested in the acceptance of new technology, but also in results of recognition.

-Results

Two of the RNs had used SP before in the hospital, but another system. The others had only some experiences of systems in their mobile phones.

The expectations and experiences varied a lot. Highest expectations gathered the statements: SP is feasible and I will use SP in the future. Those statements got also good scores of experiences. Most skeptical attitude RNs had of expectation statements: Use of SP is easy, SP works faultlessly as it should and SP is easy to learn. However, they still got quite good experience scores.

The used system got 84 SUS points out of 100, which can be regarded as very good. Using the system was easy, RNs did not need any technical help and they did not need to learn a lot to use the system.

It was easy to accept the new way of documentation. If the room was crowded noise disturbed, it felt stupid to talk loudly; comparing the way doctors did it was clumsy.

On the other hand, it took time to be acquainted with the system, but after a while, dictating went smoothly and it was much better way than writing. Using SP there were less spelling mistakes and less correcting. With short documentation writing was quicker but with long ones quicker.

-Conclusion

The Lingsoft Speech Service system worked well. SP does not fit for all especially when trained shortly. For some RNs it could be a perfect tool for quicker and more correct documenting.



Patient safety improving by nurses

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Fundamentals of care and health enhancing care practices of neuro-nurses, Hall I, May 27, 2023, 09:00 - 10:30

Background: Patient safety is a priority in hospitalized patients care and ensure timely and high-quality services for our patients. Evidence based tools, like a Patient Safety Alert System, Patient Identification, Monitoring of Vital Signs allows to create a safe and supportive environment.

Material and methods: In September 2020, a group of 3 doctors and 3 nurses initiated a patient safety project at Kauno klinikos. Proactive nurses implemented new tools into clinical practice and surveys conducted.

Results: Patient Safety Alert System

Patient Safety Alert System was introduced to improve quality of services provided, foster a working environment, learn from difficult situations and have a register of complications.

The first event was registered on December 5, 2018. In total 530 events have been registered.

More than 50 percent of events were registered in central department of anesthesiology, about 20 percent in each – in departments of maternal and child anesthesiology and of neurosurgery anesthesiology.

Discussion of results is ongoing quarterly, more often, if necessary.

Patient Identification

June 2021 survey indicates, best way to identify patient is an identification bracelet (by 76 nurse's leaders (80.9%)). From that moment, in Kauno klinikos, identification bracelets are used for all hospitalized (100 percent) patients.

If risk factors are identified, bracelet is marked with color:

- Red – allergy (by available data),
- Yellow – increased risk of falling (by MORSE questionnaire).

Monitoring of Vital Signs (VS)

July 2021 survey indicates, that Monitoring of VS is useful for registering and monitoring their dynamics (by 13 heads of nursing (100 %)). Process is useful due to timely assistance when changes of patient's health condition are noticed. Timely transfer an information to physician on duty.

Monitoring of VS is recommended for adult patient at least every 12 hours, for pediatric patients - as prescribed by physician. Also, to be maintained as e.records.

12 out of 13 respondents recommend monitoring of VS to their colleague.

Conclusions

1. Patient Safety Alert System, Patient Identification, Monitoring of VS implement case analysis based culture strategy by analyzing clinical cases, ensuring learning process from mistakes.
2. Reduce possibility of human error by ensuring effective working conditions.
3. Regular education of medical staff on patient safety issues and use of evidence based tools is an integral part of strengthening teamwork.



Nursing physical assessment in neurosciences in a tertiary hospital: standardization improves practice

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Fundamentals of care and health enhancing care practices of neuro-nurses, Hall I, May 27, 2023, 09:00 - 10:30

Main objective: Develop nurses' physical assessment skills in neurology, neurosurgery and intermediate care units.

Secondary objective: Implement institutional guidelines for clinical nursing assessment when admitting patients to the unit.

Material and Methods : The project was conducted from February 2019 to June 2022. Standards of practice for physical nursing assessment at patient admission were determined through a literature search and a local group of experts for the units of neurology, neurosurgery, and intermediate care (IMC). The following items were selected: pulse, respiratory rate, blood pressure, temperature, oxygen saturation, pain, orientation; acute confusional state (ACS); respiratory inspection (expansion, effort, dyspnea, cough); abdominal inspection, abdominal auscultation, abdominal palpation, skin inspection; risk of falling, dehydration; urinary elimination; intestinal elimination. In vascular neurology, nurses were also expected to assess NIHSS and potential swallowing disorders. For spine surgery, nurses were required to test motricity and sensitivity. For patients with head neurosurgery, nurses were expected to check pupils, level of consciousness, motricity and sensitivity. In IMC, nurses were asked to add pulmonary auscultation and measure the Riker Sedation-Agitation Scale (SAS). 79 nurses were trained in physical assessment with theoretical training, skill labs, e-learning specifically developed for this purpose and one to one coaching.

In order to monitor the implementation of the nurses' physical assessment, documentation in the patient records was assessed before training (T0) and 12 months after training (T1)

Results : A total of 90 records were assessed at T0 and 84 at T1. We observed an increase in the following physical assessment items performed: respiratory rate (24.5%), orientation (49.2%), ACS (75%), respiratory inspection (75, 7%), abdominal inspection (63,8%), abdominal auscultation (61,4%), abdominal palpation (53,5%), skin inspection (22,7%), dehydration (63,1%), urinary elimination (39,3%) and intestinal elimination (49,4%). Items linked to neurologic specificity (level of consciousness, pupils, SAS, motricity and sensitivity), pain and vital signs were higher than 90% at T0 and T1. In vascular neurology, a 15% drop in the evaluation of swallowing disorders was observed between T0 and T1, although, at T1 60% of the assessments were made. In IMC, pulmonary auscultation increased by 30,1% , but only 40,5% were performed at T1.

Conclusion: The establishment of physical assessment standards and a multimodal training program improved nursing practice. Results showed a systematic assessment of neurological parameters at the admission. Although, assessment of swallowing disorders and ACS could be improved. There is a need to adapt new strategies to better implement this physical assessment items.



POSTER SESSION

Abstracts



Occurrence of anxiety in patients with multiple sclerosis and its impact on the quality of life of patient

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Background: Multiple sclerosis (MS) is the most common immune-mediated inflammatory demyelinating disease of the central nervous system (CNS) (1). It usually affects younger people. It negatively affects physical and mental health (2). According to numerous studies, serious neurological symptoms caused a worse quality of life in MS patients. The aim of this reaserch is examine the incidence of anxiety in patients with multiple sclerosis.

Respondents and methods: The respondents are patients suffering from multiple sclerosis treated at the Clinical Hospital Centre Osijek, on the Neurology Department. As a research instrument, a questionnaire designed for this purpose will be used, which consists of sociodemographic data, a scale of generalized anxiety disorder (GAD-7), Questionnaire for MS (MSQOL-54) and Extended Disability Status Scale (EDSS). Inclusion criteria for participation in the study will be people who signed an informed consent; older than 18 and younger than 65 years of age, suffering from MS and cognitively preserved without severe psychological changes, whereas the exclusion criteria will be dementia and psychiatric diagnoses from inspecting medical documentation.

Results: The study involved 92 respondents; 64 (70%) women and 28 (30%) men. The median age of the respondents is 44 years. Subjects with neurological outbreaks have a significantly worse both physical and mental health in regards to subjects without neurological outbursts. Anxiety with regards to severity of symptoms is present in 31 (34%) subject without (minimal) symptoms; 30 (33%) of them have mild symptoms and 15 (16%) moderate; while 16 (17%) respondents have a high risk of anxiety disorder. Conclusion: The research proved the incidence of anxiety in patients with MS. The stronger the symptoms of anxiety were, the lower the quality of life was rated.



