CARE4

International Scientific Nursing and Midwifery Conference 2024

5–6 February 2024, Antwerp
University of Antwerp
Campus Drie Eiken

www.care4-2024.org

Navigating the Future of Healthcare:
Nurses and Midwives as Drivers for Change

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DEVELOPMENT AND IMPLEMENTATION OF ORTHOGERIATRIC COMANAGEMENT IN THE TRAUMA WARD

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Background: Evidence strongly suggests that orthogeriatric co-management in frail older adults with a fracture improves patient outcomes, but evidence regarding how to implement this model of care in daily clinical practice is scarce.

Aim(s): This study aims to evaluate the initial implementation of a new nurse-led orthogeriatric co-management program, named G-COMAN on the trauma ward in the University Hospitals Leuven in Belgium by 1/measurement of the fidelity towards the program's core components, 2/ quantification of the perceived feasibility and acceptability by the healthcare professionals, and 3/ defining of the implementation determinants.

Methods: Implementation strategies were operationalized based on the Expert Recommendations for Implementing Change (ERIC) guidelines. A step by step implementation process was used where stakeholders were trained and educated in new geriatric subjects. In the feasibility study, fidelity towards the core components of the program was measured in a group of 15 patients aged 75 years and over by using electronic health records. Feasibility and acceptability as perceived by the involved healthcare professionals was measured using a 15 -question survey with a 5 -point Likert scale. Implementation determinants were mapped thematically based on seven focus group discussions and two semi-structured interviews by focusing on the healthcare professionals' experiences.

Results: We observed low fidelity towards completion of a screening questionnaire to map the premorbid situation (13%), but high fidelity towards the other program core components: multidimensional evaluation (100%), development of an individual care plan (100%), and systematic follow-up (80%). Of the 50 survey respondents, 94% accepted the program and 62% perceived it as feasible. Important implementation determinants were feasibility, awareness and familiarity, and improved communication between healthcare professionals that positively influenced program adherence. While 65% of the healthcare professionals believed in the sustainability of the program, only 35% of the healthcare professionals had the feeling that the program was integrated into their daily clinical routines.

Discussion: The low fidelity towards the first core component of the program (completion of the screening questionnaire to map the patient's premorbid situation) might be because we only offered digital self-assessment options to fill in this questionnaire. The high fidelity towards the other three core components is likely a result of the high perceived acceptability by all healthcare professionals. During each phase of the implementation, we intensively involved all stakeholders. Early and continuous stakeholder involvement creates ownership and has been proven to increase acceptability and uptake ultimately leading to the embedding of a new intervention in practice.

Implications and future perspectives: This study provides other clinicians and researchers essential information and a methodological approach to implement nurse-led orthogeriatric care on the trauma ward. Future studies should focus on measuring the sustainability of the program over time and evaluating the cost-effectiveness.

THE INTERPERSONAL CARE RELATIONSHIP ON NON-GERIATRIC WARDS IN HOSPITALS

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Background: A positive interpersonal care relationship (IPCR) has a beneficial impact on patient safety and care satisfaction [1]. Consequently, to achieve high quality care in practice, it is essential to gain insight into the IPCR and how it can be optimised. The lack of an unambiguous definition of the IPCR, the lack of an adequate measurement tool and the complexity of the IPCR concept are challenging to assess the quality of the IPCR.

Aim(s): Gaining insight into the IPCR between older patients and nurses on non-geriatric hospital wards by:
- Identifying current knowledge about the elements of the IPCR from the perspective of the older patient.
- Developing and psychometric testing of the Interpersonal Geriatric care relationship (InteGer) tool to gain insight into the elements of the IPCR that hospitalized older patients experience as (not) disturbing.
- Exploring older patients' experiences regarding their contact with nurses during their hospitalization.

Methods: A multi-methods study was conducted, including a systematic mixed methods review, instrument development and validation, survey research and grounded theory research.

Results: The systematic mixed methods review revealed that older patients consider dignity and respect as core values of the IPCR. Five core elements were identified by the older patients to meet these values.

The development and validation process of the InteGer consisted of four phases and the final tool included 30 items divided into four components and had good psychometric characteristics.

The results of the cross-sectional study were divided into four categories. 10 items scored in the category "no action needed", nine items in the category "remain attentive for patient experiences", 10 items in the category "further analyses or monitoring needed" and one item in the category "urgent action needed".

The analyses of the 17 qualitative interviews with older patients revealed that within the brief, functional contacts with the nurses, they find that their fundamental care needs are not always met. Because they do not want to be a burden to the nurse, they adapt as much as possible. They search solutions themselves by calling in their loved ones, by placing themselves in a subordinate position or by lowering their expectations to a minimum.

Discussion: Based on the results of this research, one core value (respect for patients' dignity), one core need (fundamental care needs), and three core elements (patients' adaptability, perceived nurses' attitude and perceived workload in the care context) can be identified in the process of the IPCR. During the InteGer studies, additional insights were gained regarding the use of negatively formulated items and the strengths and weaknesses of the IPCR.

Implications and future perspectives: To optimize the IPCR, attuning appears to be necessary. This can be achieved by focusing on an attuning attitude of the nurse, anticipating the adaptability of the patient and optimizing the organization of care.

Further research can focus on the nurse's perspective within the IPCR, the care context in which they work and on exploring how the InteGer tool can be used within a quality policy, e.g. to monitor patient safety risks or as a tool to improve patient-centered care.

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DEVELOPMENT AND IMPLEMENTATION OF GERIATRIC-SURGICAL CO-MANAGEMENT FOR PATIENTS UNDERGOING COLORECTAL SURGERY

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Background: Our healthcare system is challenged by an ageing population, often with multiple chronic diseases, frailty and geriatric syndromes, such as functional or cognitive decline. Population ageing results in increasing numbers of geriatric patients on non-geriatric wards, including surgical wards. Geriatric co-management on non-geriatric wards has proven effective in improving patient outcomes.

Aim(s): The aim of our research project was to 1/ develop a nurse-led geriatric-surgical co-management model on the abdominal surgical ward, and 2/ select strategies for sustainable implementation.

Methods: The co-management model was developed based on literature review, a previously implemented co-management model on the cardiology ward, stakeholder meetings, and experiences of the mobile geriatric consultation team on non-geriatric wards. The implementation was led by three project nurses: a project coordinator and two implementation coordinators, a geriatric nurse and a surgical nurse, respectively. Implementation strategies were determined during stakeholder meetings with members of the geriatric and abdominal surgery team: head nurses, nurse specialists, project nurses and physicians. Chosen implementation strategies were context-specific and based on expert recommendations for implementing change, ERIC-implementation strategies, experience with implementation of previous co-management models, clinical experience and stakeholder input. Key performance indicators to ensure objective follow-up and to allow adjustment of implementation strategies were selected.

Results: The co-management model includes the four successive steps of Comprehensive Geriatric Assessment: 1/ detection of frail older patients (by means of an online screening questionnaire and subsequent clinical confirmation by a nurse), 2/ bedside geriatric evaluation (by a healthcare worker), 3/ individual care planning (using standardized geriatric protocols adapted to the surgical population and context), and 4/ systematic nurse-led follow-up. Geriatric protocols affecting the former standard of care were implemented step-by-step. Implementation strategies included, among others, intensive stakeholder involvement of the geriatric and abdominal surgery team, programming the online screening questionnaire and standard geriatric interventions in the electronic medical records, development of a detailed co-management manual, and bedside coaching of geriatric and surgical nurses and allied health professionals.

Discussion: The project team worked on the implementation of a pre-defined co-management model, with flexibility for context-specific adaptations and appropriate implementation strategies. A core team of three project nurses with experience in either geriatric medicine or abdominal surgery, led to field participation, accessibility, direct communication and a strong advocacy in the context of feasibility and acceptability for the team. Intensive collaboration between the geriatrics and surgery team provided an opportunity to build a partnership where exchange of expertise can occur.

Implications and future perspectives: The implementation of the co-management model on the abdominal surgery ward is part of an implementation project, in which geriatric-surgical co-management is being implemented on three surgical wards, namely traumatology, abdominal surgery and vascular surgery. Implementation strategies are selected with an important focus on sustainability, with the ultimate goal of maintenance by the surgical team, supported by coaching from the mobile geriatric consultation team. Implementation materials developed during the project can be used to scale-up of geriatric co-management to other wards and for other intra- and transmural projects.

INTERVENTIONS FOR THE EMPOWERMENT OF OLDER PEOPLE AND INFORMAL CAREGIVERS IN TRANSITIONAL CARE DECISION-MAKING: A QUALITATIVE STUDY USING FOCUS GROUPS

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Background: Literature indicates that the empowerment of older people and informal caregivers can improve transitional care. However, there is insufficient insight into precisely how to empower older people and informal caregivers in transitional care decision-making.

Objective: To explore interventions by which to empower older people and informal caregivers in transitional care decision-making in the Flemish (Belgian) context.

Design and Methods: A qualitative descriptive study using focus groups was conducted between February and May 2022 in the region of Flanders, Belgium as part of the TRANS-SENIOR consortium's collaborative research. A total of 40 people participated in the focus groups, including 12 older people, 13 informal caregivers, and 15 healthcare professionals involved in a transition from an older person's home to another care setting or vice versa. Thematic data analysis was performed based on Braun and Clarke's six-step method.

Findings: The empowerment of older people and informal caregivers in transitional care decision-making can be operationalised in alternative ways. Four main themes were identified: providing information; preparing people for what is to come; person-centredness; and providing professional and peer support.

Conclusions: Interventions for transitional care empowerment should be person-centred and should focus on information provision, preparing people for what is to come, and providing support. The exact interventions can vary in relation to context, transition pathways, and individual's needs and capacities. However, healthcare (professionals) play a key role in delivering such interventions.

Implications and future perspectives: The empowerment of older people and informal caregivers in transitional care decision-making should consider a contextualised, multicomponent, and integrated approach. Such an approach should include interventions focussing on a suitable information provision, preparing people well for what is to come, the person as the central actor in the decision-making process, and continuous support. In addition, healthcare professionals should encourage both older people and informal caregivers to think of possible care scenarios in advance, such as for the day it might be needed, and to organise themselves accordingly.

Future studies may address the proposed interventions' implementation and might assess both their feasibility and effectiveness in terms of actual empowerment in transitional care decision-making. In addition, more international original contextualised research on interventions by which to empower older people and informal caregivers in transitional care decision-making is needed

THE USE OF THE APOP SCREENER IN EMERGENCY TRIAGE OF FRAIL GERIATRIC PATIENTS

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Background: Correct triage and follow-up referral of frail geriatric patients on emergency departments (ED) is important to ensure that these patients get appropriate care. Correct triage decreases patients' length of stay, mortality and treatment costs. At present, frail geriatric emergency patients are not always admitted to a geriatric ward. A screening instrument may be helpful to support decisions on triage and referral. The APOP screener is developed to identify older patients in ED who are likely to have adverse outcomes (mortality within 90 days and/or loss of function and/or cognitive impairment) [1,2]. On the basis of this study, it will be examined whether the APOP screener can be used within the referral to specialized geriatric care.

Aim(s): Identifying if the APOP score and the APOP items are predictive for a referral of only the frail patients aged 75 or more to a geriatric ward.

Methods: A descriptive retrospective study is conducted in a large multi-campus general hospital in Belgium. Following data will be analyzed from patients aged 75 or more who were admitted at the emergency department: APOP screener score and subquestion scores, GRP (Geriatric Risk Profile) score and subquestion scores, clinical assessment of the geriatric consultation team regarding the frailty of the patient and referral after ED.

Results: The first analyses show that the questioning of some APOP items is time-consuming and that some themes from other geriatric or anamnesis tools are missing within the APOP score. Further analyses will identify the extent to which APOP scores are different from the GRP scores and the clinical assessment of the geriatric consultation team. The correlation between the APOP (item)score(s) and dischargement to home from the emergency department, patient's first hospital ward and transfer to a geriatric ward will be determined. The predictors within the APOP (item)score(s) and GRP (item)score(s) for admission to a geriatric ward or transfer from a non-geriatric ward to a geriatric ward will be identified.

Discussion: Based on the results of this study we will not only be able to identify the most predictive tool(s) for outcomes of geriatric patients admitted to ED, we will also be able to identify the most predictive questions or items of the different tools. Combining these questions or items could facilitate a more accurate triage and referral.

Implications and future perspectives: Using a modified or combined assessment to detect frail older patients admitted to ED, can lead to more appropriate care, resulting in better outcomes, shorter hospital stays and less readmittance to the hospital.

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EXPLORING AND UNDERSTANDING HIGH-QUALITY PERSON-CENTRED CARE IN CARE HOME SETTINGS

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Background: There are an estimated 2.9 million residents living in 43,000 long-term facilities in Europe (1). In the UK more than 400,000 people are living in just over 17,000 care homes (2). Most residents in long-term care settings are older people living with dementia, frailty, and end of life care needs. Compared to other groups in society there has been little research evaluating the delivery of high-quality person-centred care provided to residents in their care homes. This is despite repeated calls for context-specific research that will, with residents' involvement, define and measure what good quality person-centred care looks like.

Aim(s): The primary aim of the study was to explore and understand the barriers to, and enablers of, delivering the most effective high-quality person-centred care possible in care homes.

