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CONTENTS

ORAL PRESENTATIONS

Experto crede (Trust in one experienced)

In fide scientiam (Faith in science)

Cras es noster (Tomorrow is ours)

Ad altiora tendo (I strive for higher things)

POSTER PRESENTATIONS

ORAL PRESENTATIONS

Claudia Leoni-Scheiber, RN, MSc, MSN, PhD

Claudia holds a PhD from the University of Vienna, where her ground-breaking research focused on the impact of the Guided Clinical Reasoning training method. Her study explored the method's effects on registered nurses' attitudes, Advanced Nursing Process knowledge, and the quality of nursing diagnoses, interventions, and outcomes. She conducted the research at a City Hospital in Zurich, acquiring invaluable insights that are shaping the future of nursing practice.

Claudia currently serves as a senior scientist at UMIT TIROL - Private University for Health Sciences, Medical Informatics and Technology, Institute of Nursing Science in Austria. Her dedication to nursing extends globally as the vice-president of ACENDIO and coordinator of the NANDA-I Network Group: German Speaking Countries.

Current developments in standardised nursing languages in Europe: An Overview

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ACENDIO, Klundert, The Netherlands

Current developments relate to nursing practice including frameworks that influence the use of standardised nursing languages (SNLs), education and research. Among the eight interface terminologies recognized by the American Nurses Association (ANA) in 2018 and 2015, three exhibit the highest levels of validity and reliability: NANDA-I, NIC, and NOC (Müller Staub & Rappold, 2017), collectively referred to as the NNN taxonomy (Johnson et al., 2012). In contrast, many other SNLs used in Europe lack validated concepts, limiting their applicability and suitability for research. The use of different SNLs within diverse healthcare settings, regions, and countries complicates data exchange. To address this issue, the ANA (2018) advocates for the use of the Systematised Nomenclature of Medicine - Clinical Terms (SNOMED CT®). Many European countries have translated these terms, and performed reviews and mappings with SNLs although the ANA (2018) emphasises that data exchange between providers using the same SNLs does not require conversion of data.

Several implementation projects of the NNN taxonomy are currently underway. In specialty areas such as psychiatry, several studies have demonstrated the suitability of NNN for describing critical nursing phenomena and interventions (Frauenfelder et al., 2011, 2013, 2016, 2018a, 2018b). NANDA-I nursing diagnoses are the most employed. In a scoping review on the prevalence of nursing diagnoses using NANDA-I, D'Agostino (2023) found that

more than 90% of the 328 included articles utilised this classification. Significant for practical use is a user-friendly software for nursing records. The development of clinical decision-making skills including knowledge of Registered Nurses on the validated concepts is equally important. Therefore, curricula should be structured with this focus in mind, as demonstrated by examples from Holland, Switzerland, and Estonia. To this end, several educational methods such as simulation and case meetings have been utilised. Guided clinical reasoning has proven particularly effective in enhancing internal consistency in the Advanced Nursing Process (Leoni Scheiber et al., 2021). High quality translations that are consistent across different languages are needed. Other factors influencing practical application are nursing organisational systems such as primary nursing as well as nursing staffing. A representative survey in Austria (Cartaxo et al., 2022, 2023) revealed that every second nurse omitted complete nursing documentation due to resource shortages, with a statistically significant correlation observed between nursing staffing levels and this issue. However, research conducted in primary health care centers in Spain suggests that the use of the NNN taxonomy results in significantly improved patient outcomes (Pérez Rivas et al., 2016).

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Kristi Puusepp, RN, MSc

Kristi Puusepp is the Head of the Chair of Nursing at Tallinn Health Care College. She earned her nursing degree at Tartu Medical College and holds a Master's degree from the University of Tartu. She has been the editor of NANDA-I books in Estonian since the 2012-2014 publication. Kristi has successfully integrated the teaching of NANDA-I into the Estonian curriculum, leading the Estonian 3N (NNN) working group, and serving on the board of the Estonian Nursing Quality Development Center. She is one of the leaders of the state program for creating and implementing the 3N electronic system and has authored numerous articles on nursing education, history, and the teaching of NANDA-I in Estonia. Additionally, she has overseen various projects, including the development of the simulation centre at Tallinn Health Care College.

Aleksei Gaidajenko, RN, APN, MA, MSc

Aleksei Gaidajenko works as the Member of Executive Board - Chief Nursing Officer at West Tallinn Central Hospital, is the CEO of Estonian Nursing Quality Development Center. He is the lecturer of managing and leading the healthcare systems at Tallinn Health Care College as well as at the University of Tallinn.

Aleksei implemented many important projects, such as developing the MA curriculum for organisational behavior specialising in healthcare management, he also reached an agreement with the leaders of nursing in order to start using and developing the NANDA-I, NOC and NIC classifications in Estonia. He was influential in implementing the "Magnet" principle in the Estonian health care system. He received his MA in Social Sciences from the University of Tallinn and the MA in health sciences specialising in intensive care nursing from Tallinn Health Care College. For his achievements in developing nursing, he received the Estonian Red Cross III class badge of merit from the Estonian president in 2021.

Integrating standardised nursing language in Estonia: An Overview

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First Estonian version of NANDA-I was published in 2012, marking the initiation of its integration into nursing studies within Estonia during the same year. As of today, there are four Estonian versions available. By teaching NANDA-I classifications the English versions of NOC and NIC were implemented into the study process. Currently, the use of 3N classifications is compulsory in basic nursing studies, while practicing nurses are offered advanced training concurrently.

Considering the active incorporation of classifications, a decision was made to undertake the translation of NOC and NIC classifications into Estonian. In 2022, The Estonian National Health Fund allocated funds for the translation, editing, and publication of these classifications. The main challenges encountered in this endeavour pertained to the development of nursing care terminology and the establishment of agreements. Esteemed translators of NANDA-I classifications, the editor, and members of the Estonian nursing terminology working group actively participated in this process. The publication deadline for the translated book was January 2023, with oversight provided by the Estonian Nursing Quality Development Center.

Along with the translation and editing of NIC and NOC classifications, future plans for implementing the standardised nursing

language into practice have been agreed upon. Over the upcoming year, a comprehensive business analysis of 3N will be conducted, encompassing the mapping of 3N service design. Estonian Ministry of Social Affairs, the Center of Health and Welfare Information Systems, and the Institute of Health Development, are integral contributors to this process. the business analysis of 3N will be done, the 3N service design will be mapped and Estonian Ministry of Social Affairs, Center of Health and Welfare Information Systems and the Institute of Health Development will also be involved in the process. The aim is to establish consensus regarding the principles and values that the service will deliver for patients, nurses, and the broader healthcare system. The most ambitious plan aims to extend the service's coverage to the entirety of the Estonian healthcare system by 2025. Thus, the envisioned outcome is that, by 2025, nurses across the entire state will utilise electronic support based on the classifications of NANDA-I, NIC, and NOC.

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Carme Espinosa i Fresnedo, RN, MSc

Carme served as NANDA-I President from 2020 to June 2023, making significant contributions to the organisation since 2000. She has been a member of various committees, shaping the future of nursing.

Today, Carme works as a human developer and trainer for a top consultancy firm. Recognised as a "NANDA-I Fellow" in 2016, Carme's dedication to nursing innovation is unparalleled. Beyond NANDA-I, she is actively involved in organisations promoting standardised nursing languages. Carme's expertise spans Nursing Languages, Methodology, Critical Thinking, and Clinical Reasoning.

She is a key translator of "NANDA-I Nursing Diagnoses: Definitions and Classification" into Spanish, making nursing knowledge accessible to a broader audience. Carme's research contributions, publications, and presentations at national and international levels are paving the way for nursing excellence.