Systematic screening of the oral cavity of hospitalized patients in neurorehabilitation – a project development

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Background:

In academic literature, it is well described that patients do not receive sufficient oral care during hospitalization. Furthermore, there is a lack of knowledge among the nursing staff about products and utensils for oral hygiene, as well as indicators for a healthy mouth.

An audit made in June 2020 on ward NR shows that 37 % of hospitalized patients need help to perform oral care. Among these, there is documentation for performed oral care in 2 patient records corresponding to 18 %.

The median consumption of Nystatin mixture in 100 ml bottles was 7 measured over a 3-month period with existing procedure.

Purpose:

- To prevent plaque and fungus in the oral cavity of hospitalized patients.
- To implement a systematic method among nursing staff when screening the oral cavity of hospitalized patients.
- To reduce the use of Nystatin mixture.

Method:

Systematic screening of the oral cavity is introduced amongst all patients admitted for neurorehabilitation. ROAG is chosen as the screening method, as interventions are connected, when abnormal findings are concluded.

Formalized training is planned for all nursing staff and it is ensured that relevant utensils for oral care are available in the ward. In addition, a tongue brush against plaque is being introduced. Various sheets are prepared for the staff to support correct screening and documentation.

Results:

The implementation process is followed closely through audits since the start-up on March 8th 2021, and it shows:

Performed ROAG screening on admission is 84%.

Individually created care plan with relevant interventions is 81%.

Daily documentation in records of performed oral care is 40%

The median consumption of Nystatin mixture in 100 ml bottles is reduced to 4 measured over a 3-month period.

Conclusions:

A systematic screening has been incorporated to identify problems in the oral cavity of hospitalized patients, which has increased the focus and intensification of nursing efforts. The efforts have led to the prevention of plaque and fungus in the oral cavity.



A Movement Disorder Nurse work description in HUS Neurocenter

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1. Background

Advanced Parkinson's disease (PD) is increasing because the population is aging and at the same time people's life expectancy is increasing. Levodopa-infusion administered through PEG-J tube is a device-aided therapy that can diminish "off" -time and dyskinesia in advanced PD. The most common complication is accidental removal of the J-tube, which lead to the functional impairment of the PD patient and to additional procedures in the endoscopy unit. In 2018, a multi-professional team paid an attention to the fact that the J-tube can be changed by a trained registered nurse (RN).

2. Materials and methods

In 2018, the multi-professional team decided to train three volunteer RNs from the neurological ward. Training was organized by a specialist in abdominal surgery and an AbbVie Duodopa specialist RN. Training included a theoretical lecture, a practical training and two examinations of the J-tube replacement performed by the RN.

3. Results

The multi-professional team develop a job description for a Movement Disorder Nurse. Three RNs started an out-patient reception for the advanced PD patients who has complications in Levodopa-infusion administered through PEG-J tube. The job description included passive exchange of the J-tube and the connectors and the patient education in the levodopa-infusion therapy. Movement Disorder Nurse has the continual option of a doctor's (both neurologist and the abdominal surgery specialist) consultation at the reception.

4. Conclusions

The patient, neurology unit and endoscopy unit will benefit in many ways by starting the outpatient reception of the Movement Disorder Nurse. Patients J-tube/connectors are changed earlier without anesthesia, additional laboratory tests or a possible transillumination procedure. Levodopa-infusion is administered immediately, improving patients motor function and the quality of life. There will be also cost savings for neurological unit and endoscopy unit because procedure won't require surgery, an anesthesia team, or a bed place in the neurological ward. Working as a Movement Disorder Nurse enable professional growth, skills development, and variety to everyday work as a RN.



A national network of researchers in neuro-nursing to strengthen evidence-based practice.

An example from Denmark

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Organization and participants

The research network is part of the Professional Association for Neuro-nurses (FSNS). The network is open to all research-active nurses with a PhD degree and PhD students in Denmark who are engaged in the research field of neuro-nursing.

Vision

The research network for Neuro-nursing is a professional research network consisting of nurse researchers who collaborate across sectors, institutions, and neurosurgical and neurological areas. The aim is to generate knowledge to strengthen research-based and person-centered nursing care.

Mission

The network must contribute to the research basis of neuro-nursing. We create knowledge and stimulate the development of neuro-nursing through dissemination, teaching and collaboration.

Strategy

The overall strategy of the network is to inspire, exchange knowledge and collaborate. The network's first common focus is the "Involvement of Patients and relatives in research and clinical practice". Two annual all-day meetings are held in the network. LinkedIn is used to communicate the networks' professional benefits.

Status

In 2022, the network comprises 17 researchers representing three regions in Denmark. The researchers focus on specialties of neurology, neurosurgery, oncology, neurorehabilitation or educational initiatives of health professionals.



Title: Development and validation of a questionnaire for patients with epilepsy using Patient Reported Outcomes (PRO).

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Introduction: Research of the patient-perspective on the use of PRO, as a tool to guide consultations, is still sparse and within the field of epilepsy, almost unexplored. Therefore it is relevant to collect descriptive data of specific variables in relation to the use of PRO, among patients with epilepsy. Therefore we aimed to develop a questionnaire for this study-population, to describe differences in user socio-demographics associated with increased involvement, self-reflection and lifestyle changes.

The perspective of the questionnaire was to initiate a larger study on the use of PRO, within the field of epilepsy.

Purpose: The purpose of the study was to develop and validate a questionnaire for patients with epilepsy, who use PRO as a tool for consultation, through cognitive interviewing.

Method: Inspired by Rattrays et al., the questionnaire was developed with simple straight-forward items described in layman's terms. Primarily we had focus on the meaningfulness of the PRO-tool in terms of including, daily living with epilepsy and the patient trajectory. The content-validity of the questionnaire was obtained by critical selection of items by an expert-panel. The panel continuously provided input for improvement of the content and construction of the questionnaire, by expressing their expert-knowledge on epilepsy, Patient Reported Outcome and development of questionnaires, respectively.

The validation-process was, due to the Covid-19 pandemic, performed through individual telephone interviews (n=4) with a random sample of patients with epilepsy, using cognitive interviewing to test the reliability and the validity of the questionnaire.

Results: 6 patients at the age from 25 to 68 were invited to participate. Two patients declined the invite. Four patients, at the age of 46-68 of where 50 % were male, participated in the study. They all expressed understanding and acceptance of the content and construction of the questionnaire and had only few comments.

The questionnaire was finally tested in a larger population (n=50) in a descriptive and analytical statistical sub-study, as part of a larger project focusing on the patient-experience with the use of PRO, within the field of epilepsy.

Discussion: Due to validation through telephone, it is possible that important knowledge was lost. It seemed remarkable that none of the patients had significant comments to the questionnaire. Retrospectively it would have improved the reliability of the questionnaire to have a second round of validation through face-to-face interviews, as recommended theoretically.



Measuring patient involvement in a Danish department of neurosurgery - a questionnaire survey of inpatients' experiences and preferences

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Objectives

There has been an increased focus on patient involvement in healthcare worldwide, and in Denmark, this is one of the eight national healthcare goals. Studies show that involving patients in their treatment and care improves patient safety and satisfaction. However, knowledge of inpatients' preferences and experiences of involvement in neurosurgery is lacking. The aim was to identify inpatients' preferences for involvement and to establish to what extent patients experienced being involved in their treatment and care during admission.

Material and methods

From February 2020 to September 2022, a questionnaire survey was conducted at the Department of Neurosurgery at Aarhus University Hospital, Denmark. Patients were invited to participate on the day of discharge. Inclusion criteria were: >18 years, GSC 15, a neurosurgical diagnosis, ability to read and write Danish and being hospitalized >24 hours. Preferences and experiences of patient involvement were assessed with a 22-item questionnaire measuring the degree of agreement on a 5-point Likert scale from 0 (not at all) to 5 (to a very high degree).