Methods: We used a multiple case study design across seven care homes, with a resident up to system level focus. Data was collected using non-participant observation of care delivery and care culture. Sixty semi structured interviews took place with care home residents, family members, care home staff and visiting professionals, and social and healthcare stakeholders. Data was collected by an older people's mental health nurse researcher who maintained a reflective/reflexive journal. Reflexive Thematic Analysis (3) was used across all qualitative datasets to build a full and in-depth critical understanding. Results

Findings reiterate the importance of (a) 'people being placed at the centre', when providing high-quality person-centred care. This includes residents, family and care staff. The latter need to feel valued and respected for the roles they fulfil, by their employers, the community and wider society. (b) The challenge of residents (re)negotiating their identity during times of transition, particularly between their home and the care home setting. The (c) 'crossing and negotiating of old and new boundaries' between staff and residents and across care providers- acute, community and social care was a key theme. Lastly (d) care home staff making sense and finding meaning during critical moments in care such as end of life.

Discussion: The study provides new insights into the provision of high-quality person-centred care in care home settings through resident to system level and provides a platform for further research. Research in care homes is not without challenges the engagement and participation of residents in care homes especially, those without mental capacity is difficult. Some were included, and others were represented by family members. Non-participant observation is an important method for this setting. The inclusion of residents in care home research needs innovative and accessible methods to support them and an experienced older people's mental health nurse as an embedded researcher was critical in this study.

Implications and future perspectives: The provision of person centred high quality care is central to residents, family, professionals and health and social care systems as a whole. It is a worldwide issue requiring international collaboration. Nurses are central to developing person centred care in this setting and are in the best place develop resident focused and accessible care home research.

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HOW MUCH DO WE KNOW ABOUT CARE DELIVERY MODELS IN NURSING? AN EVIDENCE MAP

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Background: To deal with the upcoming challenges and complexity of the nursing profession, it is deemed important to reflect on our current organization of care. But before starting to rethink the organization of nursing care, an overview of important elements concerning nursing care organization, more specifically nursing models, is necessary [1].

Aim(s): The aim of this study was to map the existing literature, to map the field of knowledge on a meta-level and to identify current research gaps concerning nursing models in a hospital setting.

Methods: An evidence map was conducted to highlight and give an overview of what is known by conducting a systematic search of a broad field of evidence, presenting results in a user-friendly format [2]. Three electronic databases were searched without a limit in time: Medline, CINAHL and Web of Science. All papers were first screened based on eligibility criteria, followed by a full text screening of the remaining literature. During the screening process, papers were labeled by emerging topics. Inclusion criteria were the organization of nursing care, type of ward, all kinds of nursing personnel, and OESO-countries. Exclusion criteria were specialist wards (e.g. intensive care units), military hospitals, physicians, physicians assistants, logistic personnel, unpublished work or opinion papers, and the unavailability of English, Dutch or French full texts. Results

In this evidence map 297 studies were included. Three topics were of importance when looking at the organization of nursing care: care delivery models, nurse staffing and skill mix. The concept of care delivery models was described by a wide variety of terms in the different papers, while nurse staffing and skill mix were well defined. When looking at the quantity of publications, the three topics were independently discussed in literature and skill mix and nurse staffing were frequently combined (n=90). Skill mix was less frequently linked to care delivery models (n=36), and nurse staffing was rarely linked to care delivery models (n=13) in literature. Seven studies combined all three topics, of which three studies in recent years. The last two decades the number of publications on care delivery models has diminished, while publications on nurse staffing and skill mix were consistently growing. Discussion

Although it seems that in recent research, the theoretical focus on the organization of nursing care has been left behind, the increasingly complex healthcare environment might gain from the use of nursing theory, or in this case, care delivery models.

Implications and future perspectives: As almost no fundamental studies have been done towards the combination of care delivery models, nurse staffing and skill mix, those elements should be taken into account to fully capture the organization of nursing care in future research.

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IMPLEMENTING A NURSING COUNCIL: WHAT DO STAKEHOLDERS REALLY WANT?

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Background: Empirical research emphasizes the benefits of a nursing council (Porter-O'Grady, 2019). However, before implementation, contextual elements should be taken into account. Receptiveness by all stakeholders is a first step in the process of shared governance.

Aim(s): To explore the perspectives of various stakeholders regarding the implementation of a nursing council in a tertiary hospital in Belgium.

Methods: An exploratory interview study was conducted between November 2022 and March 2023. Semi-structured interviews (n=30) were held with a purposive sample of nurses, nurse managers, physicians, physician managers, paramedics, members of the board of directors, and members of unions. Data collection and analysis were performed according to principles of the grounded theory, including a cyclical process of data collection and analysis, a constant comparative analysis, thematic saturation and researcher triangulation.

Results: Stakeholders hold different perspectives on the objectives and responsibilities of a nursing council. The envisioned composition varies accordingly. Receptiveness towards a nursing council depends on how the participants interpret the nursing council. Receptiveness was greater among nurses and healthcare managers compared to physicians, executives and board members, and members of unions. A process of power (im)balances was underlying.

Discussion: Empirical research emphasizes the benefits of a nursing council. Implementing a nursing council in the study hospital could be beneficial, provided that the objectives, responsibilities and operational processes are clearly defined.

Implications and future perspectives: To realize the implementation taking into account the different perspectives that demonstrate varying receptiveness is needed. Implementing a nursing council in the study hospital could be beneficial, provided that the objectives, responsibilities and membership are clearly defined. A process of involvement and codesign is advisable.

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THE ETHICAL MANDATE OF NURSING BOARDS. PROGRAM THEORY TO STRENGTHEN NURSING PROFESSION AND HEALTHCARE SYSTEM

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Background: In recent years, some German States have established nursing boards as self-governing bodies for nursing in order to improve health care[1]. Other states are on the way to doing so, some haven't yet recognized this resource for the health care system, few have impatiently given it up again. The topic area of ethics is a normative component of nursing boards. However, it is still unclear what effect ethics should have and what mandate is derived from this.

Aim(s): Although individual efforts have been made recently, the systematic analysis of the field and the identification of effective interventions to fill the ethical mandate are still missing. The possibilities for strengthening the health system should be recognized, the potential of nurses as change agents should be made visible. This gap is filled by the presented dissertation[2]. It sets out to develop a program theory of the ethical mandate of nursing boards.

Methods: Program theories describe and explain new fields of knowledge, penetrate them systematically, and justify purposeful intervention programs that fit to the target group[3]. Program theories consist of two interacting sub-theories, the strategically oriented Theory of Change, and the operational Theory of Action[3]. The basis for designing a program theory is a detailed situation analysis[3]. Following the qualitative approach of case studies, sources of different origin are examined with the help of a scoping study[3, 4].

Results: From the analysis results Logic Models are built[3], which synthesize the found situation as well as the causes and effects logically argumentatively related to the topic. Three relevant strands of argumentation were identified: ethics as a normatively set building block in German nursing boards; ethics in the German health care system and the inclusion of the desiderata of the nursing profession; the ethical mandate of nursing boards on the political level.

Discussion: "Nursing is a deeply moral activity"[5]. The profession of nursing bases its professionalism on moral norms that need to be reflected ethically[6]. This integrative professionalism operates in the nursing relationship and in the political arena. The implementation of the mandate, the responsibility for safeguarding of the professionally and ethically founded professional nursing action, succeeds to the nursing boards via a suitable program theory. The recommended program theory includes as Theory of Change the Klagenfurt Intervention Research[7, 8], which strategically focuses on the transdisciplinary participation of board members[9, 10]. The operational Theory of Action is the Ten Essential Public Health Services process model[11]. Its core is equity[11], it is strengthened by Trontos political ethical theory of care[12]. Theses discuss the filling of the ethical mandate of nursing boards with concrete content.

Implications and future perspectives: The fusion of the three sub-theories results in the desired program theory, which enables successful care work in the direct care relationship and in the political space via Care for the Caregivers[2]. Nursing boards could navigate the future of healthcare, nurses could be the drivers for change in the German healthcare system.

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NURSING CONSULTATIONS IN BELGIUM: CURRENT STATE, CHALLENGES, AND RECOMMENDATIONS FOR FUTURE DEVELOPMENT

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Background: The healthcare sector is facing various challenging evolutions, including a growing population of patients with chronic conditions, an ageing society, rising complexities in care demands, the need for specialised and remote care, as well as budgetary constraints. In the face of limited availability of certain healthcare professionals (both medical and nursing), the quest for high-quality, safe, and efficient care becomes both a challenge and a catalyst for adapting and optimising care models. To enhance the professionalisation of nursing care and leverage essential competencies, nursing consultations, nurse-led clinics, and advanced practice nursing are progressively being integrated and documented within care models globally.

Aim(s): This study aims to provide a comprehensive overview of the current state of nursing consultations in Belgium. It explores the context, highlights implementation challenges, and identifies priority areas for improvement. It will explore the contexts in which these consultations are conducted and highlight the existing challenges in their implementation. Additionally, it will identify priority areas for improvement.

Methods: A bilingual cross-sectional online survey was conducted among nurses performing nursing consultations in Belgium. The survey covered nursing consultation contexts, activities, implementation statements, and a general section with descriptive questions.

Results: A total of 638 nurses completed the questionnaire, with 428 working in Flanders, 148 in Wallonia, and 62 in Brussels. The implementation of nursing consultations exhibits significant variability in terms of organizational structure, setting, financing, remuneration, accessibility, and availability. Generally, respondents express positivity towards the structural and process-related aspects of nursing consultations, but dissatisfaction with support from direct supervisors and/or organisational management was expressed. Additionally, nearly half of the respondents reported a lack of financial and legal framework, along with limited coaching opportunities. Priority areas for further development include establishing a comprehensive legal and financial framework, allowing time for scientific research, and ensuring adequate infrastructure. There are also clear regional differences in these priority areas.

Discussion (including limitations): This study offers a comprehensive overview of the current state of nursing consultations in Belgium, including identified problem areas and priority areas for future development. While the questionnaire employed clear criteria, respondents were responsible for determining if their job content aligned with the definition of nursing consultations. This self-identification process may have introduced a self-selection bias. Notably, nursing consultations in Belgium display substantial variability in operationalisation. To establish uniformity in their implementation, it is imperative to develop a comprehensive framework that addresses organisational, legal, and financial aspects.

Implications and future perspectives: The findings of this study have led to the formulation of several recommendations by the Belgian Health Care Knowledge Centre (KCE) regarding the further development of nursing consultations in Belgium. In addition, the federal Ministry of Health is presently undertaking various reforms to promote the professionalisation of the nursing profession.

MEASURING CONTEXTUAL FACTORS & SKILLS IN NURSING TEAMS REGARDING QUALITY IMPROVEMENT: A VALIDATION STUDY

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Background: Quality improvement methodologies are commonly used in healthcare. Some studies show an improvement in patient outcomes, while others show a modest or even no effect [1, 2]. These inconsistent results may be attributed to contextual differences, particularly at the microsystem level [3, 4]. Understanding this problem requires shifting from studies investigating whether methodologies work to studies focused on understanding why and where they work most effectively [2]. These insights about the impact of context factors could help accelerate quality improvement initiatives [5].

Aim(s): This study aims to develop and psychometrically validate an instrument for assessing contextual factors and skills related to quality improvement initiatives among nursing teams in acute care settings.

Methods: Rattray and Jones's framework was used to develop a questionnaire to asses contextual factors and skills regarding quality improvement practice [6]. A literature review was performed to select relevant content in the field of quality improvement at microsystem level in acute care. Six subject experts conducted a preliminary evaluation of the items. The face validity was assessed using cognitive pretesting [7]. The instrument was piloted by 124 Flemish nurses. The validity and reliability was tested by exploratory factor analysis and Cronbach's alpha. Results

Based on the literature review 60 items were selected from two related frameworks, namely the 'Model for Understanding Success In Quality revised [8] & Quality by Design [9], and relevant studies in the field of PDSA based quality improvement. The expert panel resulted in a selection of 45 items with a scale-level content validity index (S-CVI) of >.90. The remaining items were grouped in 4 dimensions namely motivation & trigger, improvement skills, context in the team and context in the organization. The items were rephrased and restructured based on the pretesting. The four dimensions were divided in 10 factors (or subscales) based on theoretical rationale. The overall questionnaire showed good validity and reliability. The predefined factors explained >60% of variance in the 4 dimensions (except improvement skills 59%). The Cronbach's alpha for the subscales were all >70% except internal & external motivation. Discussion

In this study an instrument was developed to assess contextual factors and skills based with 4 dimensions and 10 subscales. Within the dimensions the initial hypothesis of the theoretical distribution was consistent. Only the dimension 'improvement skills' just not met the threshold of 60% of total variance. The dimension 'motivation and trigger' has a Cronbach's alpha <.70. A Cronbach's may suggest that items in these dimension and the subscales are poorly grouped [6] but kept in the instrument because of evidence based relevance. The study have two important limitations. First the sample size of pilot study is rather small for conducting a factor analysis. Second, without existing validated instrument, it was not possible to determine the convergent validity [6].

Implications and future perspectives: Gaining insight into the contextual factors and skills that influence the effectiveness of quality improvement initiatives can facilitate their implementation. This instrument can be utilized in the future to assess these factors, while further research can examine the specific impact of each factor.

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DEVELOPING MENTORSHIP PROGRAMS FOR EXPERT NURSING PROFILES: WHAT CAN WE LEARN FROM STAKEHOLDERS PERSPECTIVES AND THE EVIDENCE?