Integrating standardised nursing language into Electronic Health Records

Carme Espinosa i Fresnedo, RN, MSc
NANDA International Past President, Principality of Andorra

The concept of the Electronic Health Record (EHR) can be traced back to the 1960s, but its implementation and widespread adoption took several decades. In its early stages, EHR systems primarily focused on the electronic storage and retrieval of patient data.

The true emergence and adoption of comprehensive EHR systems began in the late 20th century and early 21st century as technology advanced, and the benefits of digital health records became increasingly apparent. Today, EHRs are a crucial part of modern healthcare, improving patient care, communication between healthcare providers, and overall efficiency in healthcare practices.

Nursing is often described as the profession responsible for all those aspects that cannot be counted, measured, and determined in a world dominated by information and communication technologies. (Jenkins, 1988). Jenkins' statement remains valid for a significant part of the discipline: How can we measure a patient's level of hopelessness or anxiety? This challenge makes it difficult for nursing to fully integrate into information systems.

Undoubtedly, the integration of nursing information into the EHR entails a degree of complexity. Nursing information needs to be the axe of the HER, and should trascend departmental and disciplinary boundaries to be effective. Effective communication should extend across healthcare professionals and ideally encompass various levels of care, enabling the sharing of information between primary healthcare settings and hospitals. To achieve this, the implementation of EHRs need to overcome political and economical issues and focus on

user needs, considering the specific environment and conditions in which the system will operate.

Finally, the use of Standardised Nursing Languages is crucial for the successful implementation of Electronic Nursing Records within the EHR. The electronic system should function as a Decision Support System, assisting nurses in making appropriate decisions regarding patient care. It is essential to consider that the implementation of an electronic system is a complex endeavor, requiring a well-planned change process to overcome the challenges effectively.

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Lynda Juall Carpenito, MSN, CRNP, FNI

Lynda holds a rich and extensive nursing background. Graduating from a BSN program in 1968, achieving her MSN in 1974, and completing an Advanced Practice Nursing program in 1997, she has demonstrated an unwavering commitment to the field for over five decades.

For more than two decades, Lynda has served as a dedicated Family Nurse Practitioner, extending her care to underserved communities facing the challenges of high crime rates and limited access to healthcare. Following this, she dedicated four years to providing compassionate care within an assisted living and dementia facility. Presently, she continues her mission as a Nurse Practitioner in the field of Hospice, where she considers it a true privilege to practice nursing.

With a remarkable literary contribution, Lynda has authored seven significant texts and is currently in the process of revising the 17th edition of her renowned "Handbook of Nursing Diagnosis."

Lynda's literary works bear a poetic touch, commencing with a poem titled "To Risk." The poignant conclusion of this poem reads, "Only those who risk are truly free," reflecting her enduring spirit and commitment to nursing and life itself.

Advanced Practice Nurses and nursing diagnoses

Lynda Juall Carpenito, MSN, CRNP, FNI
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This presentation focuses on the utilization of nursing diagnoses by Advanced Practice Nurses (APNs). For more than two decades, nurses in the United States have been voted to be the most trusted profession for honesty and ethical standards by the respected Gallup poll. This presentation explores the use of nursing diagnoses by nurses and advanced nurse practitioners. Utilising Carpenito's Bifocal Clinical Practice Model (1983), the different practice focuses for nurses and APNs will be explained. Advanced Nurse Practitioners have been practicing across various specialties since 1965.

The science and art of nursing remains invisible and under-appreciated unless it can be precisely named and classified. While the public knows what to expect from physicians, nursing diagnoses offer a vital classification system that not only guides nursing practice but also defines accountability.

Nurses and Advanced Practice Nurses both share the same foundation in the art and science of diagnosing and treating nursing diagnoses. The key distinction is that Advanced Nurse Practitioners also possess the authority to diagnose and manage medical diagnoses. The Bifocal Clinical Practice Model introduces a significant contrast in the roles of nurses and advanced nurse practitioners. Nurses primarily monitor and refer patients for physiological complications arising from medical diagnoses and treatments, whereas Advanced Practice Nurses can both diagnose and manage medical diagnoses and their associated complications. Nurse Practitioners also have the option to consult with physicians when necessary.

Nurses and Advanced Practice Nurses must, after decades of being defined as subservient to medical professionals, clarify that their unique expertise is nursing (Carpenito 2021).

Never ask permission to practice nursing.

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Luca Bertocchi, RN, BSN, MSN, PhD

Luca's dedication to nursing knows no borders. He brings a wealth of international experience, having worked for two years at St George's University Hospital in London (UK) GB and *completing a transformative six-month mobility program at Boston College in the Connell School of Nursing (United States) under the mentorship of Professor Dorothy Jones, former president of NANDA-International and current Director of the Gordon program.*

Luca is at the forefront of nursing research, with a focus on cutting-edge topics such as Standardised Nursing Terminologies, Nursing Information Systems, Simulation, and Nutrition.

Effectiveness of nursing process-clinical decision support systems using NANDA-I, NIC, NOC in education: An Italian experience

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Standardised Nursing Terminologies (SNTs) can enhance the quality of healthcare services and improve and/or predict both patient and organisational outcomes (Bertocchi et al., 2023). Among these terminologies, the NANDA-I, NIC, NOC (NNN) are globally recognised and extensively employed. SNTs can be incorporated into electronic health

records and computerised Nursing Process-Clinical Decision Support Systems (NP-CDSSs-) can support nurses in the clinical decision-making process. In nursing education, electronic documentation systems have been used to enhance nursing students' ability to accurately identify patient data, while also facilitating the development of their critical thinking skills through the utilisation of NNN taxonomies during the nursing process (Müller-Staub et al., 2016; Pobocik 2015; Sousa Freire et al., 2018; Tinôco et al., 2021). However, there is a paucity of literature regarding the impact of NP-CDSS using NNN in undergraduate nursing programs.

The study aimed to compare the effect of an educational NP-CDSS employing NNN on nursing diagnostic accuracy with the traditional paper-based method. In a before-and-after study, a sample of third-year undergraduate nursing students were asked to solve three validated clinical scenarios (cancer, acute myocardial infarction, and stroke) using the traditional paper-based method initially and, after thirty days, utilising a NP-CDSS.

The results indicated that when using the NP-CDSS, the accuracy of nursing diagnoses was significantly higher in the cancer in community setting and stroke scenarios, while no significant difference was observed in the acute myocardial infarction scenario.

In conclusion, the implementation of the NP-CDSS demonstrated a positive effect on nursing diagnostic accuracy. Nursing programs have the opportunity to incorporate these technologies into their curricula to enhance students' decision-making capabilities.

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Prof. Kristi Rannus, RN, BSN, MSc, PhD

With an impressive 19 years of experience as a lecturer, Kristi's dedication to nursing terminology, education, and research has made her a shining star in the field of healthcare. Currently serving as a full-time professor at Tallinn Health Care College, Kristi also takes the helm in overseeing the Master's Degree Program in Health Sciences.

In her ground-breaking research journey, Kristi places a spotlight on the education and development of nursing, with a particular focus on Advanced Practice Nursing. Kristi's expertise extends into the practical realm, where she has honed her skills in leadership and innovation within the field of cancer care.