Results

One hundred patients were enrolled in the study (49% women). The mean age was 56.2 years, and the average hospital length of stay was 4.3 days. The response rate of the questionnaire was 99%. Regarding patients' preferences, the results showed that 82% preferred sharing responsibility regarding their treatment with their doctor. 16% reported they preferred leaving treatment decisions entirely to the doctor, while 2% preferred making the final decision about their treatment independently. The average participation score reporting on information, communication, and participation was 4.08, suggesting that patients experienced being involved in their care and treatment at a high level. However, patients also reported on items of possible improvements. The items with the highest scores were: It should be more evident how relatives could participate in the course of events (22%), healthcare professionals should invite patients to ask more questions (17%), and a higher alignment in the information given by the different healthcare professionals (15%).

Conclusion

Patients mostly preferred to be part of a shared decision about their treatment during hospitalization and generally reported a high level of involvement in their treatment and care. Furthermore, we found that improvements in the information and dialogue between healthcare professionals, patients, and relatives was desirable



Developing an onboarding app for nurses at the Department of Neurosurgery at Aarhus University Hospital in Denmark

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Background: Nursing shortage in the Danish health care system is currently a great challenge that only seems to increase within the coming years. Studies show that a well-conducted onboarding program increases job satisfaction as well as recruitment and retention.

The Department of Neurosurgical at Aarhus University Hospital, Denmark has a thorough onboarding program lasting one year. This includes several days of education, personal conversations with the nurse in charge of onboarding as well as a printed folder containing written information about the department and specialty. However, we often saw that the newly employed nurses didn't use the written information given to them, due to lack of availability – the folder was either at home or work.

Based on these experiences, we decided to develop a comprehensive onboarding program for our newly recruited nurses as an app. The purpose was to ensure that the newly employed nurses had the right information at the right time and place.

Material and methods: A working group was established consisting of experienced neurosurgical nurses, one newly employed nurse, the nurse in charge of development, the nurse in charge of onboarding, and the nurse manager.

A representative from the working group performed qualitative interviews of former newly recruited nurses to uncover the need for information and to what extent. Based on these interviews, our already existing material and discussions in the working group, we agreed on what content the app should include.

The content was structured and collected on an app platform. This platform also held other useful features such as notifications with reminders of scheduled teaching days and meetings, and a messaging function, that enables the newly employed nurse to have direct communication with the nurse manager and the nurse in charge of onboarding.

Results:

The content in the onboarding app consists of:

- Knowledge about the organization: The department, the management, the development in nursing
- Practical knowledge: How to call in sick, parking- and cafeteria conditions
- Knowledge of neurosurgical nursing: Neurological observations, postoperative care, medicine, and literature references

The intention is that the newly employed nurses should use the app during their first year of employment.

The app was launched in the summer of 2022.

Conclusions: It is possible to compose a usable app for newly hired nurses, where relevant knowledge is accessible when the need arises



Nutritional needs outcomes of patients with Parkinson's disease: preliminary results of a randomized controlled trial

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Background

Non-motor symptomatology in Parkinson's disease (PD) is related to patients' quality of life (QoL). Patients with PD commonly suffer from dysphagia, and consequently malnutrition, that can lead to sarcopenia and increase motor deficits in relation to loss of muscle mass and energy deficit. The impact of dysphagia on PD patients' health status, makes it necessary to study the effectiveness of specific nutritional programs in addressing feeding needs. The objective of this study is to evaluate the effectiveness of a nutrition program based on self-produced soft/pure meals (WeanCare Domus) in changing the QoL in PD patients with dysphagia. Secondary goal is to improve in QoL, reducing non-motor symptoms.

Material and methods

The study is a single-center randomized controlled Nutraceutical Clinical Trial with a cross-over design. Participants in the study include dysphagic adult subjects with PD followed by one rehabilitation center. We evaluated baseline data from the Novel Non-Motor Symptoms Scale for PD (NNMS) and data for the evaluation of nutritional status (anthropometric indices, Mini Nutritional Assessment [MNA]). The same will be evaluated after the treatment.

Results

The total of participants was 14, the majority were males (64.3%), the mean age was 71.9 years (SD=6.4). Participants had been affected by PD for an average of 9 years (mean=9.2; SD=5.5) and had dysphagia for less than a year (mean=0.6; SD=0.9). The mean score of NNMS was 158 (SD=43). Domain 4 (Disperceptions/Hallucinations) obtained a mean value=0 (SD=0). As for the anthropometric indices: physical performance (seconds/minutes), mean=1 (SD=0.3); muscular strength (grip strength of the hand), mean=23.6 (SD=9.8); weight (Kg), mean=67.7 (SD=15.2); BMI (Kg/sqm), mean=24 (SD=3.7); MNA, mean=9.2 (SD=2). We found significant negative correlation between the NNMS total mean score, and the muscular strength mean score (Pearson's $r=-0.6$; $p=0.03$). We analysed the singular domain of the NNMS scale, and we found significant negative correlation between Domain 1 (Cardiovascular) and physical performance (Pearson's $r=-0.7$; $p=0.02$); Domain 6 (Gastrointestinal) and physical performance (Pearson's $r=-0.7$; $p=0.01$), muscular strength (Pearson's $r=-0.6$; $p=0.02$), and weight (Pearson's $r=-0.6$; $p=0.03$); Domain 8 (sexual activity) and muscular strength (Pearson's $r=-0.7$; $p=0.003$), weight (Pearson's $r=-0.7$; $p=0.01$), and MNA score (Pearson's $r=-0.7$; $p=0.002$).

Conclusions

In conclusion, we can affirm that managing the dysphagia, to deal also with sarcopenia, is a fundamental aspect for the QoL of PD patients. The study is ongoing, it will be possible to evaluate the effectiveness of the nutrition program in changing, and possibly improve, the QoL in PD.

Irrigating ventricular drainage system treatment in the Neurosurgery Clinic in the Neurosurgical Intensive

Care Unit at Helsinki University Hospital, Helsinki

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Irrigating ventricular drainage system treatment in the Neurosurgery Clinic in the Neurosurgical Intensive Care Unit at Helsinki University Hospital, Helsinki

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Background: Multiple medical conditions leads to increase of intracranial pressure (ICP) which causes mortality and morbidity. High ICP is caused by trauma, bleeding, tumor etc which leads to disruption of cerebrospinal fluid (CSF) pathways. The acute rise of ICP is solved with neurosurgical care in intensive care unit (NICU) with medical treatment or/with temporal shunt (external ventricular drainage (EVD)). Problems of EVD are related to infection, dysfunction by clogging the drainage and EVD acting as passive drainage.

Material and Methods: To resolve the problems we used active EVD with double lumen catheter with ability to irrigate actively and drain passively. Irrigation is controlled by intelligent pump and with ability to function in controlled ICP levels. Irrigation allows removal of component causing high ICP eg intraventricular hemorrhage. NICU nurses actively manage the system by constantly monitoring the fluid exchange and ICP levels. When needed give bolus of irrigation fluids or decline drainage bag to balance ICP. During the treatment, the patient's position is changed every 4-6 hours to irrigation is reached all over the ventricular system. The patient is turned 90-degree to all sides. The treatment is temporarily stopped during the turns and the single dose/continuous of the medicine given by the neurosurgeon/NICU nurses.

Results: By actively involving NICU nurses, neurosurgeons, and neuro-anesthesiologist we have been able to use the active EVD in multiple diseases including ventriculitis, IVH, and subarachnoidal hemorrhage (SAH). We have been able to drop the mortality of ventriculitis to 0%, reduce shunt dependency in SAH patients and reduce ICU stay of IVH patients.