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Background: Due to the complexity of cancer care, there is an increased need for expert nurses involved in the care of cancer patients. Although the added value of these expert nursing profiles, such as advanced practice (APN) and specialized nurses (SN) in interprofessional teams has already been proven, barriers and facilitators at individual, organizational and healthcare system level, related to their role integration have been reported. To date, little research has been conducted on the needs of these expert nurses and the needs of the interprofessional team and the nurse managers who they collaborate with, regarding role integration. No comprehensive overview is available on the effectiveness (e.g. on role and leadership development, collaboration, role clarity, job satisfaction and job retention) and components of mentoring programs that aimed at supporting the individual expert nurse, the interprofessional team, and the nurse/healthcare managers.

Aim(s): To describe underlying processes, dynamics, experienced barriers and facilitators of expert nurses during their role integration in an interprofessional team. To identify, evaluate and summarize evidence about the objectives and characteristics of mentoring programs for expert nurses and to provide insights in the development of a mentoring program for expert nurses.

Methods: This study was performed in four phases. Firstly, a qualitative study was conducted in which individual semi-structured interviews and focus groups were conducted with 51 expert nurses from 11 academic and non-academic hospitals in Belgium. Secondly, a qualitative study, in which 26 semi-structured interviews with nurse managers from two Belgian academic and four non-academic hospitals were conducted. Thirdly, a systematic review was performed. PubMed, EMBASE, CINAHL and The Cochrane Library were searched, and studies describing the characteristics of mentoring programs focusing on one or more specific roles of SN and APN were included. Fourthly, a matrix which was developed in collaboration with several key stakeholders (e.g members of a steering committee, experts in educational sciences and mentoring, expert nurses, nurse managers). The content of the matrix is based on the results of the previous three phases and reflects the needs of the expert nurse, the interprofessional team and their nurse managers, as well as learning methods which can be applied to convey the content during a mentoring program.

Results: SN and APN experienced a lonely journey during role integration and were constantly searching for partners, medical knowledge and acknowledgement from the interprofessional team. Despite having a watchful attitude and trying to make themselves visible to ensure they were involved in the team and to preserve their role and responsibilities, they felt powerless when they had the impression that their role was not acknowledged by their team. An unclear role description to the interprofessional team, and a lack of coaching and guidance were influencing factors of the experience of the expert nurses. To optimize collaboration, nurse managers need an implementation framework providing (1) a clear and uniform job description and an unambiguous definition of all expert nursing roles, (2) uniformity about the need for coaching and the level of autonomy of these expert nurses and (3) clarity on the financial aspects of integrating these expert nurses in healthcare teams. In the systematic review, twelve studies were included. All studies focused on mentorship programs for APN (nurse practitioners and clinical nurse specialists). Different forms of mentorship (formal, informal, workshadowing, competence development, workshops, reflection sessions) were reported. The studies reported positive outcomes on job retention (n=5), job satisfaction (n=6), skills improvement (n=7), satisfaction with the program (n=7) and confidence improvement (n = 4) among participants of the mentoring programs.

Discussion: SN and APN in oncology experience difficulties to integrate their role in existing interprofessional teams. There is need for the development of a framework which clarifies the job description, coaching and the financial aspects for the implementation of these expert nurses, and to enhance the collaboration within the nursing workforce. In general, there is a lack of rigorous research on mentoring programs for SN and APN, not focusing on building clinical capabilities within their specialty domain. There is a need to develop a mentoring program that focuses primarily on needs and challenges experienced by both SN and APN related to their role integration in an interprofessional team.

Implications and future perspectives: The synthesis of the evidence may be useful to organizations developing and implementing mentoring programs for expert nurses.

TASK REDISTRIBUTION FROM GENERAL PRACTITIONERS TO NURSES IN ACUTE INFECTION CARE

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Background: Due to an increasing demand for primary healthcare and a shortage of general practitioners, both the accessibility and quality of care are being put under pressure. To address this challenge, healthcare organizations are experimenting with new forms of collaboration and task substitution in both chronic and acute care.

Aim(s): This study aims to examine the impact of implementing nurse-led consultations compared to physician-led consultations for patients with acute infectious symptoms in a primary care practice.

Methods: The study is a monocentric, prospective cohort study conducted in a multidisciplinary, capitation-based general practice in Belgium. Through analysis of patient files, the number of follow-up contacts (in-person or telephonic) within 14 days after an infection consultation was investigated to determine any difference between physician-led or nurse-led consultations. Secondary outcomes included pharmacological interventions and the prescribing behavior of medical leave certificates.

Results: A total of 352 consultations were analyzed, of which 174 conducted by physicians and 178 by nurses. Patients typically presented with respiratory (90,6% of consultations) and/or gastrointestinal (36,6% of consultations) symptoms. There were no significant differences between the two groups in terms of demographic variables, nature of complaints, or duration of illness. No significant difference was found in the number of follow-up contacts within 14 days ($p = 0.547$) between physician-led and nurse-led acute infection consultations. However, the probability of a pharmacological intervention by a physician was revealed to be significantly higher (with a factor of 3.8) in the cohort that consulted a physician compared to nurse-led consultations (OR 3.84, 95% CI 1.60-9.23). The presence or absence of such pharmacological intervention did not significantly influence the number of follow-up contacts within 14 days for both physician-led consultations ($p = 0.82$) and nurse-led consultations ($p = 0.67$). Discussion

Although these results are promising, more extensive research is needed. This should also incorporate the experiences of patients and healthcare providers. Furthermore, it is advisable to consider the experience and education of the nurses and incorporate them into the analyses. Finally, it is important to develop a facilitating legal and financial framework, as well as a structured tailored training for nurses, to safely and efficiently implement this task substitution as a standard practice. Implications and future perspectives

This study demonstrates that nurses can be safely, effectively and efficiently utilized in acute infection care within a general practice setting. The redistribution of tasks in acute infection care can help to alleviate the burden on physicians and can potentially enhance the attractiveness of the nursing profession by increasing the variety and responsibility of tasks.

THE ADDITIONAL VALUE OF THE NURSE INTUITION PATIENT DETERIORATION SCALE TO THE NATIONAL EARLY WARNING SCORE TO PREDICT SERIOUS ADVERSE EVENTS IN THE HOSPITAL: A PROSPECTIVE COHORT STUDY.

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Background: In previous research, we developed and validated a new scale to aid nurses in measuring patient deterioration through nurse intuition in medical and surgical patients admitted to the general ward. However, it is unclear what the additional value is of this scale when used together with the National Early Warning Score.

Aim(s): This study aimed to prospectively investigate the predictive value of the Nurse Intuition Patient Deterioration Scale (NIPDS) in addition to the National Early Warning Score (NEWS).

Methods: A prospective cohort study in a Belgian hospital in two medical, two surgical, and one geriatric ward from December 2020 until February 2021. COVID-wards were excluded from participation because of the specific pathology. Convenience sampling was used to include adult patients admitted to participating wards. Minors and patients who refused participation were excluded. After a short information session on how to use the NIPDS, nurses were asked to fill in the scale during patient admission. The NEWS and administrative data were recorded in standard practice during admission. Patients were followed up during the 24 hours after scale registration. Primary outcomes were death, cardiopulmonary resuscitation, and unanticipated transfer to the ICU. Secondary outcomes were medical emergency team activation and upscaling of a Do-Not-Resuscitation-code.

Results: 321 patients were recorded having a valid NIPDS registration during admission and 8 were excluded resulting in 313 patients for analysis. Of all registered NIPDS, 31 patients had a positive score (≥5). The primary outcome was reached in 9 and one patients in the positive and negative NIPDS groups respectively. The secondary outcome was reached in 21 and 12 patients in the positive and negative NIPDS groups respectively. NIPDS predicted the primary and secondary outcome (primary OR 1.79 [95%CI 1.43-2.23], secondary OR 1.94 [95%CI 1.56-2.41]) controlled for NEWS in multiple regression analysis. Receiver operator analysis for the primary outcome showed superior performance of NIPDS compared with NEWS (AUROC 0.970 vs. 0.833 respectively). Decision curve analyses confirmed the net benefit of using NIPDS combined with NEWS to predict serious adverse events.

Discussion: The use of the Nurse Intuition Patient Deterioration Scale adds to the prediction of death, cardiopulmonary resuscitation, and unanticipated transfer to the ICU. Nurse intuition could be used in addition to early warning scores in clinical practice.

Implications and future perspectives: In future research, the NIPDS should be tested in a different setting using a multicenter prospective study design to confirm or contradict our results. In practice, the NIPDS could be used as a standardized method to aid nurses to translate their clinical feeling of worry to concrete scores.

COMPARISON OF UNFINISHED NURSING CARE PERCEPTIONS BETWEEN REGISTERED NURSES AND NURSE MANAGERS IN ACUTE CARE SETTINGS: A CROSS-SECTIONAL MULTI-CENTRE STUDY

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Background: It is suggested that Nurse Managers can influence Unfinished nursing care (UNC) levels through effectively managing nurses' working conditions, allocating duties and coordinating available resources(1). However, the studies focus on nurse managers' leadership skills(2, 3) rather than on their perception of the quality of care delivered under their watch.

Aim(s): The aim of this study was to compare the perceptions of Nurse Managers (NMs) and Nurses with respect to the quantity, type of Unfinished Nursing Care and underlying reasons in the different acute care settings of all the Hospital Trusts of the Veneto Region, Italy.

Methods: The study followed a cross-sectional, multicentric design. The occurrence of UNC was measured using the questionnaire "Unfinished Nursing Care Survey"(4), which investigated degrees of omission of nursing activities and perceived reasons behind it. Data collection was carried out in the period 2020-2021. All the Registered Nurses (RNs) and NMs working in medical, surgical, urological, orthopaedics and geriatric units of primary, secondary and tertiary tiered hospitals were invited to participate.

Results: 2179 RNs providing direct patient care and 159 Nurse Managers (NMs) completed the questionnaire, for a total sample of 2332 participants and 37 participating hospitals. 69.1% of NMs defined as always/ nearly always adequate the human resources assigned to their unit compared to only 41.5% of RNs. RNs and NMs showed congruence of perception of the level of UNC in all but 4 items, pertaining to adequacy of handover to the next RN shift, go to patients to introduce themselves or go without being called and mouth care. As regarding the reasons behind UNC, there was a trend of 12 unaligned perceptions between RNs and NMs. NMs consider inaccurate initial priority setting ($p < 0.02$) and inadequate priority re-assessment during shift ($p < 0.01$) as elements leading more significantly to UNC compared to RNs. RNs blame items referring to communication tension/conflicts within the nursing staff and with other team members (p 0.01), lack of material resources and inadequate human resources ($p < 0.001$).

Discussion: Nurses reported that they prioritize clinical monitoring and hands-on activities. This perception is consistent with the one expressed by NMs, indicating that NMs hold strong clinical competencies and have a clear vision of the routine activities performed in their hospital units, even if their responsibilities place them farther away from the patient bedside compared to RNs. NMs can compare the number of resources available to their units and their associated skill mix against the resources available to other units or hospitals and therefore may tend to judge their context less harshly compared to RNs. Conversely, RNs bear most of the weight of nursing shortages and may be more sensitive to the consequences of ineffective management. Implications and future perspectives NMs maintain strong clinical knowledge and perception regarding unfinished nursing care aligned with their RNs. NMs have influence over several aspects of the work environment, including resources, teamwork, staff relationships, managerial ability and leadership, and are in the perfect position to spearhead and develop local initiatives to improve practices to promote the reduction of UNC.

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REASONS FOR INTERRUPTION OF DRUG ADMINISTION IN PATIENTS WITH CENTRAL VENOUS CATHETERS

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Background: In addition to providing ease of use during long-term fluid replacement or administration of various drug derivatives, central venous catheters (CVCs) are the most interrupted way during administration compared to other catheters [1]. Approximately 10% to 66% of nurses cause interruptions in drug administration via CVCs [2].

Aim(s): This study was conducted in a cross-sectional and observational type to determine the reasons for the interruption of drug administration in patients with CVCs.

Methods: The study population consisted of adult patients with a CVC in the surgery and internal medicine clinics of a hospital in Istanbul between 2020-2021. Its sample was 168 patients determined with power analysis. The inclusion criteria were 18 years of age and older, having a CVC inserted, administering medication through a CVC during hospitalization, and staying in the clinic for at least 24 hours [1,2]. Study data were collected using the Patient Information Form, Central Venous Catheter, Treatment Information Form, Treatment Follow-up Form for Patients with CVCs, and Katz's Activities of Daily Living Scale. Ethical approval was obtained from the ethics committee (approval code: 85693). Interruptions in drug administration, frequency of interruptions, and reasons for interruptions in both shifts within 24 hours were determined by the researcher and recorded in the related forms. Data analysis was performed using the Mann-Whitney U test, Kruskal-Wallis H test, Spearman correlation, and Bonferroni post hoc test.

Results: The patients' mean age was 62.11±4.21 years, and 50% had an internal jugular vein. In the 08:00 am-06:00 pm shift, 94% of the patients applied fluid,34.8% applied total parenteral nutrition (TPN) and 94.4% were given medicine while at 6:00 pm–08:00 am shift, 59.5% of the patients were applied fluid, 48% were applied TPN, 95.8% were given medicine. In the 08:00 am-06:00 pm shift, all of the patients had a fluid interruption, 75.3% experienced physician-induced fluid interruption, 34.8% had problems due to the CVC, 71.3% had no interruption in drug administration, the reason for the interruption in 7.3% was problems related to the infuser and in 11% the source of interruption was other reasons. At the 06:00 pm-08:00 am shift, 79% of the patients had a fluid interruption, in 35% of them transfusions were the reason for the interruption in fluid treatment, in 48% the reason was patients. In 91.3% of them, treatment was not interrupted; in 26.7 of them, the reason for interruption was symptoms patients experienced; in 6.2% of them, the source of interruption was the patient. A statistically significant difference was found in terms of the mean Katz's Activities of Daily Living Scale scores of the patients who did not experience medication interruption in the 08:00 am-06:00 pm and 06:00 pm-08:00 am shifts ($p<0.05$).