Teaching NANDA-I diagnoses, nursing interventions and outcomes classifications in nursing curriculum: Curriculum analyses and lecturer interviews

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The national nursing stakeholders have agreed that by 2025 Estonia will be among the countries implementing all three classifications (NNN) of Nanda I, nursing outcomes (NOC) and nursing interventions (NIC) into the electronic health information system (Gaidajenko & Puusepp, 2023; Puusepp, 2019). Therefore, qualitative research was conducted to delineate effective strategies for teaching the application of NANDA I, NIC, and NOC in clinical decision-making within the undergraduate nursing curriculum. In spring 2023, a document analysis of the General Nurse Curriculum (General Nurse ..., 2021), including the 11 syllabi of the NNN teaching subjects, and ethnographic interviews with 13 lecturers instructing these subjects were conducted at Tallinn Health Care College. The content analysis comprised a total of 212 pages of written text material.

The study revealed that the learning of NNN classifications constitutes half of the time spent on learning to be a nurse (125 ECTS out of 210 ECTS). This is typically taught through oral and/or written problem-solving assignments in seminars, simulations, individual homework, and internships. The complexity of health situations in assignments increased progressively with each academic year. So far, the focus has been on identifying the nursing diagnosis based on the Estonian version of NANDA-I (Herdman et al., 2021/2022). To find the appropriate interventions, students have often resorted to copying Carpenito´s (2017) handbook due to difficulties in understanding English NIC and NOC textbooks (Rannus & Puusepp, 2023).

To enhance learning, students need to be educated on independently collecting and analysing patient health status data, engaging in group discussions on the clinical reasoning behind their choice of diagnoses, interventions, and expected outcomes, and justifying their decisions to achieve a consensus within their teams. The evaluation of learning outcomes and feedback to the student should be immediate and rather in the form of individual reflection and dialogue. More emphasis is required on the significance of setting and assessing nursing outcomes. The integration of the freshly translated Estonian NIC (Butcher et al., 2018/2023) and NOC (Moorhead et al., 2018/2023) textbooks into nursing practice, education and research necessitates the identification, translation, and adaptation of effective learning tools used in NNN.

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Ass. Prof. Irena Milaniak, RN, BSN, MSN, PhD

Irena holds an extensive nursing background. She graduated as a registered nurse in 1991, and continued to elevate her expertise, earning a BSN in 2010 and an MSN in 2012, while also completing a specialised cardiology nursing program in 2016.

In 2014, she obtained a scientific degree - Doctor of Medical Sciences for the dissertation topic: "Evaluation of selected determinants of quality of life of patients after heart transplantation."

She has worked for over three decades at Krakow Specialist Hospital St John Paul II in the Clinical Department of Heart, Vascular, and Transplantology, where she currently holds the position of a nurse ward. In her role, Irena specialises in the care of advanced heart failure patients, heart transplant cases, and mechanical cardiac support. She also actively contributes to the standardisation of nursing documentation within the hospital and imparts her knowledge by training students in electronic documentation using the ICNP classification system.

She is also a member of faculty at Andrzej Frycz Modrzewski Krakow University, Faculty of Medicine and Health Sciences. Her scientific interest focuses on quality of life, psychosocial functioning of transplant and Left Ventricular Assist Device (LVAD) recipients, as well as attitudes towards organ donation.

Implementation of nursing classifications in Poland – An Overview

Ass. Prof. Irena Milaniak, RN, BSN, MSN, PhD
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Establishing a terminological framework for the nursing profession has become an essential requirement in Poland. The use of classification systems enriches professional training by describing nursing diagnoses, i.e. decisions on the patient's health condition for which the nurse is responsible, and the classification of activities/interventions remaining within her professional autonomy, and also determines the results of nursing care. The implementation of the classification into nursing practice is recommended by the Polish Nursing Association, the Accredited Center for Research and Development (ACBiR) of the International Nursing Classification (ICNP®), and the Ministry of Health.

The aim is to provide an overview of nursing classifications in the healthcare system in Poland. Discussion: Although maintaining digital medical records is mandatory in healthcare institutions, too few nurses are ready to implement ICNPR in Poland – even though classifications are included in nurse training programs. The comparative analysis of the ICNP and NANDA systems as alternative classifications ordering nursing terminology for the needs of the Polish market indicates a higher utility and educational value of the NANDA taxonomy system. The knowledge of nurses regarding NANDA and ICNP classifications related to the nursing process is limited. Less than half of the nurses are theoretically prepared to apply the classification in practice. The final Ministry of Health Report from the pilot conducted on the Standardisation of Nursing Care In Healthcare Centers indicates the

possibility of using ICNP as a standard tool for describing and documenting nursing practice, constituting a unified nursing language system. However, identified weaknesses in the system and tools necessitate specific strategies, decisions from regulatory authorities, and close collaboration with IT companies for successful national implementation of nursing classification.

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Marianne Annion, RN, APN, MSc

Marianne Annion is a lecturer at Tallinn Health Care College. Marianne holds a Master of Health Science degree in Advanced Practice Nursing (APN) with a specialisation in mental health nursing. Her primary focus is on implementing mental health simulation training for undergraduate nurses and Master's students. Marianne's research interests span mental health nursing, palliative nursing, and education.

Nursing process of patients with an anxiety disorder

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According to the WHO, anxiety disorders account for 31% of all mental health disorders. In Estonia, every fifth person is at risk of developing an anxiety disorder. Anxiety disorders are widespread, and providing nursing care to such patients can be quite intricate. Nursing diagnoses and evidence-based interventions help in planning an individual nursing plan for patients with anxiety.

To describe the nursing process, nursing diagnoses, and nursing interventions for patients with an anxiety disorder, a qualitative research was conducted. Data were collected from thematic books, and the databases EBSCOhost, DOAJ, MEDLINE, and PubMed were used to search for articles. A total of 24 pertinent peer-reviewed articles, including case studies and reviews, all within a 12-year timeframe, were identified.

Based on the literature review, nursing diagnoses for anxiety include: anxiety, excessive stress, fear, inefficient breathing, decreased cardiac output, insomnia, and disturbed social integration. Nursing interventions for anxiety involve: recognising the awareness of the patient's anxiety, using a calming and peaceful manner, and accepting their defenses. For excessive stress, interventions include explaining to the patient how their thoughts and emotions influence physiological responses and behavior, as well as providing strategies to reduce stressors. With fear, it is essential to raise awareness and reassure the patient that fear is a normal response to danger and stress. In cases

of ineffective breathing, relaxation techniques and breathing exercises can be employed. For decreased cardiac output, explaining that heart rate changes are a symptom of anxiety and tend to subside as anxiety levels decrease is crucial. In the case of insomnia, it is necessary to explain the importance of maintaining good sleep hygiene. For patients experiencing disturbed social integration, interventions should focus on teaching coping mechanisms and engaging the patient's family in the nursing process.

Establishing contact with patients suffering from an anxiety disorder can be challenging. Questioning and conversation may heighten the patient's anxiety level. Building trust is facilitated through the nurse's calm and supportive communication. During these interactions, it is especially important for nurses to be self-aware of their attitudes, biases, anxiety levels, speech, and non-verbal cues. Nursing diagnoses and activities should always be planned in co-operation with the patient.

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Irma Nool, RN, MSc

Irma Nool is a senior lecturer at Tallinn Health Care College and the head of the nursing basics module. Her research expertise encompasses critical thinking in nursing, the application of NNN taxonomy in the nursing process, and student satisfaction with practice supervision. Irma is also interested in holistic nursing. Drawing from her practical experience, she possesses valuable skills and knowledge gained as a nurse in the field of oncology.

Continuing trainings for nurses for the implementation of NNN and the impact of the training on the implementation of NNN in practice among nurses

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The activities of nurses and midwives must be measurable and visible (Eesti õenduse ..., 2020; Rahvastiku tervise ..., 2020). To achieve the goal, Tallinn Health Care College has conducted training programs for nurses since 2013. This training process has been facilitated by the translation of NANDA's book of nursing diagnoses into Estonian, which occurred for the first time in 2012. Additionally, in 2023, the "Nursing Interventions Classification" and "Nursing Outcomes Classification" were published in Estonian for the first time.