Conclusions: Active EVD has opened new avenue for research and has shown promising results. Multiple prospective trials has started to demonstrate the benefit of active CSF exchange.

The form of presentation is a poster.

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Neuroscience nursing – a career path for nursing students

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1. **Background:** Nurses working with neurological and neurosurgical patients take care for people with a variety of neurological conditions and disorders. Neuroscience nurses need comprehensive and specific competence. It takes time for newly graduated nurse to master a specialized nursing care. Providing nursing students a deep and versatile learning opportunity affiliating neurological and neurosurgical nursing is seen important. Through constructed career path, nursing students are served work-related training in various neuro nursing learning environments in Helsinki University Hospital (HUS).

2. **Material and methods:** The project is carried out in collaboration with HUS Neurocenter and Metropolia University of Applied sciences (Metropolia UAS) in Helsinki, Finland. The target group were nursing students who study in Metropolia UAS and wanted to focus their nursing studies into neuro nursing.

HUS Neurocenter is one of the 13 departments in HUS area, and it includes multiple neuro units: outpatients' clinic, several bed wards, rehabilitation wards, operation ward, stroke unit and intensive care unit.

3. **Results:** HUS Neurocenter together with Metropolia UAS accomplished possibility for nursing students to focus their studies in neurological and neurosurgical nursing. Road map of work practice units (known as career path) for students is formed. Two student mentors, experienced nurses from neuro units, are designated from HUS Neurocenter to support students alongside their path. Also, existing induction material for neuro nurses is utilized; electronic learning environment HUS Moodle and HUS Handbook for neuro nurses.

Student's begin their neuro nursing studies from units that serves basic training in neurological and neurosurgical nursing, diseases and symptoms. Students proceed training to children or mental or substance abuse rehabilitation units to develop their understanding neuro nursing in diverse environment. Later students can choose their training units based on their personal curriculum and aims to more demanding units which provides them extensive and versatile skills in neuro nursing.

Student's also perform their study-related innovation project and thesis in collaboration and based on the themes of HUS Neurocenters nursing development perspective.

4. **Conclusions:** Collaboration between HUS and Metropolia UAS offers a comprehensive description for nursing students intrigued in neuroscience nursing specialization. Student mentoring is essential part of the studies offering students support in professional growth. Students get inclusive understanding of nursing a neuro patient and competence to provide suitable nursing wholeness for this patient group. It also eases nursing students transition to work life.



Creating a Competency Development Program for Experienced Neuro Nurses

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Objective

In Denmark, no formalized or specialized continuing and further education for experienced neuro nurses exists. The lacking education challenges highly specialized neuro care. Research shows that experienced nurses who do not experience adequate professional challenges lose their commitment and consider leaving their position. Thus, a specialized competency development program is needed for experienced neuro nurses.

Our objective was to develop a local competency development program for nurses with more than one year of experience working in a neurological or neurosurgical department.

Material & methods

In 2020, national recommendations for competency development and career paths in neuro nursing in Denmark were published. At Aarhus University Hospital, the head nurses and clinical nurse specialists across the neurological and neurosurgical departments met to discuss the recommendations. They identified a call for uncovering local needs and wishes for a competency development program. Two researchers conducted a focus group interview with seven nurses representing different work experiences. In order to combine the focus group results with the national recommendations, a steering group and a working group of experienced nurses were established. Through six working meetings a competency development program was created. In the process, clinical nurses from both departments were asked to rate the essential areas in neuro nursing on a scale from one to ten to be included in the program.

Results

A local competency development program was created consisting of 10 modules; 1. Neuroanatomy and -Pathology, 2. Neurorehabilitation 3. Patient and Relative Perspective, 4. Pain, Nausea and Palliation, 5. Dysphagia, 6. Acute Nursing, 7. Conflict Management, 8. Diploma Module in Neurorehabilitation, 9. The Patient's Pathway, 10. Continuing Education in Palliation.

Conclusion

It is possible to create a specialized competency development program for experienced neuro nurses based on each nurse's needs, interests and wishes.



Mentoring project in HUS Neurocenter

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Background

Recruitment of nursing staff is challenging as there is a shortage and competition for skilled staff. Nurses' well-being at work increases by offering them the opportunity to be mentored by a more experienced colleague. Mentoring can be used to increase commitment to the organization, support professional growth and improve the quality of work.

The goal of the project was to implement and ingrain the mentoring model to the units.

Materials and methods

The need for change was identified for the mentoring project in cooperation with employees and management at the HUS Neurocenter. A mentoring team was established consisting of representatives of the units. Two team leaders were chosen for the mentoring project: a clinical expert and an expert nurse in mentoring. The leaders prepared a project plan. The schedule, resources, participants, and communication methods of the project were recorded in the project plan, and the evaluation methods of the project were defined.

Results

The mentoring project was started in spring 2022 by appointing mentoring coordinators, who formed a mentoring team. The task of the mentoring coordinators was to form mentoring pairs in the units together with ward management and to offer monitoring and support for the pairs.

In autumn a mentoring training was organized for the new mentoring pairs. The purpose of the training was to familiarize the participants with mentoring and to initiate the work of new mentoring pairs. The goal of the mentoring training was to increase the participants' knowledge about mentoring, increase motivation and create a good basis for the success of the mentoring relationship. The SWOT analysis was used to prepare a work of the mentoring pairs and create a structure for the progression of the mentoring process and define the individual goals for the mentoring.

The mentoring team was responsible for monitoring of the mentoring project. The team held a meeting at the end of 2022, where the progress of mentoring in the units was reviewed. In the spring of 2023, a summary of the final evaluations of the mentoring pairs will be made.

Conclusions

Encouraged by the mentoring project, mentoring is implemented in the HUS Neurocenter units. The mentoring process requires enthusiasm, activity, and commitment to long-term cooperation from the mentoring team and the mentoring pairs. Through mentoring, an experienced nurse transfers tacit knowledge and skills to a new employee, which increases overall professional development and growth.



The role of nurses in the interprofessional assessment of abilities and functions using the Functional Independence Measure in municipal neurorehabilitation after acquired brain injury

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Background: The Functional Independence Measure® (FIM) is an 18-item validated tool for assessing level of independence and assistance needs in patients with acquired brain injury (ABI), making it an essential part of Neurorehabilitation – CPH’s work. FIM scores are based on twenty-four-hour observation and interprofessional assessment of each item in collaboration with the patient. Nursing staff are the only professional group present around the clock and some items exclusively depend on their observations and data concerning e.g. bladder and bowel management. Consequently the validity of the score greatly depends on the nurses’ input. The aim of this project is to ensure that nursing staff contribute to the scoring process to achieve a valid interprofessional FIM score.

Material and methods:

In accordance with the Breakthrough Series Collaborative model we calibrated nursing staff shifts around the clock to ensure valid FIM scores by:

- Having all nursing staff complete one-day educational programmes on FIM scoring with other professional groups, underlying theory and Background, local scoring processes, representative cases and assessment of all 18 items
- Developing local helpful hints for the scoring process
- Establishing a FIM resource group (7 FIM-certified employees, 2 of them nurses) to address general questions and evaluate/adjust the one-day educational programmes
- Having nursing staff participate in the daily FIM scoring processes supported by FIM-certified staff
- Allocating time for resource group meetings and supervision of staff
- Conducting a focus group interview in December 2022 when the project ends that focuses on the nursing staff’s practical experience with FIM

Results:

Twelve one-day educational programmes were and will be conducted from August 2020 to December 2022. Forty-one nursing staff participated, 11 of whom no longer work at Neurorehabilitation – CPH, which means 70% of the nursing staff are fully calibrated. The educational programmes are evaluated separately before the FIM resource group makes adjustments. Results from the final focus group interview are expected to provide an overview of the impact of our efforts to support FIM among nursing staff and will be presented at the conference.