Discussion: It was determined that medication applications of patients with CVCs were interrupted during their time in the clinic and various factors were effective in the interruption. According to the research findings, although liquid and drug applications are applied more intensively at 08:00-18:00, all the procedures performed by the healthcare team members are carried out uninterruptedly at full capacity [3].

Implications and future perspectives: Interruptions favor the occurrence of errors in the health field [3]. This study shows a scarcity of papers addressing interruptions during the practice of nurses, which may be related to the absence of a descriptor for this topic that is used worldwide.

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BRIDGING THE GAP IN PSORIASIS CARE: THE DEVELOPMENT OF A NURSE-LED INTERVENTION THROUGH EXPERIENCE-BASED CO-DESIGN

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Background: Psoriasis can have a profound impact on a person's life, resulting in physical discomfort, psychological distress, and social stigma that significantly restrict daily activities and diminish overall quality of life. Therefore, it is essential to prioritize comprehensive management and ensure access to a wide range of treatment options. The availability of information about and access to all treatment options is of utmost importance. Experience-Based Co-Design (EBCD) emerges as a highly encouraging approach to bridge the gap between the necessary and current management strategies. This collaborative approach involves conducting interviews and observations to gather insights into the needs and perspectives of patients and healthcare professionals (HCP). Subsequently, these valuable insights guide the design process, enabling patients and HCP to collaborate on developing improvements and solutions that lead to enhanced outcomes. Given the limitations in healthcare resources, nurse specialists (NS) can play a vital role in facilitating these improvements.

Aim(s): To bridge the most important gaps in current psoriasis care by developing a nurse-led intervention through EBCD.

Methods: In two EBCD sessions led by a nurse specialist (NS) 5 patients and 4 HCP watched a 30-minute montage of 14 in-depth interviews, had a brainstorm session and discussed the properties of the intervention needed to support the unmet needs in current care. From the interviews, 'shared decision-making' (SDM) was identified as one of the most significant themes related to unmet needs in current care. A nurse-led SDM intervention was incorporated into the existing specialized consultation program named PsoPlus for first time patient visits. Intervention patients received a comprehensive appraisal of all treatment options by a NS utilizing the decision aid proposed by van der Kraaij et al [1]. Control patients received a regular PsoPlus consultation, approaching the patient in an integrated and holistic matter by a specialized nurse but without specific attention for SDM.

Results: 76 patients were enrolled in the study to investigate the impact of SDM. There was no significant difference between the intervention group and the control group. However, there was a significant increase in the degree of shared decision-making after the patients' consultation with PsoPlus. At the follow-up visit after three months the satisfaction with the treatment in the intervention group was significantly higher than before the first consultation, while there is no significant increase in the control group.

Discussion: This study presents the first example of EBCD in dermatology, where two nurse-led interventions were developed based on extensive patient participation and in-depth understanding of their illness perspectives. The impact of the decision instrument, applied by a nurse specialist, on the degree of SDM does not differ significantly from that of a standard PsoPlus consultation. The PsoPlus approach increased the degree of SDM significantly.

Implications and future perspectives: Further research is needed to identify the elements that influence the degree of SDM. The involvement of specialized nurses could enhance SDM, while alleviating the burden on dermatologists.

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CO-DESIGNING AN INTERPROFESSIONAL PRACTICE MODEL AS PART OF MAGNET IMPLEMENTATION IN A UNIVERSITY HOSPITAL

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Background: One of the challenges for hospitals aiming to implement Magnet® principles is the development of a professional practice model (PPM)1. A PPM is a the overarching conceptual framework for nurses, nursing care and interprofessional patient care that depicts how nurses practice, collaborate, communicate and develop professionally to achieve the highest quality outcomes2. Using a PPM may improve patient outcomes, but has also been associated with improvements in job satisfaction, nurse-to-nurse interactions, nurse-physician interaction and retention3.

Aim(s): We aimed to develop an interprofessional practice model (IPPM) through shared governance to promote shared decision making on patient care units and between different care professionals in the University Hospitals of Leuven, Belgium.

Methods: We used a multi methods qualitative approach. First, a brainstorm session was held with the 65 healthcare workers representing 15 different care departments that form the interprofessional advisory (IPA) board. The central question of the session was 'What are the necessary components enabling high-quality professional care'. Second, after being advised on how to communicate with their team to facilitate discussion, all IPA board members discussed the same question within their patient care units to receive input from front-line clinicians. Lastly, three feedback rounds were held within the IPA board and the leadership advisory board to analyze all written input and finalize the IPPM.

Results: The UZ Leuven IPPM consists of eight components accompanied by subcomponents which drive practice and is translated into the daily work on the patient care units. The eight (sub)components are: communication (having a warm, transparent and honest dialogue with each other, the patient and the environment), research and innovation (working together on quality improvement projects which are relevant for practice), well-being (creating a group feeling within a confidential place with attention and time for (ethical) reflection), involvement (having a positive feedback culture with empathic interaction for staff as well as the patient), professional development (attention for career opportunities, lifelong learning and development of individual talents), collaboration (multi- en interprofessional) healthy work environment (attention for ergonomics, infrastructure and staffing of healthcare workers) and shared leadership (motivating each other with attention for the individual and shared responsibility). The patient and healthcare worker are centralized in the IPPM.

Healthcare workers from the hospital were involved in the visualization of the IPPM. A guide and interactive sessions are being developed for the practical use of the IPPM at the patient care units.

Discussion: The involvement of a variety of healthcare workers in the development of the IPPM via shared decision making is considered an essential component to become an ambassador in promoting the IPPM on the patient care units. The IPPM gives structures, processes and values that guides and supports healthcare workers in the delivery of high-quality patient care.

Implications and future perspectives: Patient care units start implementing the IPPM within their practice in October 2023. Since every patient care unit has a different scope of practice, each patient care unit chooses its own points of attention. The implementation will start in different units and will be spread over the entire hospital the coming year.

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PERCEIVED IMPACT AND CHALLENGES RELATED TO THE INTEGRATION OF NURSE PRACTITIONERS IN INTERPROFESSIONAL TEAMS IN A BELGIAN UNIVERSITY HOSPITAL: A QUALITATIVE STUDY

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Background: Nurse Practitioners (NPs) can have a variety of positive effects when integrated in interprofessional teams of healthcare professionals (HCPs). However, the integration of a new team member could also pose challenges. Currently, three NPs have been integrated in two settings in a university hospital in Belgium.

Aim(s): To investigate the perceived impact and challenges related to the integration of NPs in a university hospital from the perspectives of HCPs and healthcare managers.

Methods: An explorative qualitative study was set up using semi-structured interviews with healthcare managers and focus groups with HCPs teams collaborating with the NPs in a pediatric and digestive surgery setting. A topic guide inspired by the Normalization Process Theory was used. In total, four semi-structured interviews and 14 focus groups were held. All discussions were audiotaped and transcribed. A thematic analysis was performed with researcher triangulation to enhance the trustworthiness of the findings.

Results: The perceived impact of NP-integration was related to five aspects: (1) HCPs and healthcare managers stated that NP's fast capacity building and their motivation enhanced their autonomously working in practice; (2) NPintegration was perceived as leading to an improved quality, safety, and continuity of care; (3) better communication and information exchange within the interprofessional team and towards patients were experienced; (4) coaching and support of other HCPs (e.g. ward-nurses and physicians in training) by NPs was mentioned, and (5) improved interprofessional and seamless transmural collaboration (e.g. improved discharge letters). Challenges were related to role unclarity in the team and feeling threatened by NPintegration, especially by ward-nurses and physicians in training; high work burden of NPs; practical issues related to the NP's limited clinical autonomy in Belgium (e.g. no prescriptions rights yet), clothing (wearing outfits aligned with nurses or physicians) and sufficient consultation rooms for NPs.

Discussion: There is a need to legally recognize NPs and extend their clinical authority so that they can work to their full scope of practice. Challenges related to role unclarity in teams and to guaranteeing educational opportunities for physicians in training should be resolved to stimulate acceptation of NP-role.

Implications and future perspectives: The results may inform other healthcare settings, healthcare managers and policy makers in health care who aim to integrate NP-roles and who are in charge of the legal recognition of these expert nursing profiles. It is essential to involve all stakeholders during the design of NP's scope of practice to ensure role clarity and acceptation of these profiles.

SHARED DECISION MAKING IN RECTAL CANCER SURGERY: THE WAY TO GO?

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Background: In rectal cancer surgery, there are two surgical options: a low anterior resection with preservation of the anal sphincter and an abdominoperineal resection with resection of the sphincter and formation of a permanent stoma. When the sphincter is not compromised, both surgical options are, from an oncological point of view, comparable. However, both procedures have their own morbidity such as bowel problems versus a permanent stoma [1, 2]. Given the need to take patients' perspective into account, the choice of rectal cancer surgery is a value-based choice [3]. To facilitate this, there is a growing interest in the use of decision aids. It helps patients to participate in weighing the impact of different treatment options on their QoL [3].

Aim(s): The aim of this study was to explore the expectations of healthcare professionals (HCPs) and to evaluate the impact of using a decision aid in daily practice.

Methods: A multi-center explorative study was conducted where interprofessional HCPs responsible for the care of patients with rectal cancer were purposefully recruited. Individual semi-structured interviews were performed with 16 HCPs and were audio recorded and transcribed verbatim afterwards. Data collection and data-analysis alternated each other. Thematic analysis was performed during data-analysis using Braun, Clarke six phases. Additionally investigators' triangulation was applied during analysis.

Results: First, HCPs felt that a decision aid would enable them to provide information in a more neutral and uniform way. Second, it was believed that the decision aid enhanced the understanding of the different aspects of QoL. Moreover, a shared decision was hypothesised to enable patients to accept consequences of rectal cancer surgery. Additionally, it was believed to empowering patients and increasing their involvement in the treatment decision. Finally, some key issues for implementation were highlighted, such as reorganising the preoperative consultation, a consensus on the most appropriate moment to use the decision aid and the need for training. Several HCPs mentioned the added value of a nurse-led consultation, complementary to the physician.

Discussion: Patient prefer to avoid a permanent stoma [4]. This is partly because their knowledge about the possible bowel problems is inadequate [5]. Previous research has shown that the knowledge of HCPs in this field is also insufficient leading to underestimating the impact of bowel problems [6-8].

Implications and future perspectives: A decision aid can help to give information about rectal cancer surgery in a structured way. HCPs in our study described that a nurse-led clinic could be used to inform the patients using a decision aid.

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SOCIAL INEQUALITY IN HOME CARE: THE IMPACT OF SOCIO-ECONOMIC RESOURCES ON HOME CARE ARRANGEMENTS

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Background: Demographic and social developments justify the assumption of an increasing number of people in need of care from disadvantaged groups [1, 2]. Still, inequalities in long-term home care are rarely considered in the discourse on health inequalities [3, 4]. Several studies point out that the utilization of care services in Germany increases with the level of income and wealth as well as education [5-10]. However, despite increasing research reflected in the literature, the evidence remains incomplete and shows inconsistencies so that a valid statement on the degree of inequalities in care provision is not possible [11].

Aim(s): This study pursues the question how socio-economic resources of people in need of care and their family caregivers are influencing the utilization of care services in Germany. It is examined whether income and education of people in need of care and their caregivers are related to the use of support services in homecare arrangements.

Methods: As a part of a mixed-methods research approach a quantitative secondary data analysis of a survey [12] among members of the social association VdK (Sozialverband VdK) was conducted. The statistical evaluation includes descriptive analyses as well as the investigation of correlations between socioeconomic characteristics and characteristics of the care arrangement.

Results: A correlation between income and the use of support services exists regarding so-called 24-hour care, which is more common with high income. Other income effects can be seen in the extent to which care services and home help services are used and in measures to adapt the home environment. A higher level of education is related to an increased use of counselling services. The assessment of the care situation is more negative the lower the income.

Discussion: The results point out that phenomena of social inequality in care exist and that the options for shaping homecare are influenced by socioeconomic factors. Home care is not only determined by individual need but seems to be decisively influenced by socio-economic restrictions. The study also shows challenges in dealing with social inequality and provides orientation for further research, which is becoming increasingly important in view of current trends.

Implications and future perspectives: For a more targeted approach, further research on the use of care services depending on socio-economic resources is needed. As the perception of people in need of care and their caregivers has hardly been addressed, the user perspective should be explicitly taken into account. Therefore, the study results presented will be followed-up by qualitative research in which the user perspective is taken into account by guided interviews with people in need of care and their caregivers. Results are expected in spring 2024.

Please note that the research results presented in this abstract have also been published in Englert N et al, Homecare arrangements: examining the use of support services in relation to socioeconomic status. Bundesgesundheitsblatt-Gesundheitsforschung-Gesundheitsschutz, 66(5): 540-549, 2023.

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HEALTH MATTERS, EVEN ON THE STREET. HOW STREET NURSING CAN ANTICIPATE THE PERCEIVED NEEDS OF THE HOMELESSNESS

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Background: Despite the overall poor health status of the homeless, the population has limited access to health care [1,2]. This suboptimal health status is associated with an increased frequency of emergency care interventions and residential admissions, which are frequently preventable. Combined with difficult access to primary care, this leads to the inefficient use of health care resources [2]. Street nurses are in an ideal position to connect with the population, identify (health care) needs, and facilitate access to health care [3,4]. Until now, few studies have examined the contribution of street nursing among homeless individuals, and additional experienced care needs and care gaps [5,6].