To describe additional training for nurses to implement Nanda-I, Nursing Interventions Classification and Nursing Outcomes Classification (NNN) and the impact of the training on the implementation of NNN in practice among nurses, applied research were conducted with quantitative, empirical, and descriptive design. Between 2015 and 2018, studies were conducted among home care nurses, including training on NANDA-I nursing diagnoses (n=27) and nursing documentation (n=22). Additionally, evaluations of the quality of nursing documentation at Tallinn Children's Hospital and West Tallinn Central Hospital were performed using the D-Catch instrument (Paans et al., 2010).

The survey conducted among home care nurses revealed that 24 (85.7%) nurses considered their knowledge completely sufficient to comprehend the nature of NANDA-I and apply it in their work. It was also revealed that different providers employed seven different electronic systems for documentation. The research conducted at Tallinn Children's Hospital and West Tallinn Central Hospital indicated that the quality of nursing documentation had improved post-training, especially in terms of the formulation of nursing diagnoses and documentation of nursing interventions.

The findings of the research demonstrate the effectiveness of the training programs in the implementation of NNN. However, since nursing diagnoses are constantly changing, continuing education remains crucial, particularly in light of Estonian editions of the "Nursing Interventions Classification" and "Nursing Outcomes Classification".

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Priit Tohver, MA

Priit Tohver is the Head of Sustainable Development Department at North Estonia Medical Centre (NEMC), Estonia's largest healthcare provider serving at the forefront of healthcare innovation. He leads a team of 30 people responsible for continuous improvement at NEMC with activities ranging from strategic planning to research & development and business intelligence.

Trained as a physician, Priit has previously served as the Advisor for E-Services Innovation at the Estonian Ministry of Social Affairs, where he was responsible for advancing data-driven decision making and innovation in healthcare. He is also a member of the WHO Roster of Experts on Digital Health and has previously served as Director of the Board at the Digital Health Society and Advisor to the Estonian Permanent Representation to the UN and other international organisations in Geneva. Priit has extensive experience with healthcare nonprofits, including having served as Regional Director for Europe at the International Federation of Medical Students' Associations.

Nurse sensitive indicators: Why are they important

Priit Tohver, MA
North Estonia Medical Centre, Tallinn, Estonia

The quality of nursing care plays a crucial role in determining patient outcomes. Nursing-sensitive quality indicators (NSQIs) are key metrics towards improving nursing quality and patient outcomes as an end result. This presentation aims to introduce NSQIs through the lens of a large healthcare provider, highlighting how NSQIs can be employed to guide administrative decisions, shape nursing education, and foster continuous quality improvement. Emphasising the integral role of NSQIs in promoting evidence-based nursing practice, we at North Estonia Medical Centre advocate for their widespread adoption and integration into healthcare quality frameworks.

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Marita Ritmala, RN, PhD

Marita embarked on her healthcare career in 1979 when she became a registered nurse. Fast forward to 2015, and she proudly earned her PhD in Nursing Science from the prestigious University of Turku, Finland. Her unwavering passion and research focus are the sleep patterns of ICU patients, a crucial yet often understudied aspect of critical care. She is also actively involved in crafting an ICU nursing knowledge test that will assess the professional development levels of ICU nurses, ensuring the highest standards of care.

With 13 years of hands-on experience as a critical care nurse in Finland and an additional eight years at JFK Medical Center in Florida, USA, Marita brings a wealth of knowledge to patient care. For 15 years, she held the role of an advanced practice nurse in critical care nursing at Helsinki University Hospital (HUS), where her expertise has left an indelible mark. Since 2016, Marita has held the position of Magnet Program Director, contributing to the advancement of nursing at HUS in

accordance with Magnet Hospital® standards.

Benchmarking quality of nursing

Marita Ritmala, RN, PhD
Helsinki University Hospital, Helsinki, Finland

Patients have the right to receive safe, evidence-based, and high-quality care as mandated by Finnish legislation. According to European Commission (2010) good quality care is "health care that is effective, safe and responds to the needs and preference of patients". In order to determine what is the quality of the nursing care provided, it is imperatiive to establish methods for evaluation. Benchmarking can be employed to determine the desired level of quality.

In Helsinki University Hospital (HUS), we conduct quarterly data collection to evaluate and benchmark the quality of nursing care from two crucial perspectives: safety and patient satisfaction. Data encompasses patient safety-related incidents such as falls, pressure injuries, central line and urinary catheter-related infections, extravasations, and HbA1c levels in children. Patient safety related results are benchmarked internationally, and patient satisfaction is benchmarked nationally.

This presentation describes the examples of data collection methods and their results in HUS. Significant decrease in the number of falls leading to harm to the patient, serious (degree ≥ 2) pressure injuries, and central line related infections are demonstrated. Nursing interventions have contributed to an increase in patient satisfaction within HUS.

Nurses are responsible for delivering high-quality nursing care. The care must be evaluated using valid methods to identify areas of excellence and areas requiring improvement. By benchmarking our own data whether on a national or international scale, we establish a level for what is conisdered high-quality nursing care.

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Reelika Kaljurand, RN, APN, MSc

Reelika Kaljurand has been working at the North Estonia Medical Centre for 21 years. Over the past two years, she has held the position of Chief Nurse in the Pulmonology Centre, preceded by a role as a nurse in the intensive care unit.

Reelika acquired the profession of a nurse at Tallinn Health Care College, where she also obtained a Master`s degree in Health Science in the field of intensive care nursing in 2021. Her primary focus revolves around improving nursing quality, leading to the creation of several quality-enhancing guidelines. Her research interests span patient standardised handover, in-hospital fall prevention, and the treatment journey of COPD patients. She has presented her research at several conferences both in Estonia and internationally and has been published in several publications.

In addition, she is a member of the board of the Estonian Anesthesia and Intensive Care Nurses Association and contributes to the development of the field of intensive care nursing.

Implementing evidence-based practices to prevent falls in the North Estonia Medical Centre

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The incidence of falls resulting in in-hospital injuries is an important quality indicator for evaluating patient safety and is the most commonly documented safety incident in the healthcare field (Boot et al., 2023; Turner et al., 2022; Heng et al., 2020; Le Laurin & Shorr, 2019). The rates of falls range from 3 to 11 falls per 1,000 patient days (Boot et al., 2023; Turner et al., 2022; Heng et al., 2020), and approximately 25% of these falls lead to varying levels of injuries (Turner et al., 2022; Heng et al., 2020). Hospitals worldwide primarily rely on staff training (49%) and various quality strategies (34%) as the most prevalent methods for preventing falls (Turner et al., 2022). The North Estonia Medical Centre lacked an action plan in this area, leading to the initiation of a development project focused on fall prevention in hospital in October 2021.

To develop and implement measures for preventing falls in the North Estonia Medical Centre, a cross-sectional descriptive survey was conducted. A retrospective analysis of evidence-based practices in falls prevention and falls rates per 1,000 patient bed days was performed.

Throughout the development project's implementation, several measures were undertaken, including the translation and adaptation of fall risk assessment tools (MORSE and Kinder1), the development of guidelines, post-fall action plans, and follow-up sheets, as well as the introduction of a yellow wristband system for identifying at-risk patients. In order to promote patient safety, a fall calendar was developed for staff training and a patient safety incident information system (POI) was established.