Conclusions:

The calibration process and daily FIM assessments confirm the necessity of nursing staff participating in FIM scoring. Due to their presence and provision of around-the-clock observation, they have the best conditions for focusing on and including the perspectives of patients with ABI in terms of contributing to the validity of the FIM score and suitable goal setting.

The evolving educational role of MS Nurse PROfessional 2012–2022

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Objective

Nurses play a critical role in MS patient care. The Multiple Sclerosis Nurse Empowering Education (MS-NEED) survey reported disparate nursing standards across Europe, highlighting inconsistency and variability in skills, responsibilities, and clinical setting.¹ One-fifth of the MS Nurses surveyed cited lack of training, skill and knowledge to provide expert MS nursing care. In order to avoid inequalities in care, it is therefore important to recognise nursing in MS as a specialty, to standardise and benchmark training, and to share best practice.

Material and methods

In order to address this inconsistency, and following the publication of a position statement paper on MS nursing,² the European MS Platform (umbrella organisation for 43 MS patient societies) developed MS Nurse PROfessional using a collaborative model with key MS organisations.

Results

Launched in 2013, MS Nurse PRO is an online foundation level resource providing a free, training curriculum that supports the evolving role of European MS Nurses. As well as delivering education at a foundation level, MS Nurse PRO also provides additional knowledge and skills in MS care to those outside of the specialist role who wish to expand their knowledge. It is currently available in 13 languages, established in 17 countries with further launches planned. It has international accreditation and endorsement from national and international patient and professional groups. To date, the programme has welcomed 7000+ users, of which on average 1300 are active on the platform per year.

Impact analysis shows MS Nurse PRO meets user needs, exerting positive influence on clinical practice, resulting in (self-reported) increased self-confidence to answer patients' questions, improved dialogues with colleagues, and an improved relationship with the patients.

Conclusions

MS Nurse PRO is a multidisciplinary educational programme that meets the needs of professionals caring for people with MS, delivering the benchmark for consistency and constancy of quality of care. The vision for MS Nurse PRO is to develop a pan-European MS Nurse Community, providing a virtual faculty for nurses to share knowledge, skills, challenges and to find solutions together.

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What is the impact of brain tissue oxygenation monitoring on the Glasgow Outcome Scale/Glasgow Outcome Scale Extended in patients with moderate to severe traumatic brain injury? A systematic review.

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Background: Traumatic brain injuries (TBI's) are one of the leading causes of death or long-term disability around the world. As a result of improvements in supportive care, patients are surviving more severe insults with more pronounced dependency on their families, hospitals, and long-term care facilities. The introduction of brain tissue oxygenation (PbtO₂) monitoring aims to recognise episodes of reduced cerebral perfusion prior or without increased intracranial pressure (ICP).

Aim: The aim of this systematic review was to determine the impact of brain tissue oxygenation on the Glasgow Outcome Scale/Glasgow Outcome Scale Extended in patients with moderate to severe TBI.

Design: Systematic Review with narrative and meta-analysis. All original research in which adult patients undergoing brain tissue oxygenation were compared to a control group of traditional ICP/CPP monitoring. Both randomised control trials and observational studies were included in this review.

Methods: The PICO mnemonic (Population, Intervention, Comparison and Outcome) was used to formulate a research question. Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines were used to direct the review. In the beginning 272 articles were found with relevance to the research question. Upon careful screening, the majority were eliminated, leaving 7 studies which were suitable for inclusion to answer the review aim. Quality appraisal of the included studies was completed using the evidence-based librarian critical appraisal checklist. Data was analysed using RevMan software and narrative synthesis.

Results: Two of the studies included found a statistically significant association between long-term neurological outcome of patients treated with PbtO₂ in comparison to traditional TBI management (intracranial pressure/cerebral perfusion pressure) ($p = 0.01$, $p < 0.01$). A meta-analysis of the secondary outcome was completed which demonstrated an associated reduction of mortality in favour of the group treated with PbtO₂ monitoring ($p < 0.0001$). A narrative analysis of two included studies, found the mean length of stay (LOS) in ICU for those treated with PbtO₂ was greater than traditional treatment methods, one of which was statistically significant ($p < 0.01$).

Conclusion: It is unclear whether PbtO₂ goal directed therapy has a positive impact on the long-term neurological functions and mortality of patients suffering from TBI, a multi-centre randomised control trial is required to provide conclusive evidence.



Anxiety, depression, impulse control disorders and weight changes in Parkinson's disease patients with Deep Brain Stimulation: A systematic review

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Background: Parkinson's disease (PD) is the second most common neurodegenerative disease. Its treatment is complex and may involve Deep Brain Stimulation (DBS), which can give excellent symptom relief but also trigger cognitive, psychological, and neuropsychological complications.

Objectives: To gain knowledge of DBS's effects on anxiety, depression, suicidal behavior, and impulse control disorders (ICDs). In addition, we will explore the relationship between weight gain and ICD following DBS and describe instruments used to assess these symptoms.

Method: A systematic review of the literature encompassing quantitative and mixed-method research papers. We designed the review according to the Joanna Briggs Institute guidelines and used the PRISMA statement to ascertain transparent data reporting. We searched PubMed and CINAHL systematically to locate research papers published from January 2010 to August 2019. Titles and abstracts of papers were screened for inclusion, and the papers that passed were read in their entirety. Further articles were identified by forward and backward snowballing in Google Scholar and searching reference lists of included articles. We assessed the risk of bias with a 10-item tool based on JBI-MAStARI. Two researchers independently evaluated each research paper. Data was analyzed narratively using the matrix method and by vertical data integration.

Results: We included 34 quantitative and one mixed-method research paper. PD patients with DBS were 3.220, and control groups were 1.114. Anxiety and depression remained either the same or improved following DBS. Frequency of suicidal behavior was 0%-5%, most suicides/ attempts were made <3 years following the surgery. ICD symptoms either improved, remained the same, got worse, or presented as de-novo symptoms. Weight gain was only assessed in relation to ICDs in one study; 12%-88 % of PD patients gained weight following DBS treatment. Beck's Depression Inventory (BDI) was the most common tool to assess depression and suicide risk, State-Trait Anxiety Inventory (STAI) for anxiety, and the Ardouin Scale of Behavior in Parkinson's Disease for ICD.

Conclusion: Nurses must conduct systematic screenings for anxiety, depression, and ICD in PD patients with DBS. It is also important to educate patients and their families about these symptoms before the DBS surgery and during follow-up. Access to guidance from specialized healthcare professionals should be promoted to prevent serious consequences of these symptoms.



A holistic approach to psychiatric health care for patients suffering from depression

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Introduction: The word 'holism' or 'holistic' are of Greek origin and mean all, whole or total. If we translate the meaning of these words into the concept of a holistic approach in the care and treatment of patients, we will understand that it is a completely different approach to the conventional concept of health and illness. Namely, persons, i.e. human beings, are viewed as whole entities, persons and just like that, they're the focus of interest, not as individual diseases.

Methods: The basis of this research will be a detailed analysis and observation of already existing written publications, books and monographs. The largest number of references will be publications from the Medline database, which was the main source of relevant data.

Results: Our expectations from the research are to show that a person consists of body, soul and mind, as well as that they are separate parts of a unified whole and that a change in any aspect of life would have a direct impact on every aspect of an individual's existence. Also, research should show that health care provided by nurse has always a holistic approach, even when we did not know or were able to define this term itself and that care was never one-dimensional.