Aim(s): This thesis aimed to examine how street nursing could improve health care for homeless people within categories 1 and 2 of the ETHOS-typology in Belgium. In addition, the study explored which care needs and gaps were experienced by the population.

Methods: From August 2022 to February 2023, data were collected using 15 semi-structured interviews, including one duo interview (n=16) and three observational moments. The interviews were recorded and transcribed. Data collection and analysis were conducted based on the principles of Grounded Theory [7].

Results: Two typologies of perceptions towards homelessness were discovered; people who perceived homelessness as a way of life and people who resisted the predicate of homelessness. Both groups tended to have complex physical, psychological, and social care needs. They attached less importance to their psychological care needs. According to the participants, health care workers needed various core competencies to meet health care needs such as being connection-oriented, authentic, present, working discretionary, fulfilling patient advocacy, and a bridge function between primary and secondary care. The participants also experienced several care gaps, such as difficult access to general practitioners and secondary care and laborious cooperation between primary and secondary care.

Discussion: Street nursing can anticipate the care needs by applying the methodology of intensive case management [8]. Here, the therapeutic interpersonal relationship between the street nurse and the homeless population is crucial [6,9] as well as cooperation with other primary and secondary actors [10,11]. The results suggest that street nursing can be used to respond to the care needs of people experiencing homelessness if strong methodological efforts are made within an authentic relational framework to establish the principle of intensive case management. This study has some limitations. There was no data saturation for the in-depth perception of street nursing, and it was difficult to guarantee privacy during the interviews. Some participants had low literacy, which can imply suggestive questioning and misinterpretation. Only two women and people within categories 1 and 2 of the ETHOS-typology were included, which requires caution regarding the transferability of the results.

Implications and future perspectives: Changes in policy and legislation regarding the available time of health professionals working with the target population are crucial. Intensive follow-up is needed with the target population to establish an interpersonal trust relationship [12]. Street nurses have to take action to reduce stigma among other health care professionals so that an understanding of homelessness can be gained and empathy can be increased [13]. No research has yet been conducted regarding the in-depth perception of street nursing, which is needed to take a broader view of the function's added value.

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A SYSTEMATIC REVIEW ON FACTORS INFLUENCING THE IMPLEMENTATION OF A MULTIFACTORIAL FALLS PREVENTION INTERVENTION IN COMMUNITY-DWELLING OLDER PERSONS

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Background: One out of three community-dwelling older adults (65+) fall each year. Multifactorial falls prevention interventions are effective, however poor implementation often leads to inadequate results. To successfully implement multifactorial falls prevention interventions, it is important to understand factors influencing the implementation of multifactorial falls prevention interventions in community-dwelling older adults.

Aim(s): This systematic review aims to investigate factors (barriers and facilitators) influencing the implementation of multifactorial falls prevention interventions in community-dwelling older adults.

Methods: A systematic literature search was conducted on the 3th of December, 2021 and updated on the 3th of April, 2023 in five databases: PubMed (including MEDLINE), EMBASE (via Embase.com), Cochrane Central Register of Controlled Trials (via Cochrane Library), Web of Science Core Collection and CINAHL (via EBSCO). Additional relevant papers were searched by forward and backward snowballing and unpublished reports were examined in grey literature, including clinical trial registries. This review is reported according to the PRISMA guidelines and is registered in PROSPERO (CRD42022295988). Two researchers independently screened the articles on title, abstract and full text. The quality of each included article was evaluated based on a sensitivity analysis, consisting of the assessment of the relevance to the research question and appraising the methodological quality using the Mixed Method Appraisal Tool (MMAT). 'The Comprehensive Integrated Checklist of Determinants of practice' (TICD) was used to categorize influencing factors for the implementation of multifactorial falls prevention interventions in community-dwelling older persons.

Results: In total, 29 studies of the 20.522 records were included in this systematic literature review. Influencing factors were classified as barriers (n=40) and facilitators (n=35) within the TICD checklist. The availability of necessary resources is the most reported influencing factor. Other commonly reported factors are knowledge, intention/beliefs and motivation at the level of the older persons and health care professionals, fitting of the falls prevention intervention into current practice, communication, team and referral processes and financial incentives and disincentives. Only few determinants (e.g. legislation, payer or funder policies) were mentioned at social, political and legal level.

Discussion: Different from other systematic reviews exploring the influencing factors for the implementation of falls prevention interventions, this review included both quantitative and qualitative study designs and took all levels of the context (i.e. micro, meso and macro) into account. The determinants were categorized within the TICD checklist. The use of a determinant framework allows a uniform categorization and enables comparison between studies. An interesting finding from mapping the determinants in the TICD checklist, is that we identified determinants at a domain that is not included in the TICD checklist (i.e. family and informal caregivers). This review resulted in a more holistic understanding of the determinants influencing the implementation of multifactorial falls prevention interventions specific for the community setting.

Implications and future perspectives: Barriers and facilitators at different levels influence successful implementation of multifactorial falls prevention interventions. Mapping of the barriers and facilitators is essential to enhance the uptake and effectiveness of multifactorial falls prevention interventions in community-dwelling older persons and to choose implementation strategies tailored to the context.

HAPPY AGEING: INCLUSION AND MOTIVATORS OF SOCIAL VULNERABLE OLDER ADULTS IN A HEALTHY LIFESTYLE INTERVENTION

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Background: Socially vulnerable older adults tend to have a lower health literacy regarding healthy behaviours and they most often experience limited access to health interventions such as healthy lifestyle programs when compared to general older adults [1,2].

Aim(s): This research project aimed to detect the needs of socially vulnerable older adults in terms of healthy lifestyle behaviors. These needs were then used in the development of a healthy lifestyle program that was being implemented in local centers for community-dwelling older adults in Brussels and Flanders.

Methods: Based on a literature review and a needs assessment, a multidisciplinary research team of nurses, occupational therapists, a nutritionist, a psychologist, a sleep therapist and a physiotherapist were involved in the development of a 10-week healthy lifestyle program. This program consisted out of 10 weekly group sessions of 60-90 minutes each. Each session was focused on healthy lifestyle behaviours such as physical activity (PA) and sedentary behavior (SB), sleep and stress, healthy nutrition, resilience and social contact. First, for the implementation of the program, socially vulnerable older adults were identified and recruited by means of a neighborhood analysis that was initiated by the research team and supported by the community centers. Second, the participants' motivators for participation in the program were examined by means of focus groups with the participants [3].

Results: Nine centers for community-dwelling older adults in Flanders and Brussels were involved in the implementation of AHAA of which 6 centers collaborated in this program. In total, 93 older adults were recruited to participate in AHAA of which 76 completed the full program. Main motivators of participants for participation were to acquire more knowledge on a healthy lifestyle, staying and becoming fit, getting acquainted with neighbours and the community center, expanding own network, escaping loneliness, positive ageing and rebooting social contact after covid.

Discussion: The inclusion of socially vulnerable older adults in this program was a challenging process considering these older adults often remain under the radar of both formal and informal organizations. Second, the social aspect of a group was a critical factor for the drop out of participants as well as absence due to illness of the participants or the participants' spouse. Third, the success of the program itself was also strongly affected by the embedding of the program within the community centers as well as the social aspect (belongingness), the free admittance and the freebies that were included in the sessions.

Implications and future perspectives: Future research and projects regarding socially vulnerable older adults are encouraged to reconsider recruitment methods and inclusion of the target group and their motivators during the development of the intervention in order to increase inclusion of older adults and decrease drop out during the intervention.

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THE INTERPERSONAL CARE RELATIONSHIP AS A FORGOTTEN FOCUS IN QUALITY OF CARE: HOW TO ENHANCE THE NURSING COMPETENCIES IN PRACTICE?

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Background: Large efforts have been made to improve the quality of nursing care. Nursing has become more and more evidence based, data driven, standardized, supported by guidelines and procedures, digitalized, monitored and measured to enhance the quality of care. In the trajectory of ameliorating nursing care, the focus was mainly put on nursing actions and activities, on what nurses should do to provide quality of care, e.g. gathering information by following the anamnestic protocol, correctly administrating medication by scanning bar-codes, registering patient parameters that are put into an algorithm calculating a score that indicates which actions should be performed. This results in better outcomes of care. However, when monitoring the outcomes of nursing care in a broader perspective, there seem to be some adverse effects of the strategies mentioned above. The measured outcomes do not always match the outcomes that patients find important and research has brought processes to light that undermine the results of nursing actions. The interpersonal care relationship (IPCR) and the complex interplay of elements in it, can have an important, unexpected effect that is not always prominent. Research shows that the IPCR is the driver for patients to inform nurses, to ask them for help, to discuss health related solutions they found. An IPCR that creates the possibilities for open and authentic communication, guarantees a safer patient environment and better patient outcomes. It also stimulates nurses in their competences to communicate, reflect and attune to patients' needs and it protects nurses from burn-out. Yet, the IPCR seems to have disappeared as a focus of quality of nursing care.

Aim: This presentation aims to discuss (1) implementation strategies to strengthen the IPCR as a fundamental aspect of nursing and (2) possibilities to put the IPCR to the forth when enhancing and assessing the quality of nursing care.

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THE IMPACT ON PATIENT SAFETY AND QUALITY OF CARE OF PHARMACEUTICAL TECHNICAL ASSISTANTS ON NURSING WARDS: A QUALITATIVE STUDY

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Background: Staff shortages challenge nurses to maintain high-quality pharmaceutical care in hospitals [1,2]. To support nurses, a Flemish hospital in Belgium, Vitaz, implemented pharmaceutical technical assistants on nursing wards to manage stock and prepare medicines for subsequent administration by nurses [3,4]. However, evidence is lacking regarding the impact of pharmaceutical technical assistants on nursing wards on the quality of care and patient safety within the Belgian context.

Aim(s): This study aimed to explore nurses' experiences and perceptions of the implementation of pharmaceutical technical assistants on hospital wards. The process of implementation, role development, and the impact on safety and quality of care were investigated to determine critical success factors and opportunities for quality improvement.

Methods: Semi-structured interviews were conducted with nurses of Vitaz between December 2022 and March 2023. All interviews were audio recorded and transcribed verbatim. Thematic analysis was performed in NVivo 1.6.1. Results

Sixteen interviews were conducted with seven head nurses and nine nurses on internal, surgical and geriatric hospital wards. Three main themes emerged: patient safety & quality of care, organization of care, and role development & collaboration. Implementation of pharmaceutical technical assistants on nursing wards to support the process of medication preparation was perceived to lower the risk of medication errors without compromising care quality. Nurses felt they could spend more time on direct patient care. The interviews showed successful implementation requires a clear and uniform communication procedure. It is perceived important to find a clear way to collaborate and share information about the medication between pharmaceutical technical assistants and nurses. To improve medication safety and care quality, all participants mentioned the importance of assigning the same nursing wards to the same pharmaceutical technical assistants for them to become part of the team. Being part of the team is considered an important aspect to ensure a smooth and optimal cooperation between nurses and pharmaceutical technical assistants. Nurses indicated that collaboration with pharmaceutical technical assistants challenged them in their role of supervising care and co-working in the team.

Discussion: The nursing staff was convinced that the implementation of pharmaceutical technical assistants on nursing wards had a positive effect on workload, patient safety and quality of care. Organizational barriers mentioned were limited, yet, will help to further optimize processes and outcomes. This study only focused on the experiences and perceptions of the nursing staff. Another ongoing study focuses on the experiences and

perceptions of pharmaceutical technical assistants and hospital pharmacists. In other European countries, pharmaceutical technical assistants with higher educational levels are allowed to perform more tasks on nursing wards. It may be interesting to look into possibilities to extend this support system for nurses in Belgium likewise.

Implications and future perspectives: The findings of this study confirm the added value of pharmaceutical technical assistant in terms of medication management on the hospital ward. Critical success factors for the implementation include dedicated assignment of pharmaceutical technical assistants to hospital wards, clear role description and mutual expectations in the collaboration and communication between pharmaceutical technical assistants and nurses. Experiences and perceptions of health care providers involved in pharmaceutical care on nursing wards help to map what factors and outcomes should be considered in a quantitative measurement of the effects of the implementation.

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AN INTEGRATED AND PERSON-CENTRED CARE MODEL IN A BELGIAN REFERENCE HOSPITAL, A JOURNEY OF MANY YEARS

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Background: Healthcare worldwide has undergone a tremendous evolution in recent decades. Due to the evolution of medicine and the explosion of various ingenious and more expensive examination and treatment options. This ensures that patients are treated more and more efficiently, and admission times are drastically reduced. Not only medicine is creating new challenges, but social developments are also setting the scene for a renewed healthcare organisation. Consider the participation needs of patients, the documentation and accountability of quality of care, the ageing of the population, evolution towards supra-regional hospital networks in Belgium and the alignment with-and substitution of-care to primary care. The nursing profession must evolve along with it, but the amount of knowledge we expect from nurses both in terms of knowledge of pathology but also broader knowledge of informatics, technology makes it particularly complex.

Aim(s): In response to these challenges, AZ Groeninge Belgium has developed a new model of care in recent years. The aim was to clarify the role of the nurse and deploy it in a one-to-one relationship with the patient. The multidisciplinary care team was built around this model. As one of the larger non-university Belgian reference hospitals, we want to take our social responsibility by sharing our experience and approach in tackling this exciting but complex challenge.