The development project included an analysis of the application of the falls prevention measures developed in the North Estonia Medical Centre. Global research demonstrates that assessing the risk of falls and designing patient-specific fall prevention strategies reduces the risk and prevents falls and fall-related injuries. By implementing and enhancing staff awareness to prevent falls in hospital, the number of falls recorded and processed has increased. This practice in turn allows for the introduction of improvement measures, fosters the development of a sustainable patient safety culture and enhances the improvement of the quality of health care provided in the North Estonia Medical Centre.

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Aino Kormilainen, RN, APN, MHC

Aino Kormilainen, a registered nurse since 2013, achieved her Master's in Global Health Care in 2017. Aino has extensive experience in oncology nursing, having worked in both Finland and Saudi Arabia. Since 2020, she has been an integral part of HUS Cancer Center, initially as a Nursing Development Manager, progressing to roles as MPD and APRN, where she oversees nursing quality outcomes. Aino is actively engaged in steering HUS Cancer Center's pursuit of Nursing Excellence and aiming for Magnet Hospital Recognition®.

Our journey to prevent patients from falling in the Helsinki University Hospital

Aino Kormilainen, RN, APN, MHC
HUS Comprehensive Cancer Center, Helsinki, Finland

Falls in hospitals represent the most common yet preventable complications for hospitalised patients. Approximately 1.4 to 10 falls per 1000 patient days occur according to studies conducted on in-hospital patients and 30-50% of these falls result in injury. Moreover, 1-2% of these falls result in hip fractures, which incur a substantial cost of approximately 27,000 to 35,000 euros per patient (in Finland). In addition to increased financial burden to society and healthcare organisations, falls inflict human suffering on patients and result in prolonged hospitalization. (Mattila, 2020.) Falls also increase nurses' workload.

In HUS Comprehensive Cancer Center (CCC) falls are monitored monthly and reported by the clinical nurses in patients' medical records. When systematic falls monitoring was initiated, it became apparent that the number of falls with injuries in inpatients units were higher than the international benchmarks. Therefore, the aim was to decrease falls with injuries within the in-patient units in HUS CCC.

Various interventions to decrease the incidence of falls with injuries will be presented in the presentation. Interventions such as educating patients regarding fall risk and utilizing technology, were conducted by clinical nurses in collaboration with multidisciplinary teams. As a result, the implementation of these interventions by clinical nurses within the in-patient units in HUS CCC led to a significant decrease in falls with injuries. Thus, clinical nurses play an important role in fall prevention, and through innovative interventions the incidence of falls can be reduced.

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Dina Ljahh, RN

Dina serves as a Transfusion Nurse in the Blood Bank at the North Estonia Medical Centre, focusing on training nurses and proactively preventing errors during transfusion procedures. With 20 years of practical experience in intensive care, Dina brings valuable insights into the thought processes of nursing practitioners.

Since 2021, she has been actively involved in collecting data on blood transfusion duration to enhance preventive measures against circulatory overload.

Ene Vadi, RN, MA

Ene serves as the Nurse Manager in the Blood Bank at the North Estonia Medical Centre, having joined the team in 2008. In this role, she oversees the operational aspects of the blood bank, ensuring the delivery of safe blood transfusion therapy to patients.

Since 2020, Ene has expanded her involvement as an Associate Lecturer at Tallinn Health Care College. Her research interests encompass nursing management, emotional intelligence, ethics in nursing, laboratory medicine, and blood transfusion therapy.

Overview of red blood cells administration duration in the North Estonia Medical Centre

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Nurses must be knowledgeable about the administration duration of blood products to provide safe transfusion care (Henneman et al., 2017). Red blood cells are the most frequently transfused blood product. In routine practice, there is a well-established tradition of administering red blood cell units over 90–120 minutes per unit to ensure safety. Fluid overload occurs when red blood cells are transfused too quickly, leading to respiratory distress and hydrostatic pulmonary oedema (Robinson et al., 2018).

The purpose of the research was to record the duration of red blood cell transfusions on a daily basis and provide corrective feedback to nurses if the duration was inappropriate. A descriptive study design was employed. Data were collected from a large Estonian medical centre over the course of 2021 and 2022, with the approval of the transfusion committee. A total of 8,733 transfusion protocols were reviewed.

The results of the research revealed a significant increase in the duration of red blood cell transfusions over the two-year period. Instances where the duration exceeded 120 minutes per unit were 20% more frequent in 2022 compared to 2021, while transfusions lasting approximately 60 minutes per unit decreased by 21%.

It can be concluded that through ongoing monitoring of nurses' transfusion practices and providing relevant corrective feedback, we

can ensure safer transfusion care for patients. In addition, we recommend nurses to use the transfusion duration checklist, cooperate with physicians, and regularly participate in blood transfusion trainings to ensure the appropriate duration of blood transfusions.

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Helsinki University Hospital journey towards Magnet® recognition

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Magnet® Hospital is a recognition of nursing excellence granted by the American Nurses Credentialing Center. Helsinki University Hospital (HUS) has worked towards obtaining the recognition since 2014 to prove the provided high quality nursing care and to improve HUS hospitals' attraction amongst nurses and local residents.

The aim was to fulfill Magnet® requirements in the entire HUS, and secure the Magnet® recognition for HUS Cancer Center and Heart & Lung Center in the upcoming year.

HUS has developed shared governance structure, nursing professional practice model, and follow-up procedures for nursing quality indicators (NSI), patient satisfaction, and nurse satisfaction. HUS leads the national nursing quality development network. Professional career model is under revision and varioust methods for supporting nurses' professional career are being evaluated and advanced.

As a result, improvement in occurrence of NSI's has been demonstrated, level of patient satisfaction is high, and nurse satisfaction has remained higher than national average despite the adversity met in the last few years. HUS Cancer Center and Heart & Lung Center have entered the official application and appraisal process towards Magnet® recognition.

Magnet Recognition Program® provides an excellent framework for developing nursing care and nurses' working conditions towards excellence, whether or not the official Magnet® Hospital status is pursued. However, entering the application process enforces and fastens the development work.

M. Maureen Lal, RN, BSN, MSN, DNP

Maureen is a distinguished figure in the field of healthcare and nursing. As the Director of the ANCC Magnet Recognition Program®, Maureen has been a driving force for over twelve years, propelling excellence in nursing to new heights. Her journey with ANCC Magnet® began as a Senior Magnet® Program Analyst, showcasing her commitment and dedication to this prestigious program.

Prior to her illustrious career with ANCC, Maureen held various roles in acute care and community health, gaining valuable insights and experiences along the way.

With an impressive 30-year career in nursing, Maureen's educational journey is equally remarkable. She earned her BSN at the esteemed University of Maryland and followed it up with an MSN from the renowned Johns Hopkins University. In 2019, Maureen reached a significant milestone by completing her Doctor of Nursing Practice with a focus on Executive Leadership at Duke University School of Nursing, solidifying her position as a leader in the field.

Beyond her roles at ANCC, Maureen actively contributes to the nursing community. She serves on the advisory board for Hood College School of Nursing, demonstrating her commitment to nurturing the next generation of nurses. She is also a valued member of the Maryland Nurses Association and takes great pleasure in mentoring aspiring nursing students.

A Framework for nursing excellence

M. Maureen Lal RN, DNP
Magnet Recognition Program®, American Nurses Credentialing Centre, Walkersville, Maryland, United States

The Magnet Recognition Program® provides an evidence-based framework that allows organizations to empower their nurses. Beginning with the original research in 1983, Magnet® continues to provide an environment that increases nurse engagement and improves patient experience and outcomes.

The framework promotes continual professional development, shared decision-making, and interprofessional collaboration. Magnet® organisations are able to demonstrate their difference through empirical outcomes. Their data measurement demonstrates to the world they have achieved the desired results of the application of sound structures and processes.