Conclusion: The future brings to us a fusion of modern medicine and modern treatment approaches with holistic care. A better understanding of holistic care, especially of psychiatric patients, will bring better treatment and adequacy of approach to psychiatric diseases. Mental healthcare professionals have to remove the restraints of modern society, where modern medicine involves looking at the general state of health, and not paying attention only to the symptoms and signs of the disease.



Modern approach to healthcare in psychiatry through partial hospitalization

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Theoretical approach to the topic: Partial hospitalization (PH) is a modality of treatment of psychiatric patients, which in the past 50 years occupies a significant place in modern psychiatric practice. It is a unit that aims to treat psychiatric patients in the conditions of a day hospital, instead of being continuously hospitalized.

Objective: This topic is very attractive, especially in a world in which work is being done to destigmatize psychiatric patients and in which the aim is for psychiatric patients to lead a maximally comfortable lifestyle, which will not be reduced to complete hospitalization, so its objective is to look at the advantages and disadvantages of this health interventions.

Method: This original master's thesis consists of the interpretation of different perspectives of the role, tasks and challenges of the nurse in the work in conditions of partial hospitalization of patients that she encounters every day, and especially in the situation when we are faced with the current coronavirus pandemic.

Organization of partial hospitalization: There are 46 inpatient psychiatric institutions in Serbia, and a total of over 6,000 hospital beds for psychiatric patients. A third of these capacities are located in the capital, Belgrade.

Analysis and discussion of collected data - hypothesis testing: The role of health care and nurses in such departments is particularly important, if we take into account all the roles that nurses have, especially the most direct contact between nurse and patient.

Given that the health system is still mostly under the umbrella of the government and that all medical interventions related to PH are financially settled from the budget, the direct economic moment is, which is commendable, practically negligible. The part of the health system that deals with psychiatry is one of the most sensitive, so even in the conditions of the SARS-CoV-2 virus pandemic, the closure or repurposing of many psychiatric institutions brought with it many half-sessions concerning the deterioration of the condition of a large number of patients, all due to insufficient available psychiatric care.

Conclusion: There are many challenges interwoven in the daily work of a nurse in the PH ward, where she is exposed to various stressful factors, potential traumatic experiences, which further complicates the already quite demanding and responsible work in front of her.

Key words: partial hospitalization, health care, nursing, psychiatry, mental health



The hyper acute ischemic stroke patient at Selfoss regional hospital in Southern Iceland. Development and implementation of a hyperacute drip-and-ship protocol

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Background and Objectives: "Time is brain," which is critical to remember in hyper-acute stroke care. However, in the countryside, providing treatment in an optimal time-saving way can be difficult. There are many decisions at play. For instance, should a helicopter be dispatched? Should treatment with tPA be initiated locally, or should patients be transported directly to the comprehensive treatment center in Reykjavik? Also, what is the responsibility of different stroke team members? For instance, nurses set up tPA infusions within the comprehensive stroke center. Still, in the countryside, the paramedics or emergency medical technicians (EMTs) have direct responsibility associated with prenotification, transportation, treatment, and surveillance in a so-called "drip and ship protocol." Throughout all decision-making, time dependency is a crucial factor. Time saved improves patients' outcomes. Selfoss has a catchment area that reaches almost 1/3rd of Iceland. Hence, patients who do not arrive at the primary stroke center in Reykjavik within a suitable timeframe for tPA could receive thrombolytic treatment at Selfoss if a drip and ship protocol was in place. For now, this treatment is not offered, and bypasses Selfoss. Rectification is much needed.

Methods. We set out to clarify the roles of the interdisciplinary hyper-acute stroke team at Selfoss. The development of the plan for treatment and surveillance was divided into several interrelated phases:

1. Review of the literature for best evidence-based practices related to acute management of the hyper-acute stroke patients in stroke-ready hospitals.
2. Identify facilitating and inhibiting factors for the implementation of a new treatment regime.
3. Interdisciplinary consensus discussions.
4. Developing an educational package, i.e., simulation scenarios and supportive clinical tools.
5. Developing a schedule for (re)evaluations of implementation.

Results: The care plan comprises a clinical pathway for decision-making and a predetermined Drip-and-Ship Order Set (DaSOS) related to; transportation, neurological assessment, surveillance, intravenous access, intravenous fluids, administration of thrombolytic treatment (tPA), observation of side-effects, and more.

Conclusion: The treatment protocol diverges from the ones seen at the comprehensive stroke center in Reykjavik. Expanding the competencies in the countryside and establishing clear innovative pathways to the comprehensive stroke center in Reykjavik, i.e., through telecommunication, may increase the number of patients who receive early medical hyperacute DaSOS treatment and optimal monitoring in the hyper-acute stroke phase at Selfoss. The project is currently in phase four, and we have run simulations. If available, examples from actual patient cases will be presented at the congress.

Assessment of spatial neglect in acute stroke patients: Results of a cross-country pilot study to validate a simplified version of the Catherine Bergego Scale

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Objectives: Spatial neglect (SN) is present in about 20% patients in acute stroke units. If left unidentified SN may obstruct rehabilitation. The 10-item Catherine Bergego Scale (CBS) is increasingly recommended for SN assessment and has excellent psychometric properties. However, a standardized assessment with the CBS takes around 30-40 minutes to complete, making it rather unrealistic for nurses and physicians to use in the fast pace of the stroke unit. The objectives were to test a revised protocol for the CBS to make its routine use feasible in acute stroke units. We will: a). Compare the time used to administer the original version of the CBS with the simplified version of the CBS (sCBS), b). evaluate the agreement between the results of the CBS and sCBS, c). establish the interrater agreement between two rates, R1+R2, when scoring the sCBS, and d). correlate the sCBS with stroke severity and disability.

Material and methods: Out of 98 consecutive stroke patients from the stroke units in Kaunas and Reykjavik, 15 with right-sided SN were included within five days following stroke. A structured assessment with the CBS established the presence and severity of SN. Patients identified with SN using the original structured assessment underwent a replicated evaluation with a simplified version of the sCBS. Two raters assessed the participants with the sCBS while they were blinded to the other rater's scores. Stroke severity was assessed with NIHSS and disability with smRS.

Results: There was a positive correlation between the NIHSS and the severity of SN $r(13) = .78$, $p = .001$. and the smRS and SN $r(13) = .72$, $p = .002$. On average it took 42 minutes to assess patients with mild/moderate SN with the CBS versus 14 minutes with the sCBS. Patients with very severe SN took <10 minutes to assess, both with the CBS and sCBS, because many scale items were impossible to score. A total of 54 items were impossible to score across patients with the CBS. Significantly more items could be scored using the sCBS ($p < .05$; 39 items, r1 and 40 items, r2).
Conclusions: In contrast to the original CBS, the sCBS is more assessment-friendly for application in bedridden acute SN patients. We expect that the shortening of the assessment time may enhance SN screening in stroke units.



Screening for spatial neglect in acute stroke: Results of a two-step research program

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Introduction: Spatial neglect (SN) is frequent and result in worse recovery following stroke. We present results of two sequential research waves to validate bedside screening tools for SN identification in acute stroke settings.

Patients and methods: Wave one: Index tests: conventional subtests of The Behavioural Inattention test (C-BIT), an additional figure copying test. Item 11 of the National Institute of Health Stroke Scale was revised to include screening for SN (rNIHSS). Wave two: Index tests were based on results from the first wave: star cancellation, figure copying, and the rNIHSS. The Catherine Bergego Scale (CBS) was used as a reference frame for SN in both waves.

Results: Wave one: 126 patients, 24% with SN <14 days post-stroke. If all C-BIT subtests were administered, 35% of stroke patients were incorrectly be identified with SN. More patients without SN were identified as having SN if \geq three C-BIT tests were administered ($p=0.002$). The star cancellation and figure copying were the most sensitive index tests. Inclusion of an additional item to NIHSS correctly identified SN in 80% instances. Wave 2: Out of 98 patients, 21% had SN <7 days post-stroke. SCT had a sensitivity of 80%. Combined use of the SCT and an additional item of the NIHSS identified 85% of SN patients.