Methods: To implement this new integrated and person-centered care model in a Belgian reference hospital with more than 3,000 staff members and physicians, we used the PDCA-cycles. During the process, there was maximum focus on employee participation and patient participation. Results

AZ Groeninge has undergone a transition since the merger in 2010 in which we always insist on constant alignment with all healthcare professionals within the hospital, collaboration with external partners is also central. AZ Groeninge is the first and only non-university hospital in the BeNeLux to achieve the Joint Commission International's quality label a fourth time in the summer of 2022. In recent years, the integrated electronic patient record was implemented, the role of the nurse clarified, continuous monitoring of patient-nurse ratio (with an average lower than 8 patients per nurse in 24h), implementation of bedside-shift reporting etc. Discussion

The focus of the new care model goes towards vision development, co-creation, defining the care team, job differentiation, patient-nurse ratio, use of data and the integrated electronic patient record. In conclusion, healthcare is evolving more than ever, and this is accompanied by enormous challenges. As one of the larger non-university Belgian reference hospitals, we want to take our social responsibility by sharing our experience and approach in tackling this exciting but complex challenge.

Implications and future perspectives: As one of the larger non-university Belgian reference hospitals, we want to take our social responsibility by sharing our experience and approach in tackling this exciting but complex challenge. It is a call to be innovative and not always wait for resources from the government. We report on the importance of good vision development and thoughtful team alignment, the use of data and innovation to ensure quality and safe care. References

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DEVELOPING A SET OF QUALITY INDICATORS TO MONITOR THE QUALITY OF CARE DELIVERED BY PAEDIATRIC OBESITY CENTRES

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Background: In order to tackle the growing trend of overweight and obesity among young people, the National Institute for Health and Disability Insurance (NIHDI) wants to set up a multidisciplinary, outcome-oriented stepped care model including regular follow-up for children and teenagers, to improve detection, achieve timely and correct diagnosis, provide appropriate multidisciplinary treatment and prevent relapse of obesity in Belgium.[1] A three-tier structure is advocated. The first level of care consists of physicians, the second level of care includes 25 Paediatric Multidisciplinary Obesity management Centres (PMOC) and the third level consists of 2 Centres of Expertise for Paediatric Obesity Management (CEPO).

Aim(s): To develop the set of quality indicators (QI) to monitor the PMOCs and evaluate the quality of care.

Methods: To assess health care quality, the Donabedian model was chosen, distinguishing three dimensions of quality: structure, process and outcome.[2] The literature review identified existing indicators that can be used for a scientifically based quality assessment The next steps involved a participatory approach as system of co-creation between the scientific team, the authorities and the stakeholders to identify the final set of indicators.[3][4, 5]

Results: Almost all indicators found in the scientific literature were outcome indicators. Multidisciplinary management of overweight and obesity was heavily advocated, stressing the role of nurses in different levels, although staffing requirements for the multidisciplinary team in terms of minimum numbers or minimum qualifications were not found. Additionally, no papers were found that evaluated the effectiveness of a single element of the structure or of the process on the outcomes. As a result, all elements of structure and process are currently described as eligibility criteria in agreements formalising the recognition of PMOCs by the NIHDI and can be used to assess the compliance of centres with the minimum requirements described in the agreements, but not to measure the quality of the management. Five final outcome indicators were identified: BMI z-score, Blood Pressure, Blood Lipids, Physical Activity and Quality of Life.

Discussion: Many challenges have been identified, including three priorities. First, the creation of a single database. Second, to propose a mixed methods evaluation.[3] Third, to identify validated instruments and questionnaires, available in various languages and without copyright. Next, the use of reliable quantitative data that can be extracted from records in order to explore the possibilities of linking data related to the use of care. Furthermore, the privacy of patients' needs to be respected and guaranteed in longitudinal data collections. Moreover, assessment of the quality of care must be part of a virtuous non-sanctioned circle of goal setting, implementation of a treatment programme, evaluation and feedback to trigger corrective action where necessary. Lastly, a link between the management of childhood obesity in the PMOC and the results must be obtained.

Implications and future perspectives: The creation of this second level in the stepped-wedge model is much needed and long overdue in Belgium. Depending on the education level, nurses can play a crucial role in the care for patients, coordination between the levels of care as a Nurse Specialist or play a crucial role in obtaining, managing and analyzing the data as Nurse Researchers.

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PATIENTS' EXPERIENCES REGARDING SLEEP HYGIENE IN DUTCH TEACHING HOSPITALS: A CROSS-SECTIONAL QUESTIONNAIRE STUDY

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Background: Adequate sleep is important for hospitalized patients as they are either ill or recovering from treatment. However, sleep hygiene in hospitals falls short due to frequent sleep interruptions [1].There is a lack of knowledge about sleep hygiene in hospitalized patients [2].

Aim(s): The aim of this study is to identify the sleep hygiene experienced by patients in tertiary medical teaching hospitals in the Netherlands.

Methods: Participants were recruited from six Dutch tertiary medical teaching hospitals between August and December 2021. Eligible patients completed the Dutch version of the VSH and the FISQ, consisting of 15 and 28 items, respectively. Multiple regression analysis was used to test the influence of demographic factors on sleep hygiene and One Sample T-Test was used to quantify mean sleep hygiene scores. To validate the Dutch questionnaires, the criteria of the COnsensus-based Standards for selection of health Measurement INstruments (COSMIN) were followed. We conducted a forward backward translation followed by an Exploratory Factor Analysis and Confirmatory Factor Analysis to establish the validity of both questionnaires.

Results: A total of 697 respondents completed the questionnaires. Most participants were between 50 and 74 years old, and of all participants, 51.8% were male and 70.7% had spent four nights or more in a multi-occupancy room. Seventeen percent of the respondents (n=119) indicated that they had established sleep rituals at home such as reading or meditating. Over 51% of the respondents reported sleeping worse than at home. Furthermore, respondents' sleep duration was 1.5 hours shorter during hospital admission. The most commonly reported sleep disturbing factors were bed comfort, pain, ventilation system, patient noise and equipment alarms. The preliminary results of the validation analysis are promising for the appropriateness of the questionnaires in the studied population.

Discussion: This study demonstrates that patients admitted in general wards in Dutch hospitals experience disturbed sleep. Yet, it should be taken into account that the study population included a considerable number of elderly patients, who are known to experience regular sleep interruptions [3]. Moreover, patients often have their own sleep rituals and behaviors at home for which there is little or no room for in general wards. Our results confirm earlier studies, which reported that hospitalized patients sleep on average 1.5 hours less than at home [2]. Sleep hygiene is suboptimal, due to environmental factors such as equipment or traffic noise, which is often unavoidable due to the location of the room or hospital. All aforementioned indicates that patients' sleep in general wards is suboptimal.

Implications and future perspectives: The results of this study demonstrate the importance of taking sleep hygiene into account when building a new hospital. In addition, nurses should pay attention to sleep hygiene when taking the anamnesis and take measures to ensure patients' uninterrupted sleep, such as administering pain relief, improving the comfort of the bed or avoiding unnecessary postoperative checks. In addition, delaying early morning nursing rounds, combined with non-pharmacological interventions such as sleep hygiene training for nurses and routine distribution of earplugs and sleep masks, may be useful as a sleep-promoting intervention [4;5]. Furthermore, the implementation of a non-pharmacological sleep hygiene protocol may contribute to patients' sleep perception [6].

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EQUANU - EQUALITY IN SOCIETAL AND PROFESSIONAL RECOGNITION OF NURSES

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Background: Healthcare institutions are experiencing increasing difficulties in attracting and retaining qualified nurses. The poor public image of the profession and the professional recognition of nurses themselves may underlie this.

Aims: To identify differences in societal recognition of nurses, as well as their professional recognition by advanced roles in pharmaceutical care (especially prescription management) in European countries, taking into account differentiation in function per country.

Methods: A cross-sectional study design was conducted. Both nurses of different educational levels and the general public were surveyed between November 2022 and May 2023. The public's recognition of nurses and possible influencing factors, as well as views on nurses' job content were compared across nine countries. Nurses' work environment, job motivation and degree of perceived autonomy in tasks related to prescribing were mapped and correlated with demographics and level of education. Results

A total of 1616 participants from the broad public (societal recognition) and 2361 nurses (professional recognition) took part. Characteristics attributed to nurses were: friendly, warm, empathic, female, scientific, compassionate. Mean score for socio-economic prestige of nurses was 6.6 on 10 (SD 2.6). When comparing prestige scores between nine countries, Slovenians gave the lowest score (5.3/10) and Portuguese citizens gave the highest score (7.5/10; $p<0.001$). In contrast, in Portugal the highest percentage of nurses (89%) did perceive low professional recognition, compared to 55% of the Slovenian nurses ($p<0.001$). Overall, nurses' responsibility level in prescription related tasks was 'not allowed'.

Discussion: Societal recognition of the nursing profession scored average compared to other professions but differences between countries were found. Professional recognition by nurses themselves was rated as low by the majority, with no difference between educational levels. Implications and future perspectives.

A benchmark between countries can help nurses in countries with lower levels of recognition to strive for a better recognition, with potential benefits for quality of care. More equality can be supportive for labour mobility for the European nurse.

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PARTICIPATION OF INPATIENTS IN MTM'S: AN EXPLORATIVE STUDY OF MENTAL HEALTHCARE WORKERS' PERCEPTION

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Background: There is a global tendency in mental healthcare towards a more active involvement of patients in their care process. As a result, patients participate more often in multidisciplinary team meetings (MTMs). Knowledge about the perception of mental healthcare workers on patient participation in MTM's is limited.

Aim(s): The aim of this study was to explore the perception of mental healthcare workers about participation of inpatients in MTMs and to determine which demographic and contextual factors are associated with this perception.

Methods: A cross-sectional multicenter study in 17 psychiatric hospital with 701 mental healthcare workers was performed between 29 April and 19 May 2019. For measuring the perception of the mental healthcare workers, the Patient Participation during Multidisciplinary Team Meetings Questionnaire (PaPaT-Q) was used.

Results: 93% of the mental healthcare workers indicate that they are willing to allow patients to participate in a MTM. Most mental healthcare workers prefer an active role for the patient when participating in a MTM (93%) and a collaborative role for the patient when making decisions in a MTM (75%). Level of education, discipline, experience with patient participation in MTMs, working in a team where patient participation is applied, and recent training on patient participation, are associated with the mental healthcare worker's perception on patient participation in MTMs.

Discussion: Mental healthcare workers report a great willingness to involve inpatients in MTMs. However, social workers, nurses, and pedagogues feel less competent and are less positive about the effects of patient participation in MTMs. Mental healthcare workers with recent training in patient participation and experience in patient participation in MTMs feel more competent and believe more often that the patient should fulfill a more autonomous role when participating in a MTM.

Implications and future perspectives: The findings of this study might function as eye-opener for mental healthcare workers and can be used to support further development and implementation of quality improvement programs. The insights of this study can be complemented with qualitative research data of stakeholders' experiences of patient participation in MTMs. Future research must focus on the meaning psychiatric nurses, pedagogues, and social workers give to participation of inpatients in MTMs. In particular, the focus should be on explaining why these three discipline groups are less supportive in involving inpatients in MTMs and are less convinced about the effects of patient participation in MTMs. Furthermore, research in this area should focus on the effects of patient participation in MTMs. In this regard, there should be enhanced attention to the mental healthcare workers who are working in a team where patient participation is applied, as they believe in better health outcomes. As this questionnaire exclusively focuses on patient participation in MTMs in inpatient psychiatric settings, future research must focus on the mental healthcare workers' perception on patient participation in MTMs in community-based mental health care systems. Finally, to fully understand the phenomenon of participation of inpatients in MTMs, it also essential to explore the patient's perception about patient participation in MTMs.

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VIEWS OF INTERDISCIPLINARY TEAMS IN MENTAL HEALTH CARE ON OUTPATIENT NURSING CONSULTATIONS

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Background: In Europe, mental healthcare services are continuously evolving to meet the growing and increasingly complex demands for specialized mental health care (MHC) provision. Also in Flanders inpatient services has partially been transformed into outpatient and home care. This increases the pressure on outpatient services that already struggles with long waiting times/lists?. Consequently, patients may not receive MHC in time. An outpatient nursing consultation could help to fill in this treatment gap.

Aim(s): The study aimed to gather the attitude and views of different mental health care workers (nurses and other MHC professionals) towards mental health care nursing consultation (MHCNC) as a new concept of care to be introduced in daily MHC practice.

Methods: An explorative qualitative research was conducted, based on individual semi-structured interviews with fifteen mental health care professionals from different inpatient services. A thematic analysis was performed to reveal emerging patterns and themes.

Results: Three main topics emerged from the data: content, purpose and conditions for MHCNC. The content of MHCNC should focus on the meaning of living with mental health issues for the patient and their family, how to support the patient and help (practical, emotional or hand-in-hand guidance) the patient in organizing and conducting their daily life while dealing with mental health issues. The MHC nurse should translate treatment advice into the patient's daily life and consolidate it. The MHC nurse is easily accessible, provides timely care and continuity by playing an important role in assessing the patient's condition and collaborating with MHC professionals when needed. Before the implementation of MHCNC several conditions such as the nurse's competencies and training, interprofessional collaboration and organizational concerns e.g. financing and staffing may need to be fulfilled.

Discussion: The research has identified the MHC professionals' views on mental health care nursing consultations (MHCNC) in outpatient care. Despite the concept of MHCNC is still rather unknown to MHC professionals, they believe that MHCNC may partially play a role in relapse prevention, early intervention and preventing hospital (re)admission. Nurses' education, competence, legislation, staffing and financing are subjects of concern.