Terje Peetso, MA

Terje Peetso is a Chief Medical Innovation Officer at the North Estonia Medical Centre in Tallinn. Among other tasks she is also responsible for the cooperation with other hospitals and clinical partners in Estonia and abroad.

From 2003 to 2018, Terje served in the European Commission, specialising in areas such as digital health, tobacco control, and risk assessment.

Before joining the North Estonia Medical Centre, Terje held the position of Head of Sector on eHealth and Ageing Policy in the European Commission`s DG CONNECT. In 2014, she served as the EU Fellow in the University of Southern California, USA, where her research focus was on the obstacles which hinder the introduction of eHealth in healthcare systems. From 2018 to 2023, Terje played a pivotal role as a member of the management board at NEMC, overseeing research and development, training, client services, and quality control. Dr. Peetso holds a diploma in medicine from the University of Tartu, Estonia.

Where do we stand in value based healthcare?

Terje Peetso, MA
North Estonia Medical Centre, Tallinn, Estonia

Value based healthcare (VBHC), patient centred approach, personalised medicine – all these aim at more efficient prevention, timely and precise diagnoses, speedy recovery, and no unnecessary hospitalisations. The escalating constraints of limited resources faced by healthcare systems globally necessitate innovative thinking and a critical re-evaluation of established practices. Innovation does not only mean digitalisation but can also extend to a change in processes. Do our processes and procedures demonstrate a foundation in empirical evidence, or do they predominantly reflect historical or customary practices? Recognising patients as a valuable resource, this paradigm shift demands investments in (digital) health literature and the empowerment of patients. Within the framework of VBHC, decision-making is centred around outcomes that hold significance for individuals and patients, aligning with the broader benefits valued by health systems and societies. Thus, patient reported outcomes, along with experiences and incidences reported by patients, are of utmost value. At the North-Estonia Medical Centre, we have tested all the above in the stroke patient pathway and OnKontakt projects. The outcomes suggest the efficacy of such approaches, although acknowledging that a substantial journey lies ahead to fully realise their potential.

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POSTER PRESENTATIONS

Preparation of a guide for an Enhanched Recovery After Surgery program for the perioperative treatment of a cardiothoracic surgical patient at the North Estonia Medical Centre

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The concept of early postoperative recovery encompasses various perioperative interventions and teamwork. Enhanced Recovery After Surgery (ERAS) programs are implemented in surgical specialties to define the responsibilities and tasks of healthcare employees. These ERAS programs enhance the organisation of patient care and divides the responsibilities and division of labor between healthcare professionals within departments. (Batchelor et al., 2019; Engelman et al., 2019; Nygren et al., 2012).

To compile evidence-based guidelines at the Cardio-Thoracic Surgery Center of the North Estonia Medical Centre and to describe the evaluation of these guidelines by specialists, a development project was conducted (Härm 2021). The development of these guidelines followed William Edwards Deming's continuous improvement model, and a systematic literature review methodology was employed to ensure the scientific validity of the guidelines.

Separate guidelines were prepared for Cardiac and Thoracic surgery patients. These guidelines provide comprehensive recommendations for the perioperative care of cardiothoracic surgical patients and facilitate improved work organisation among healthcare professionals.

The guidelines were implemented in practice starting from March 2023. After six months of usage, the guidelines have proven to be highly successful and valuable. They have now become the foundation for the development of guidelines for new specialties.

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Burnout of nurses in the North Estonia Medical Centre emergency medicine department

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The burnout of doctors and nurses has become a global concern. Addressing the prevention of nurse burnout is emphasised in the national health development plan (Rahvastiku tervise ..., 2020) and the Estonian nursing and midwifery development strategy (Eesti õenduse ..., 2020). Burnout has become a significant workforce issue, particularly in the emergency medicine department (ER) (McHugh et al., 2011). ER is a fast-paced, tense work environment where the personnel experience high workloads, violence, conflicts between people, overcrowding, and accidents with mass casualties; moreover, limited resources and low skills exacerbate the problem (Ma et al., 2022).

The objective of the study was to determine the occurrence of burnout among nurses in the emergency medicine department of the North Estonia Medical Centre, utilising an empirical quantitative methodology. The sample consisted of nurses working in the emergency medicine department of the North Estonia Medical Centre. The Copenhagen Burnout Questionnaire was used to collect data in October 2022. The data was quantitatively analysed employing descriptive statistics analysis methods. A significance level of $p < 0.05$ was applied.

Analysis of the research results indicated nearly equal average scores on three distinct subscales: personal burnout (49.6), work-

induced burnout (50.1), patient-induced burnout (47.5), and overall burnout (49.1). A comparison of the averages of the three subscales in the work experience distribution revealed that the groups did not differ regarding private life and patient-related burnout. However, a statistically significant difference emerged in work-related burnout ($F = 3.885$; $p = 0.027$).

Posthoc test revealed that nurses with the shortest (0–5 years) and longest (11–44 years) working experience did not differ from each other in their level of work-related burnout, but the mean rating of the middle group (6–10 years of working experience) ($M = 58.9$; $SD = 17.199$) to their burnout was significantly higher than the assessment of nurses with shorter $p = 0.047$ and longer working experience $p = 0.009$. The averages obtained on the three subscales were also compared in two different age groups: under 30 and over 30. Although the mean was higher for those under 30 than those over 30, the difference was not statistically significant ($p > 0.05$).

Based on the research findings, it can be concluded that approximately 50% of the responding nurses exhibit symptoms indicative of burnout, with 10% experiencing it to a strong degree. A higher percentage of respondents attribute their burnout to work-related factors. Nurses with a work experience of 6-10 years within the department demonstrated a significantly higher average assessment of burnout linked to work-related factors compared to their counterparts with either shorter or longer work experience.

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Development of a clinical algorithm for identification and initial management of Charcot neuroarthropathy

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Charcot neuroarthropathy (CN), or Charcot foot, is a complication of diabetes in which a combination of neuropathy, bone metabolic abnormalities and trauma cause acute aseptic local inflammation and bone destruction (Kucera et al., 2016; Milne et al., 2013). Left untreated or with delayed intervention, CN may lead to permanent disability or necessitate amputation. Therefore, particularly in clinical and health nursing, it is crucial that healthcare professionals have evidence-based knowledge and skills to monitor and care for patients throughout their diabetes pathway (Bandeira et al., 2020; Wade, 2017). In Estonia, the absence of guidelines for managing patients with Charcot neuroarthropathy prompted a development project (Mitt, 2023) conducted at the North Estonia Medical Centre under the supervision of Tallinn Health Care College.

The aim of the project was to develop a clinical algorithm for the identification and initial intervention of Charcot neuroarthropathy for health professionals. The project employed a comprehensive approach, combining theoretical insights derived from a systematic literature review with empirical data collected through a structured online survey targeting healthcare professionals. The aim of the survey was to assess the general knowledge of health professionals, especially at primary level, on the diagnosis and initial management of Charcot neuroarthropathy. An invitation to participate in the survey was sent

to 203 health professionals. A total of 102 responses from doctors and nurses were received, with a response rate of 50.2%.

Of the respondents, 71.7% rated their knowledge of the diagnosis and initial management of Charcot neuroarthropathy as insufficient. Based on the theoretical information and the results of the survey, a Charcot neuroarthropathy detection algorithm was developed as a result of the development project in June 2023 (Mitt, 2023).

Subsequent to its formulation, the algorithm has been introduced in four health centres and incorporated into two nurses' training programs. The ongoing implementation involves further training sessions for health professionals and dissemination through relevant publications. In addition, the project author is exploring the possibility of publishing a Charcot neuroarthropathy detection and early intervention algorithm as an annex to a forthcoming diabetic foot medical guideline. To assess the sustained impact of the algorithm, the project author plans to conduct a follow-up survey of health professionals up to three years postimplementation.