Conclusion: Results contests the common belief that use of more tests increase identification of SN. Rather we found that the use a large test battery decreases sensitivity in the (sub)acute phase. Adding a novel item to the NIHSS provided a new way of SN screening.



The perceptions of nursing within rehabilitation: a scoping review.

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Objective

To explore the current recognised perceptions of the nursing profession, within the wider multi-disciplinary context of rehabilitation.

Material & methods

A scoping review was undertaken in accordance with the JBI methodological guidance. This identified a wide range of qualitative and quantitative research incorporating a large time range, and broad geographical context. Findings were systematically reviewed, tabulated, and assimilated to allow for the extrapolation of key themes within the identified literature, and to further identify the research gaps.

Results

There is a wide range of literature exploring the perceptions of Nurse's, other Health Professionals, and Patients, of the role of Nurse's within the context of rehabilitation.

Key themes emerged showing a lack of clearly identified role for Nurse's within this setting, and the additional difficulty of ascertaining the unique professional contribution they make to this stage of patient care. Further literature showed the unique professional contribution made by Nurse's in rehabilitation in improving continence care, skin integrity, and providing psychological and emotional support to patients and relatives.

Conclusion

There is a clear need for further work into this area, to better define and refine the role of Nurse's within rehabilitation. This will allow for further investment and development into the role of the profession to both raise the profile of Nursing, and their unique professional contribution, and allow for the continued development of improved patient care. By raising the profile of Nursing and championing for continued investment this will allow Nurse's to be change agents within healthcare with undoubted improved outcomes for patients. Whilst staffing numbers remain a significant challenge to the profession on a global level, raising the profile of the Nursing profession provides a clear pathway to attracting people into the profession.

Structured reflection for new employees at a neurosurgical unit - a way to evolve in the profession

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Structured reflection for new employees at a neurosurgical unit - a way to evolve in the profession

Background

As a new employee in a workplace, there is a lot that is new and that can feel insecure. Through reflection of situations, a deeper understanding and insights are created that leads to a learning process and deeper knowledge.

In the spring of 2021, the current neurosurgical units had 18 newly hired nurses and assistant nurses. Most of the new employees were also completely new to their profession. A need for reflection was identified and a structure for it was created.

Objective

To implement structured reflection for new employees at a neurosurgical unit.

Method

The participants were divided into two groups with nine people in each group. The reflection sessions were initially scheduled two weeks between but was then changed to once a month. In total, each group had seven reflection sessions in half of year.

Clear rules were set to create consensus in the groups.

Each occasion started with a check-in. If a participant had a special case to address, focus was put on that case. During these occasions, Gibbs' reflection cycle was used. If no one had a specific situation to address we used other methods, such as "I'm good at this" or "This is difficult".

Results and conclusion

The participants saw the reflections as positive. They felt they were developing in their professional role and had easier to move on after difficult situations. They also described that they during the sessions got stronger unity to each other.



My life reversed completely- a qualitative interview study on significant others' experiences of own support needs, and their provision of support for persons after aneurysmal subarachnoid hemorrhage

Mrs. Ulrika Lageblad¹

¹Karolinska University Hospital, Stockholm, Sweden

Background

An aneurysmal subarachnoid hemorrhage (aSAH) is life-threatening hemorrhagic stroke. aSAH is more common among women, and often strikes in the middle of life. For their significant others, it can result in a great strain and changes in life. Significant others are an important group for persons recovering from an aSAH.

Aim

The aim of this study was to investigate experiences of own support needs, and their provision of support in significant others to persons suffering from from aneurysmal subarachnoid hemorrhage.

Method

A qualitative interview study with cross-sectional design. Inductive manifest qualitative content analysis was used. Eight transcribed interviews were analyzed.

Results

The participants were six women and two men, and different relationships to the person who have had aSAH were represented. The content analysis resulted in two categories and eight subcategories. The category 'The burden of being a close relative' includes descriptions of anxiety, the need for information from healthcare, to constitute support in everyday life and an affected relationship with the person who has had aSAH. The category 'Impact on their own lives' contains descriptions of the support they themselves have received or needed, that their own social life and housing have been affected, and that their own attitude to life has changed.

Conclusion

Being significant other to a person recovering from an aSAH can be a great strain that lasts for a long time. The results show that the significant others experienced different forms of stress, and for some of them that it had a great impact on their own lives.



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Educating The New Graduate to a Neuro Unit

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New graduates pose a unique challenge in transitioning from their role as a student to the role of a registered nurse on a neuroscience unit. As a new graduate, they are eager to learn, however, neuroscience content is not emphasized in undergraduate nursing courses. Because of this, the preceptor should consider novel teaching strategies to foster an optimal learning environment. The objective of this presentation is to demonstrate teaching strategies to implement when working with new graduates in a neuroscience unit. The first teaching strategy is the importance of evaluating and promoting clinical reasoning. New graduate nurses need to be able to reason through clinical evidence to deliver safe, effective care. Fostering an environment where students feel safe to reason through the patient's findings is essential in developing their clinical judgment. By doing so, the new nurse is better able to communicate the neuro patient's change of condition to the care team and prioritize interventions when they are out of orientation. Second, incorporating active teaching strategies such as 1) the use of QR codes, 2) Gamification, 3) Simulation (video, low and high-fidelity mannequins, and standardized patients) in orientation allows the new neuroscience nurse to engage in learning rather than passively listen to lectures or read orientation manuals. The new nurse can reflect on their learning experiences to develop an understanding of the concepts which they need more guidance. Implementing active teaching strategies and teaching how to reason through data will aid in making the transition from nursing student to registered nurse on a neuroscience unit more seamless (and less boring) because the orientation is more in line with the teaching methods used in nursing school.



Constipation. Preventive and problem solving nursing interventions. A systematic literature study.

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Constipation. Preventive and problem solving nursing interventions.

A systematic literature study.

Background

Constipation is a common condition, globally estimated to affect 14% of the population. Multifactorial causes contribute to constipation. People with neurological disorders are at increased risk of constipation especially during hospitalization, as it may entail inactivity and reduced mobility, prolonged bed rest, changed eating habits, in relation to insufficient food, fluid and fiber intake. The purpose of the study was to describe preventive and problem-solving nursing interventions for people who temporarily or permanently become immobile or inactive.

Method

Systematic literature study. Systematic search strategy to identify all types of evidence. In- and exclusion conducted independently by authors. Conflicts resolved by consensus.

Results

We found evidence concerning the following nursing interventions

Prevention

- Patient involvement in problem-solving, preventive and educational initiatives.
- Physical activity, dietary fiber and fluid are important factors in the prevention of constipation.
- Where increased physical activity is not possible, colon massage is an alternative treatment

Measurement:

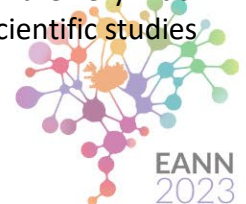
- A structured and systematic bowel anamnesis with emphasis on the previous stool pattern.
- Factors that influence constipation are systematically uncovered
- The Bristol scale or the VAS-Regula scale for stool types can be used for systematicity and uniformity

Interventions:

- The patient is supported into a good defecation position in a recognizable and undisturbed environment.
- The mildest effective laxative is chosen. Oral laxative is given once a day. The time of day is determined in order to match the time of the effect and previous stool pattern. Suppositories are used 30-45 minutes after a main meal, most often after breakfast.