Implications and future perspectives: Since the study, Ghent University Hospital has used these findings to set up MHCNC for patients with eating disorders or OCD. Patients and involved MHC professionals are very positive about this new concept of care. In future studies, objective outcomes around the MHCNC still have to be studied.

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ASSOCIATED FACTORS OF NURSE-SENSITIVE PATIENT OUTCOMES: A MULTICENTRED CROSS-SECTIONAL STUDY IN PSYCHIATRIC INPATIENT HOSPITALS.

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Background: The nurse-patient relationship in mental health care is an important focus of mental health nursing theories and research. The lack of evidence on patient characteristics and relational-contextual factors influencing nurse-sensitive patient outcomes of a nurse-patient relationship is a possible threat to the quality and education of the nurse-patient relationship.

Aim(s): To measure nurse-sensitive patient outcomes of the nurse-patient relationship and to explore the associations between nurse-sensitive patient outcomes and a range of patient characteristics and relational-contextual factors.

Methods: In a multicenter cross-sectional study, 340 inpatients from 30 units in five psychiatric hospitals completed the Mental Health Nurse-Sensitive Patient Outcome-Scale. Descriptive, univariate, and Linear Mixed Model analyses were conducted. The study was approved by the Ethical Review Committees of the participating hospitals.

Results: Overall patient-reported outcomes were moderate to good. Female participants, nurse availability when needed, more nurse contact and nurse stimulation were associated with higher outcomes. Age differences were observed for some of the outcomes. Outcomes also varied across hospitals but were not related to the number of times patients were hospitalized or to their current length of stay in the hospital

Discussion: The results may help nurses to become more sensitive and responsive to factors associated with nurse-sensitive patient outcomes of the nurse-patient relationship.

Implications and future perspectives: Having insight into the factors associated with nurse-sensitive patient outcomes of the nurse-patient relationship can help nurses, nursing students, nursing management and also patients to enhance the nurse-patient relationship, trying to influence outcomes of nursing care.

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TELETHERAPY IN MENTAL HEALTH CARE: THE PERSPECTIVE OF PATIENTS, PROFESSIONALS AND CARERS

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Background: The Covid-19 pandemic changed our social context. Not only personal contacts were limited, also professional contacts and accessibility of health care were reduced. Therapy for inpatient and outpatient mental healthcare decreased in intensity and switched to e-health and teletherapy.

Aim(s): The study was focused on mental health care and aimed: (1) to get insight into the experiences and coping of patients, carers, and mental health professionals (MHP) with e-health and telecare/therapy; (2) to measure the barriers, possibilities and perceptions of e-health and telecare/therapy in patients, carers and MHP.

Methods: A multicentric, mixed-method study was set up. Digital and paper questionnaires were distributed, telephone, online and face to face interviews were held supplemented with focusgroupinterviews. For the quantitative analyses SPSS was used, for the qualitative data thematic analyses took place with NVIVO. Results

Eleven mental health care organizations participated. During the first and second lock-down respectively, 765 and 475 questionnaires were filled out. Interviews were held with 91 professionals, 113 patients and 17 carers. Telecare/therapy was perceived as a temporary alternative and an aid to postpone but not replace hospitalization. Limited access to communication facilities and technical barriers increased irritation, feelings of helplessness and loneliness. Mental health care professionals were more positive concerning the value of telecare than patients. The qualitative research showed that MHP mainly focused on physical health, administration and control tasks. They felt alienated from their core roles. For inpatients, contact with their home environment and carers was omitted because of lack of time and communication tools. Experiences of disconnection were prominent and were reinforced by an increasingly restrictive and top-down driven management. Patients and carers felt deprived of what really matters to them e.g. being with the ones they are close to. MHP felt forced into a role they didn't want and didn't believe in. They often felt powerless. Re-establishing connection and togetherness came from sharing feelings, together searching for creative solutions to fulfill profound needs and becoming partners facing the same challenges. This contributed to mutual understanding and created space for new insights and initiatives.

Discussion: The study shows that when social relations are threatened, the need to find connection is prominent. Telecare/therapy can be a valuable addition to the usual mental healthcare. It can help patients and their carers to overcome the waiting time for hospital admission when technical issues can be avoided or solved. Empowering MHP and patients to engage in a partnership strengthens creativity to find solutions for mutual problems. Carers and family members of patients are not recognized in their crucial role in the patient's life.

Implications and future perspectives: The insights from the study indicate that a future-proof mental healthcare benefits from MHP who can adapt to extraordinary circumstances, not neglecting the need for contact and communication. It also revealed the importance of sensitivity for concerns and needs of professionals, patients and carers during crisis management and for combining bottom-up and top-down strategies driven by a focus on the core business and core values of the organization.

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ELECTROCONVULSIVE THERAPY: THE PERSPECTIVE OF THE INFORMAL CAREGIVER IN THE DECISION-MAKING PROCESS

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Background: Electroconvulsive therapy (ECT) as a treatment for depression remains controversial [1,2,3] and leads to fear and uncertainty when proposed [2,5,6]. As patients are not always able to decide on starting ECT by themselves, informal caregivers (IC) are involved. Research on IC in the decision-making process of ECT is limited [7]. However, profound understanding of IC' perspective, can facilitate the role of mental health professionals in guiding patients and IC through the process.

Aim(s): The aim of this study was to describe the perspective of IC in the decision-making process of ECT, before, after and during ECT treatment.

Methods: A qualitative phenomenological study was set up. Semi-structured interviews were held with IC of patients who are treated with ECT. Purposive sampling was based on maximum variation. Interviews were fully transcribed and thematic analyses took place. Trustworthiness was guaranteed by e.g. researcher triangulation, audit trail.

Results: Nine interviews, mean duration of 102 minutes, were held with partners, children and parents of patients. Interviewing proceeded until saturation of the important themes was reached. During the interviews it became clear that the decision-making process of ECT is strongly influenced by the illness-trajectory and context of living with the mental health problems of the patient. The IC described it as 'not a life anymore but trying to survive'. Their investment in the patient's illness-trajectory led to absence of personal well-being. They described their perceived responsibility in the informed consent process for ECT as a burden, but focusing on the possible positive effects helps to overcome fears, doubts and uncertainty. ECT seems a beacon of hope and therefore only few questions are brought forward in their first contacts with the mental health professionals. Trusting the treatment team, seems more important than having an answer to all questions. After starting ECT, IC establish a framework to evaluate side-effects and effectiveness. This framework is based on what they define as 'the patient becoming a bit more himself again'. Based on these observations they support the continuation of ECT. However, if patients clearly express that they experience side-effects that are too hindering, IC follow the patient if he or she wants to stop ECT.

Discussion: Our study clarifies the perceptions, feelings and motivations of the IC towards ECT. As others studies, it shows that the impact of the patient's illness-trajectory has an important effect on the life of IC [8,9]. The perceived responsibility, burden and loneliness of IC is often missed. The patient's experiences and opinions guide the IC in their decisions.

Implications and future perspectives: Broadening and deepening information during the process, based on the IC' questions and worries could help to stimulate adherence to ECT. The framework used by IC to evaluate the effects of ECT can be a valuable addition to the clinical evaluation. In discussing this framework through the ECT-trajectory, mental health nurses can reduce the burden and loneliness of IC.

PILOTING A BRIEF CBGT INTERVENTION FOR STRESSED ICELANDIC FEMALE UNIVERSITY STUDENTS

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Background: The university years are generally considered to be a time of transition when young people enter adult life and prepare their future career. International research has shown that stress is common among university students, especially among females. Therefore, a brief cognitive behavioural group therapy (CBGT) was developed, and pilot tested. The therapy focused on enhancing self-esteem and perceived mastery among participants with GBCT to combat the stress.

Objective: The main objective of this study was to explore female students' mean symptoms of stress and their sense of mastery and self-esteem before receiving the CBGT and again immediately post intervention. The CBGT was conducted in 6 consecutive weekly group sessions for 90 minutes. Participants were divided into five sub-groups and all had been screened with psychological stress prior to the intervention.

Method: This was a quasi-experimental study and the questionnaires consisted of the Perceived Stress Scale, Pearlin Mastery Scale and Rosenberg´s Self-Esteem Scale and questions on background variables. The sample consisted of 22 undergraduate and graduate female students, aged 21-42 years. Most were in a steady relationship, cohabiting or married (73%). Forty percent were graduate students. Data was analyzed with descriptive statistics and paired sample t-tests.

Results: The preliminary results of this pilot study revealed that participants' mean stress-scores decreased significantly between pre and post intervention whereas mean mastery and self-esteem scores increased significantly during the same period of time.

Conclusion: This pilot study, provided by advanced psychiatric nurses, indicates positive results of six 90 minutes CBGT sessions for Icelandic female university students who experienced stress. These results will contribute to further development of an intervention to target stress among university female students.

FINDING AND SELECTING NURSES FOR INNOVATIVE QUALITY IMPROVEMENT ROLES IN LONG-TERM CARE – IQE STUDY

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Background: In Germany, as in many other western countries, changing demographic profile causes increased pressure for long-term care (LTC)1 To ensure quality of LTC, quality indicators have been introduced.1,2 While quality improvement (QI) is an essential for high quality LTC outcomes, there are often concerns about diversion of resources from direct care and burden on nurses and care workers.1,3,4 However, as QI is closely linked with evidence-based practice, nurses can be ideally placed to drive QI forward.3,5 Previous studies have explored different frameworks for QI implementation4,6, and in here implementation of internal QI in LTC institutions on the background of academisation of nursing profession in Germany7 was examined.

Methods: An evaluation framework, based on the RE-AIM8 model, was developed to examine the implementation process of internal QI, especially concentrating on selection and initiation of the staff in their new roles. The new internal QI roles were introduced in 11 LTC institutions located in south-west of Germany. Evaluation was conducted with recruiting managers with questionnaires and semi-structured interviews. Questions concentrated in understanding recruiting managers views about applicant pool, ease of recruiting for the positions, and success of the planned work introduction. Data was analysed using inferential statistical methods and narrative analysis.

Results: Applicant pool for the new QI improvement roles was not wide, but appeared adequate for finding suitable candidates. Qualification profile of the majority of the applicants was non-academic, with recruiting managers emphasizing practical nursing experience as a key qualification. Applicants aptitude for the QI role was considered overall positive, though applicants' abilities for reflective thinking and work organization were rated more critically than ability to work with individuals with care needs. Results suggested that successful applicants tended to be internal, i.e. known to the institution, with some continuing to work in additional roles within the institutions. This reflected in the in the QI introduction programme, as the prior organizational knowledge differed between the staff recruited within and outside of the organizations.

Discussion: To counter concerns of QI burdening staff in LTC institutions, QI improvement roles particularly aimed for academically qualified nurses were developed. Despite the skills profile of the QI roles being suitable for academically qualified nurses, importance of understanding nursing practice was considered as a key requirement for successful applicants. This appeared to reflect the belief that knowledge of practical challenges of LTC nursing would assist acceptance of the new QI roles in the institutions. Challenges of implementing the new QI roles were also highlighted by the number of internal applicants, which indicated that prior organizational knowledge was perceived beneficial by both host organisations and applicants alike. Dedicated introduction programme was considered essential to ensure that the new QI improvement staff were aware and prepared for the roles.

Implications and future perspectives: Quality improvement and management activities are essential in maintaining and improving care quality in LTC. Introducing internal nurse-led QI can be effective strategy in countering negative perceptions of QI in LTC. Finding suitable candidates in this context, however, may be challenging, but well-constructed introduction programme can be instrumental in ensuring clear expectations and imbedding in institutional structures.

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THE IMPACT OF THE IMPLEMENTATION OF NEED-BASED CARE IN NURSING HOMES ON FORMAL CAREGIVERS' WELL-BEING.

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Background: Need-based care is a structured and standardized model that supports formal caregivers in nursing homes (NHs) in delivering person-centred care by responding with tailored non-pharmacological interventions on residents' unmet needs as well as having positive effects on behavioral and psychological symptoms on residents with dementia (BPSD) [1]. However, limited resources as well as the shortage of caregivers in NHs make the implementation of need-based care challenging [2], especially when it comes to finding ways to spend more time with residents.

Aim: To evaluate the impact of the implementation of need-basd care on formal caregivers' sense of competence in dementia care, level of burnout and level of engagement. The hypothesis is that the implementation may have an inverse effect on formal caregivers' wellbeing.

Methods: A three-arm cluster randomized controlled trial was set up in 24 Belgian nursing homes: formal caregivers in the 'need-based care' group (intervention) spent time twice a week with residents who had BPSD focusing on their unmet needs; meanwhile, formal caregivers in the 'time' group were free to fill in the time they spent twice a week; a third group delivered standard care. An implementation strategy was built upon the Implementation Quality Framework and used in the 'need-based care group' [3]. A total of 741 formal caregivers completed the digital questionnaire at one or more of the five time points (every nine weeks) between November 2021 and July 2022; they rated their sense of competence in dementia care, level of burnout, and, level of engagement. Moments of time were registered in a printed registration book.

Results: Only formal caregivers from the 'need-based care' group experienced a higher sense of competence in dementia care compared with baseline. No differences in scores on burnout and engagement were found.

Discussion: The implementation of need-based care in NHs can be integrated in daily practice when all components of the Quality Implementation Framework are present alongside a supportive and strong leadership.