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Advanced Practice Nurses` appointments implementation piloting in Estonian hospitals: Challenges and outcomes

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Advanced practice nurses (APNs) play an important role in meeting the changing global population needs (Schober et al., 2020). APN is an individual who has acquired the expert knowledge base, and greater clinical competence (International Council of Nurses, 2008). The introduction of APN is a relatively recent development in Estonia, with a pilot program conducted from 2021 to 2022 across five hospitals in collaboration with the Estonian Health Insurance Fund (*Eriõe piloot-projekt*, 2001). The aim of the pilot project was to find out whether the coordinating role of the APN meets patient expectations and to identify associated challenges. However, there is a lack of evidence presenting the advantages and disadvantages of APN implementation in Estonia and the future directions for development.

To describe the challenges and outcomes of the Advanced Practice Nurses´ appointments as a result of the implementation piloting in Estonian hospitals, a descriptive qualitative study analysed empirical reports from five hospitals on the piloting of APN appointments using a content analysis approach.

Results revealed that APN coordinates care throughout the patient's pathway and serve as either primary or secondary point of contact for patients with complex or chronic health condition. A majority

of the patients involved in the study were satisfied with the pathway of the patient, describing the process as fast and understandable. The APN must be able to direct patients directly to the next appropriate healthcare service provider, thereby saving time and reducing burden on other specialists.

In conclusion, the unique education of APNs ensures the quality of healthcare service. Consequently, the training of APNs should align with empirical evidence of societal needs. There is a need for consensus on APN competencies and its systematic evaluation process, along with related legal arrangements. The role of APNs in patient pathway and healthcare should be nationally agreed upon, which in turn requires effective cooperation among various stakeholders at different levels.

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Nursing practice guidelines for changing a suprapubic catheter in the North Estonia Medical Centre

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The independent nursing reception in urology has been operational since 2007 in the North Estonia Medical Centre. Patients with suprapubic catheter are susceptible to UTI/CAUTI symptoms, which can lead to complications such as fever, abdominal pain, and bladder stones among others. To minimize the risk of infections caused by the medical personnel, nursing practice guidelines were needed. These guidelines are essential for both new and experienced nurses working in the urological centre and responsible for daily suprapubic catheter changes. Prior to this project, there were no specific guidelines in place in the North Estonia Medical Centre for performing this procedure.

The aim of this project was to develop an evidence-based guidelines for nurses in the North Estonia Medical Centre addressing the changing of suprapubic catheters and to seek feedback and expert opinions on the guidelines from specialists in the field. The nursing practice guidelines were developed using a systematic review of the most current scientific literature, guidelines from various international professional associations, and input from urologists, urology nurses, infection control nurses, and nursing quality specialist. Expert evaluations were collected via an open-ended feedback questionnaire, which were then used in refining the guidelines.

As a result of the development project, the nursing practice guidelines were completed and presented to the Nursing Quality

Committee, which recognised it as an official nursing practice document in the North Estonia Medical Centre. The guidelines are currently in use at the general and oncology urology centre.

The development of the nursing practice guidelines for changing a suprapubic catheter represents a significant achievement for the North Estonia Medical Centre as it provides nurses with evidence-based recommendations to minimise the risk of infections and complications during the procedure. However, ongoing adjustments made by nurses during the procedure highlight the need for continuous review and refinement of the guidelines.

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The guideline for support group for first-time psychosis patients' relatives for psychiatric nurses: Development Project

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A support group is a service that unites participants sharing common concerns. The group includes a group leader (a nurse working in psychiatry), a psychologist, if necessary, and group participants. Support groups are based on building relationships and sharing experiences. (Petrakis & Laxton, 2017). Timely support of a loved one suffering from first-time psychosis improves the support network's common understanding of the patient's needs, mutual communication and improves social coping (Ma et al., 2019). Research confirms that relatives of patients who experiencing a first episode of psychosis require comprehensive information already during the family member's initial hospitalization, and provides feedback emphasizing the necessity of psychoeducation and support group services (Petrakis & Laxton, 2017; Srivastava & Panday, 2019).

Consequently, a development project was conducted under the supervision of the Tallinn Health Care College Master program (Djužev & Oinitš, 2023) with the aim of creating a support group guideline for psychiatric nurses dealing with relatives of first-time psychosis patients. This guideline encompasses the need for psychoeducation for patient relatives and covers essential topics such as illness description, aetiology, relapse prevention, everyday coping, social counseling, and the importance of following medication treatment.

The development project authors relied on a literature review and

personal experiences, seeking input from an expert group, including mental health nurses from the North Estonia Medical Centre's first-episode psychosis integrative treatment department.

Based on a literature review, a guideline titled 'The Guideline of Support Group for First-time Psychosis Patient's Relatives' was compiled for psychiatric nurses, drawing from previous research and background theory. The completed guideline was presented to ten nurses working in psychiatric clinic's inpatient treatment centre, who provided valuable feedback by responding to three specific questions.

In conclusion, nurses within the psychiatric department display a high readiness to utilize the created guideline. However, due to time constraints and heavy workloads, implementation may currently pose challenges. Despite these obstacles, there is clear evidence indicating the high demand and necessity for the support group for first-time psychosis patient's relatives service.

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Simple interventions can improve nursing documentation: A quality improvement project of nursing documentation on the surgical wards in the North Estonia Medical Centre

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The transition to electronic nursing documentation necessitated an audit of the current nursing records. It is difficult to overestimate the importance of nursing documentation, as it allows for monitoring changes in the patient's health status and ensures continuity of care. The audit was based on the following nursing quality manuals: "Nursing Documentation" and "Wound Assessment and Management". Based on the audit results intensive staff training was organised and a new audit to evaluate the effect of the training was conducted.

The aim of this quality improvement project was therefore to improve the quality of nursing documentation in the surgical wards of the North Estonia Medical Centre. This project spanned six months and followed the plan-do-study-act model (Slootmans, 2018). A baseline audit was initially conducted to assess the notes within 12 surgical wards. A number of variables from nursing records were evaluated. The audit involved the assessment of documentation for 59 patients, including 51 cases of wound care documentation. The auditors included the chief nurse of the surgery clinic and the chief nurses of the surgical wards.

The primary emphasis was on education. A series of ten trainings, each lasting 120 minutes, were conducted, involving a total of 124 nurses out of a group of 240. The training was designed using nursing manuals and was centred around improving the areas identified in the baseline audit. Following the training, a new audit was conducted to assess the potential changes.

The results revealed improvement across all data subsets. Significant differences were observed in the quality of the Nursing plan and diary (goal 49.2% vs. 94.9%, p=0.000; interventions 66.2% vs. 100%, p=0.000; documentation completed at least 2 times per day 80% vs. 98.3%, p=0.001), MORSE scale (52.3% vs. 79.7%, p=0.002), and Wound documentation (utilisation of the pre-filled wound assessment and care form 31.7% vs. 64%, p=0.010; the initial recording involving the categorization of the wound type 56.1% vs. 96%, p=0.001). No differences were found in the quantity of nursing anamnesis.

In conclusion, implementing efficient and cost-effective strategies to streamline nursing documentation can enhance the quality of medical records and elevate patient care. While this audit primarily focused on assessing the immediate effects of the training, it is imperative to determine the frequency at which such trainings are required.

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Barriers to adapting to type 2 diabetes

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Adapting to type 2 diabetes can be challenging due to various barriers that can hinder effective management. A lack of knowledge and understanding of the condition can make it difficult to implement necessary lifestyle changes and adhere to medical treatments (Pilv et al., 2012; Powers et al., 2012). Nursing plays a crucial role in facilitating patient education, support, and empowerment, which are fundamental aspects of effective diabetes management (Blonde et al., 2022).