Conclusion

Nursing interventions in relation to the prevention and treatment of constipation are very much experience based and only supported to a modest extent by well-documented scientific studies



LEIKO – From home to operation in neurosurgical department

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Background: From Home To Operation (FHTO) or LEIKO (leikkaukseen kotoa) in Finnish is a process or a model where patients come to a special unit at the day of their scheduled operation without being admitted to a bed ward. Patients for LEIKO have to meet somewhat strict criteria: they have to be able to follow preoperative instructions, be able to change clothes themselves and to preferably move without any aids or assistance.

Our aim is to introduce and reflect on our LEIKO model in the Neurosurgical department in Tampere University Hospital (TAUH).

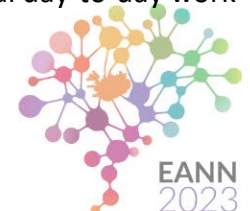
Material and methods: We searched published articles of the FHTO or LEIKO model, and went through our own data collected from the LEIKO unit since 2016.

Results: Only some thesis and a few articles were found about the LEIKO model, although many Finnish hospitals have these units. TAUH neurosurgical LEIKO unit was established in 2013, when neurosurgical and otorhinolaryngological/oral and maxillofacial surgical bed wards were united. The LEIKO unit operates within the otorhinolaryngological ward, and patients come from all three specialties. Most of our LEIKO nurses work in both of our bed wards. In 2022 three nurses from the operation theater began working part time in the LEIKO unit.

In 2016 only about a hundred patients came via LEIKO, and in 2021 the total number of neurosurgical LEIKO patients was 553. After the patient has had her operation scheduled, the LEIKO nurse calls her about one or two weeks before the operation. Anesthesia forms are pre-filled and patient's medications, physical condition and understanding of the preoperative instructions are checked. The tasks LEIKO nurses do may vary much between different LEIKO units.

Today our LEIKO is a connection point between two bedwards, two outpatient clinics and our operation theaters. As our LEIKO nurses work in and communicate with all these different units daily, they have a wide range of knowledge about patient care pathways. New ideas sprout and good practices are shared between different specialties.

Conclusions: Today most of our elective patients come to operation via LEIKO unit, and fewer elective patients need preoperative care in bed wards, which makes preoperative care smoother and frees more time for postoperative care, as Finland struggles with shortage of nursing staff. Also working in the LEIKO unit gives nurses a well appreciated change for their normal day-to-day work in hectic bed wards.



TUKENA – a bibliotherapeutic growth group for clinical nurse specialists

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Background

Healing power of words was known already in ancient Greece, and Shakespeare advised to give words to sorrow. From the early 20th century some forms of bibliotherapy or poetry therapy have been used in hospital settings, mainly within psychiatric care settings. Reading as self-help was also used in libraries. In modern bibliotherapy poems, texts, pictures, or other prompts are used with various groups or individuals to facilitate self-growth, and to discover insights and alternative viewpoints via writing, and then interchanging thoughts within a group and with a therapist or an instructor. Bibliotherapeutic methods have been proven to enable self-explorations and reflective thinking.

In 2022 we were still living in the midst of Covid-19 pandemic, and Finnish health care system was also greatly burdened by the lack of nursing workforce. Labor unions fought for better salaries and working conditions for health care personnel.

As a part of my bibliotherapy studies, my aim was to gather a group of clinical nurse specialists, and to use bibliotherapeutic methods to empower them and help them to put some form into chaos of emotions.

Material and methods

The bibliotherapeutic growth group was recruited amongst clinical nurse specialists who work in the stroke unit, neurosurgical, and otorhinolaryngological department in Tampere University Hospital, Finland. Five nurse specialists joined the group, four of which were mainly working with cancer patients. Short texts, poems, and writing prompts were used to encourage conversation. Written feedback was gathered after the last meeting.

Results

In total four half-day meetings were held. Although not all the participants were able to attend all of the four meetings, the conversations in every meeting were rich. The participants wrote that they got to see things in a different perspective. Some said they found their passion for work again in the midst of these difficult times. Although none of the nurse specialists had heard about bibliotherapy before, they were positively surprised about how it worked. Some members felt that these meetings served them even better than some work counseling groups they have attended.

Conclusions

Clinical nurse specialists felt that bibliotherapeutic methods helped them to find meaning and joy of their work again. The growth group gave them peer support and a safe place to reflect and discuss their thoughts and feelings towards their work. Further research is needed to provide more knowledge of suitable themes and prompts for this kind of focus group.



The experience of nursing graduates in covid-19 wards: explorative study with qualitative thematic analysis

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Objective: To investigate the experience of newly nursing graduates hired in COVID-19 wards.

Materials and methods: An exploratory qualitative study was conducted through semi-structured interviews, with qualitative thematic analysis according to the method of Braun & Clarke, 2006. The sampling was of a purposive type.

Results: The sample was made up of 15 newly graduated nurses. The analysis of the interviews highlighted several issues that were food for thought. The issues concerned: a) the entry of new graduates into Covid-19 wards, b) the support perceived, c) the emotions felt, d) the relationship with colleagues, e) the difficulties faced during the work transition, f) practical support and emotional strategies, g) reflections on the experience in Covid wards. The issues that emerged fully described the lived experience and led to the definition of two conceptual dimensions, the first of a personal type, the second of a professional type.

Conclusion: The results underline the importance of organizing the entry of a recent graduate into a new ward. Regarding clinical practice, taking into account the innovative organizational ideas of newly graduates helps to create a climate of equality.



Tracheostomy care in neurosurgical patients: Development of care bundles and Delphi study.

Bergrún Benediktsdóttir¹, Marianne Elisabeth Klinke

¹Landspítali

Objective: Nursing patients with tracheostomy entails daily care procedures and surveillance to ensure safety and, from patients' perspective, feelings of security. Based on evidence-based knowledge, care bundles support staff and ensure the necessary components for surveillance and treatment are available.

The project was divided into two main parts: (a) Developing care bundles for surveillance of neurosurgical patients with a tracheostomy. (b) To examine the perspectives of stakeholders and seek solutions to obstacles identified in care bundles by involving an interdisciplinary group of healthcare professionals at Landspítali University Hospital (LUH).

Method: (a) During the development of the care bundles, we adhered to Borget's seven main steps to identify evidence, prepare educational materials, and adapt them to Icelandic circumstances. (b) A two-round Delphi study ascertained the usability of the care bundles and consensus about the content from a multidisciplinary group of healthcare professionals (n=24 round 1 and n=21 round 2). After each Delphi round, the care bundles were corrected and improved. Participants comprised the target group of healthcare professionals intended to use the care bundles. Moreover, we also included other specialists at LUH with expertise in caring for patients with a tracheostomy. The validity of the study reporting was ensured by adhering to CREDES – Conducting and REporting of DELphi Studies.

Results: a) We developed three care bundles: 1) Monitoring and safety of patients with a tracheostomy. 2) Daily care of patients with a tracheostomy. 3) Weaning neurosurgical patients from a tracheostomy. In addition, we drafted a theoretical paper entitled "Recommendations for procedures related to the treatment of patients with a tracheostomy" explaining in depth the different components and theoretical background for the care bundles. (b) Staff attitudes towards care and surveillance of patients with a tracheostomy revealed several challenges that must be scrutinized further. Also, we identified diverse needs for supporting and educating staff caring for patients with a tracheostomy. The healthcare professionals' attitudes towards the care bundles were positive, which were considered conducive to improving patient safety and staff self-efficacy. The care bundles developed gradually from the feedback from the Delphi study participants.

Conclusions: The implementation process of care bundles must be carefully contemplated to integrate them into department culture. The method and results have transferability to other development projects within LUH and help to enhance interdisciplinary collaboration in the care and surveillance of patients with tracheostomies.