To describe the barriers to adapting to type 2 diabetes and their relationship to diabetes complications, a quantitative study was conducted using the Diabetes Obstacles Questionnaire 30 (DOQ-30). The sample consisted of 151 patients with type 2 diabetes (n=151). Data analysis was performed using the Statistical Package for the Social Sciences (SPSS) version 26.0.

The findings revealed that the primary obstacles in adapting to type 2 diabetes are psychosocial problems, including limited support, feelings of loneliness, lack of motivation, and fear. These barriers were associated with the most common long-term complications of diabetes, including retinopathy ($p < 0.547$), nephropathy ($p < 0.146$), neuropathy ($p < 0.066$), and diabetic foot problems ($p < 0.055$).

This study highlights the presence of diverse barriers to adapting to type 2 diabetes. The predominant obstacles to successful adjustment are related to mental health, treatment adherence, and notably, the presence of complications, which amplifies their impact. By incorporating nursing theories and interventions, nurses can play a pivotal role in promoting effective adaptation and improving the overall well-being of patients with type 2 diabetes.

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Implementation of electronic medical records in basic nursing education on the example of Tallinn Health Care College

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The use of electronic medical records for learning purposes in an academic environment allows students to acquire the necessary knowledge prior to their placement, which is essential for the quality, safety and efficiency of electronic documentation (Kaplan & Korkmaz, 2023; Raghunathan et al., 2022).

The results of the study of information gap show a difference in combining various teaching methods (Ting et al., 2021). There is a lack of information on the process of curriculum integration and its effectiveness in a practical setting. The low quality of educational research on this topic is also cited. (Williams et al., 2021).

To address the information gap, the goal was to describe the teaching methods applied in the teaching of electronic medical records and to evaluate the applicability of the knowledge in the clinical environment. The present study used a qualitative research method. An analysis of subject programs and feedback was prepared for subjects whose learning content requires medical records. The evaluation was based on the feedback analysis of students' practice documents for the academic year of 2022/2023. Qualitative data were collected from the shared electronic e-learning environment Moodle of Tallinn Health Care College. The document analysis database comprised 138 students documents, which included information collected on learning outcomes achieved during the placement, student self-reflection and student and supervisor evaluation. The entire database (sentences found in the

database) was transcribed verbatim. The sentences relevant to the research aim were simplified, coded, and grouped into subcategories. Through the process of abstraction, subcategories with similar content were further grouped into higher categories, which were eventually consolidated into main categories.

Filling in electronic medical records, simulation training, peer evaluation, use of an electronic test environment are most commonly used teaching methods. According to the feedback from practice documents, both students and supervisors consider it very important to implement electronic documentation during the learning process. Limited access to hospital information systems is noted as a disadvantage, therefore the availability of a test version is considered crucial for the learning process.

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Testing, adjustment and implementation of the Wound Assessment Model in the North Estonia Medical Centre

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All around the world, wound management presents a challenge for nurses (Moore et al., 2019) and there is a lack of wound assessment and wound care documentation - also in the North Estonia Medical Centre. Within the framework of the development project (Tern, 2023), the TIME (Tissue, Infection/inflammation, Moisture, and Edge of wound) clinical decision support tool (CDST) for wound assessment was selected for testing.

The aim of the development project was to test the TIME CDST wound assessment tool and adapt it for implementation in the North Estonia Medical Centre. The plan-do-check-act (PDCA) quality improvement model was employed as the methodology for the development project. The theoretical framework of the project was based on a systematic literature review Nurses were interviewed to collect pre- and post-test data. (Tern, 2023).

The interviews revealed that most nurses rated their own knowledge and skills as above average with nurses having longer work experience scoring higher. Additionally, compared to the pre-interview, post-interview ratings were somewhat improved. All nurses acknowledged the need for more knowledge and skills and they reported gaining new or additional knowledge from the TIME CDST tool. The comprehensibility of the tool itself was rated

as above average, but according to the nurses, some modifications were needed in all areas of the tool. The majority of nurses, especially with those with shorter work experience, expressed a desire to adopt a wound assessment tool. (Tern, 2023).

Considering nurses` feedback and based on the TIME CDST wound assessment tool and scientific information, the Wound Assessment Model, adjusted by the author of the development project, will be introduced in the North Estonia Medical Centre.

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Working for and agreeing on the terminology – lessons learned in Estonia

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Nursing is a global discipline and its terminology should be universally understood, used, and developed across different countries. Due to the constant changes in nursing, healthcare, technology, and in society, new words constantly emerge and are translated into local languages. Therefore, the challenge is to maintain a uniform, comprehensible, and standardised professional vocabulary that effectively supports the documentation of observations, treatments, and outcomes in electronic nursing documents and health records. This need for ongoing terminology work extends not only to nursing but also to other healthcare professions, making it highly advisable at the national level.

Aiming to systematically collect, develop and maintain a professional vocabulary, to disclose and share the results of terminology work i.e. the body of terms used in the nursing discipline publicly, the academic-led committee of professionals representing different stakeholders have been meeting regularly, both online and face-to-face, approximately once a month since 2022.

The terminology work was organised by collecting existing vocabulary and checking databases, scientific papers, books, and legislative documents for context and common explanations. Consensus was reached through discussions, resulting in the selection of the most appropriate terms and their synonyms, along with

formalised definitions. As a result, a database has been created in the language portal of the Institute of the Estonian Language (EKI) *Sõnaveeb* [WordWeb] and made publicly available with 17 agreed terms accompanied by their definition, examples of use, and references. The database will be supplemented according to the information received.

Terminology work requires detective work, commitment, and involvement of key stakeholders. Our experience confirms that the most important step is to start, even if resources allow only for a small beginning. Equally important to terminology work itself is communication. Therefore, future efforts include marketing the terminology work already completed and encouraging nurses, nursing leaders, and educators to use agreed terminology and contribute to its ongoing development.

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Development of a nurse`s reception and nursing guideline for totally laryngectomised patients in the North Estonia Medical Centre

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Total laryngectomy is performed exclusively in the North Estonia Medical Centre (NEMC) in Estonia. Recent experiences of health-care personnel at NEMC have indicated that not all health problems faced by patients after such a life-altering operation can be addressed solely by physicians and speech therapists. Recognising the need for a nurse reception and for an evidence-based guideline on advanced practice nursing, a development project in health sciences was conducted from 2021 to 2022 (Koort, 2021).

The aim of the development project was to develop a scientific guideline for a nurse's reception for patients who have undergone total laryngectomy in the North Estonia Medical Centre. The project was led by the first author of this presentation, following the continuous improvement model by William Edwards Deming, and involved a systematic literature review for data collection and analysis. In total, 26 relevant research papers were found in databases and used in the development of nursing guideline for the nurse's reception. In addition, international guidelines and national regulations were incorporated into the guideline. The quideline was evaluated by five head and neck surgeons using the adapted AGREE II instrument.

As a result, the created guideline integrates practical experience of specialists, theoretical and empirical knowledge, international and national recommendations, thereby providing a scientific framework for the implementation of nurse´s reception for totally laryngectomised patients at NEMC. The guideline was approved by the evaluating head and neck surgeons and the nursing quality committee at NEMC, and is now in use at the hospital, accompanied by a booklet containing patient guidelines described in the project's appendix (Koort, 2021).

Based on scientific literature, national development plans and the evaluations provided for the guideline, there is reason to believe that its implementation will enhance the accessibility and quality of healthcare services, ultimately improving the overall quality of life for for totally laryngectomised patients.

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