Implications and future perspectives: The study contributed to the development of innovative methods in delivering person-centred care. Despite challenging workforce circumstances in healthcare, implementation of complex interventions to enhance person-centred care is possible. Research on the sustainability of the implementation of need-based care is recommended.

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DELIRIUM WITH RESIDENTS IN LONG-TERM CARE FACILITIES

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Background: Residents in long-term care facilities (LTCFs) are at a particular higher risk of developing delirium [1, 2]. Despite its many adverse effects, delirium is often not adequately recognized by healthcare workers during their daily practice in LTCFs [3]. Lack of recognition or adequate management of delirium in LTCFs is mainly due to lack of necessary knowledge and skills among CNAs. Certified Nursing Assistants (CNAs) play an increasingly important role in the care of residents with delirium. Early symptom recognition enables to quickly diagnose and treat the underlying cause(s) and may prevent negative outcomes. It's important to know how CNAs in LTCFs care for residents with delirium and how they perceive receiving training [4, 5]. To increase knowledge about delirium, a blended learning was developed and tested [6].

Aim(s): The aims were to identify the prevalence of delirium in Flemish LTCFs, and the influencing factors for developing delirium; to validate a screening tool for delirium detection that can be used by all healthcare workers; to identify CNAs' perspectives on delirium care; to determine health care workers' knowledge about delirium with the Delirium Knowledge Questionnaire (DKQ), and their strain of care in delirium with the Strain of Care for Delirium Index (SCDI); and to develop a blended learning on delirium for all health care workers.

Methods: To determine the prevalence of delirium and the influencing factors, and to validate a screening tool, a cross-sectional evaluation in six LTCFs took place. To identify CNAs' perspectives on delirium care, interviews were conducted. The development of a blended learning on delirium for healthcare workers, the determination of their knowledge and their strain of care about delirium was done over the course of several years through the development of a blended learning and pre-posttests in LCTFs.

Results: Delirium is an important clinical problem affecting almost 15% of the residents in LTCFs. The Delirium Observation Screening Scale (DOSS) was found to be a reliable and valid instrument to screen for delirium in LTCFs that can be used by all healthcare professionals. During the interviews with the CNAs, five themes emerged: Knowledge About Delirium, Caring for Residents With Delirium, Delirium Education, Psychological Burden, and Quality of Care. There was a significant improvement the delirium knowledge after the blended learning and decrease in strain of care. The delirium knowledge increased the most for CNAs.

Discussion: Screening for risk factors and presence of delirium is important to prevent a potential delirium and to treat underlying causes when present [7]. CNAs' care of residents with delirium was based on prior experiences and gut feelings. This insufficient knowledge may hamper timely detection or adequate treatment of delirium, indicating a high need for delirium training [8-10]. Adequate delirium knowledge will increase awareness, not only among nurses but also among other health care workers [5, 11]. This might stimulate the implementation of delirium management in LTCFs [6].

Implications and future perspectives: During this study, we have established that knowledge about delirium in LTCFs is lacking. Health care workers not equipped to deliver adequate delirium management, because delirium training is not a part of their training. Therefore, the next phase has 2 main goals: to set-up a stepped-wedged implementation of the blended learning in Belgian LTCFs and to adapt the blended learning so that it is suited for CNAs (and other healthcare workers), and to be implemented in their curricula.

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A PSYCHOSOCIAL PROGRAM FOR PEOPLE WITH EARLY ONSET DEMENTIA TO REDUCE STRESS, ANXIETY AND SLEEP PROBLEMS.

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Background: People with diagnosed early onset dementia (EOD) often suffer from increased stress and anxiety which in turn results in sleep problems, a lower wellbeing and a decreased quality of life for the person with EOD and their informal caregivers [1,2]. The current care facilities for people with EOD are nowadays mostly focused on the physical care of the person with EOD and not so much on the mental or emotional guidance [3]. Which is to be expected, given that care providers often miss the right knowledge and skills to do so.

Aim(s): This aims of this project are threefold: (1) to develop a psychosocial program on stress, anxiety and sleep problems; (2) to implement a pilot study in which people with EOD are provided this psychosocial program and; (3) to develop a manual for professional caregivers (i.e. nurses) on how to implement this program in their own setting.

Methods: The program was developed based upon literature review and in co-creation with care providers for EOD and consisted out of 6 weekly sessions which were provided in day care centers for EOD in Flanders. During each session, participants received a training regarding coping mechanisms for experienced stress, anxiety and sleep problems. All participants were measured by means of actigraphy and plethysmography for primary outcomes (i.e. sleep and stress) at baseline and at posttest. Parallel to the piloting of the program, a trainers' manual is developed and being disseminated to care providers. Finally, feedback on the program was being collected by means of a survey. The research teams consists out of 2 nurses and a bioscientist.

Results: Currently, 23 participants with EOD (of which 12 males and 11 females) with a mean age of 64 years (range between 53 and 71 years) started the program. The program was provided in four different day care centers for people with EOD in Flanders. So far, 20 participants completed the full program.

Discussion: Considering the current sample size, additional efforts are needed to increase the sample size. Given the more vulnerable character of the population group, collaboration with day care centers for people with EOD are ideal partners to recruit patients for this study. Additionally, local and regional partners will now be contacted for further implementation of the program.

Implications and future perspectives: Based upon the collected feedback from care providers, not all nurses and occupational therapists that work in day care centers feel competent to guide the program themselves. The care providers state that the trainers' manual provides a guideline, but intervision between care providers and knowledge exchange overall partners remains a necessity in order for the program to be implemented in the long run.

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PERCEPTIONS AND NEEDS REGARDING END-OF-LIFE CARE IN PATIENTS WITH AMYOTROPHIC LATERAL SCLEROSIS.

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Background: Amyotrophic Lateral Sclerosis (ALS) is a progressive neurodegenerative disorder in which motor neurons in brain and spinal cord are affected, causing muscle weakness. Respiratory failure, due to weakening of respiratory muscles, is the most common cause of death, limiting life expectancy to 2-5 years, rendering ALS a palliative disease. Therefore, multidisciplinary care with nutritional and respiratory support and a focus on comfort of patients remains the cornerstone of ALS management. To provide an optimal framework for palliative care in these patients, it is necessary to thoroughly understand their wishes regarding end-of-life.

Aim(s): To identify and explore needs and perceptions regarding end-of-life and palliative care in ALS patients.

Methods: For this qualitative study, we contacted 25 adult patients for semi-structured interviews. Interviews were organized in the hospital or at patient's homes. Data were analyzed using Braun and Clarke's method of thematic analysis with a deductive approach supported by NVivo software V.14.

Results: Sixteen patients (response rate 64%) were interviewed about their perceptions and needs regarding end-of-life and palliative care. We included 11 men with an average age of 60y (range 30-73). Seven themes emerged from our data: (1) Feelings of fear, grief and powerlessness; (2) a strong need to live their lives to the fullest, yet with frustration with the inability to focus on this due to administrative hassles; (3) focus on practical arrangements concerning death itself, as well as financial arrangements for loved ones; (4) strong influence of and worries for loved ones; (5) needs around palliative follow-up; (6) difficulties with delineation of life and dying with dignity; and finally, (7) a lack of knowledge around disease course, palliative care options and who to adress their questions to. Patients hesitate to initiate end-of-life conversations, yet want to grant permission when healthcare providers take the lead.

Discussion: This study is the first to explore needs towards end-of-life care in ALS. Our sample included a wide variation in disease duration, severity, age and disease characteristics, contributing to the validity of the results. Yet, selection bias may have been introduced since potential candidates were selected by healthcare workers and nine patients declined to participate, most due to fatigue or aversion of the end-of-life topic. Both may have led to overinclusion of patients with a tendency to openly express their opinions. Additionally, interviewer bias may have influenced the interviews and chosen themes. To minimize this bias, we used investigator triangulation,3 different interviewers, as well as the use of a multidisciplinary analytical team.

Implications and future perspectives: Conversations around end-of-life care should be optimized and tailored to patients' needs. End-of-life conversations should feel empathetic, with inclusion of loved ones. Information should be provided early on, to improve understanding of the disease trajectory and options around palliative care and end-of-life counselling. As a next step in the process of optimizing palliative care, caregivers assessments can shed more light on their needs. The ultimate goal remains a palliative care model, where timely, transmural palliative care is organized in line with patient's, caregivers' and healthcare professionals' needs.

HOSPITAL NURSES' BARRIERS AND ENABLERS TO EARLY INITIATION OF PALLIATIVE CARE, A QUALITATIVE STUDY

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Background: Initiation of palliative care early in the disease trajectory is beneficial for patients with a life-limiting disease. However, palliative care is still introduced rather late or not at all [1, 2].

Aim(s): This study aimed to explore hospital nurses' barriers and enablers to early initiation of palliative care for patients with a life-limiting disease.

Methods: A descriptive interview-based study was conducted from a critical realist perspective until data sufficiency was reached. Fifteen nurses working in nephrology and pneumology wards presented and discussed a patient for whom palliative care was initiated too late. Data were analyzed inductively, using open codes, which were summarized in subthemes and themes.

Results: Five key themes were extracted: (1) communication, (2) fear, (3) personal beliefs about life and death, (4) ambiguity in terminology and (5) workload and time pressure. Most barriers were related to poor interdisciplinary communication: therapeutic obstinance, hierarchy, unawareness of the patient's wishes and fear of saying something inappropriate played an important role. Patients' religious beliefs often hindered the use of sedatives or morphine which led to discomfort. Due to time restraints nurses were not always able to deliver high quality palliative care. A palliative support team in hospital and advance care planning were enablers for early palliative care.

Discussion: In this study, we focused on the viewpoint of nurses working in non-oncological wards who are less frequently confronted with patients with palliative care needs than nurses working on oncology or in a palliative care unit. By assessing their views and attitudes on palliative care, we obtained rich data that help us to identify gaps in current care for people with limited life-expectancy and education of nurses. We identified more barriers than enablers to early initiation of palliative care due to our start from a negative experience, i.e. a case where palliative care was initiated too late, which is a limitation of our study. Member checking and researchers' triangulation strengthened the credibility of our findings. To ensure external validity we clearly described the (hospital) context and the participants in our study. Early initiation of palliative care can be facilitated by open communication channels that unite nurses' and physicians' perspectives. All actors should be brought together to elaborate on the enablers of early palliative care in order to achieve optimal care.

Implications and future perspectives: Education and training of healthcare professionals should focus on advance care planning and interdisciplinary communication. All healthcare professionals should be aware of each other's tasks, responsibilities and added value in delivering high quality palliative care. Communication training involving all healthcare professionals at once can add to this.

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AI-BASED NURSING – A DELPHI STUDY WITH CHATGPT

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Background: The release of the open-source platform ChatGPT (Generative Pre-trained Transformer) in November 2022, created a massive interest in the possibilities of A.I. based chatbots [1]. While there is an ongoing discussion about the possibilities and risks of use of ChatGPT in nursing education [1] as well as about ethical considerations [2], less is known how A.I. could be used in nursing practice. [1].

Aim: The aim of this study is to find out if answers on nursing related questions from nurses and generated by an AI differ.

Methods: We conducted a Delphi study in three different rounds. The instrument that was used in the different rounds differed regarding the level of complexity. For the first round, the instrument included 57 questions that were derived from ten national nursing expert standards. We used an online-questionaire for the participating nurses and asked ChatGPT the identical questions. In the second round, nurses and ChatGPT were asked to rate answers from the first round with regard to their relevance in everyday nursing. The third round included writing of an assessment and a nursing handover based on two case studies.

Results: 35 nurses (n=35) participated in our study. ChatGPT answered the questions in the second round 35 times. (n=35). The Mann-Whitney-U Test showed significant differences between the answers given by the group of nurses and the group of answers given by ChatGPT in all main categories. Answers to the case study given in the third round (case study 1 n=12 nurses, case study 2 n= 13) were analyzed with qualitative content analysis (Mayring, 2015). Results indicate that nurses' answers and answers given by ChatGPT do not differ except of answers allocated to the categories illness-related demands, stresses and assessment of risks.

Discussion: Our results indicate that ChatGPT is generating comparable answers than nurses do. With regard to the 4-step nursing process [4], we assume that, ChatGPT could be an enrichment in the beginning of the nursing process (for instance with regard to assessment) by summarizing and categorizing patient´s information. Furthermore, it could be helpful for nurses in the phase of care planning for instance by receiving an overview on possible interventions. Our study has some limitations. Because ChatGPT is an artificial intelligence, the quality of the answers given depends on the questions asked. Also, quality of the answers depends on the accessibility of literature for ChatGPT.

Implications and future perspectives: Results of our study show, that the use of text-based A.I. models like ChatGPT in nursing can be possible benefit in the future. Because ChatGPT is able to communicate in different languages, it might be a possible intervention to overcome language barriers for instance in nursing handover and nursing documentation. Therefore, future research should focus on training interventions, that qualify nurses for using ChatGPT and give them the possibility to critically evaluate the given answers in specific nursing situations.

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EFFECTS OF MULITIMODAL SENSORY STIMULATION ON THE RECOVERY FROM COMA: A SYSTEMATIC REVIEW

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Background: Multimodal Sensory Stimulation (MSS) is an intervention that may support recovery from coma. It can be performed as a part of nursing care in the intensive care unit. Recent reviews on the effectiveness of this intervention included studies with different designs, ranging from pre-posttests to randomized controlled trials, and there was only low agreement regarding the studies to be included [1,2,3,4,5]. The current knowledge on MSS, therefore, remains incomplete and lacks a systematization that would allow for an integration of results in meta-analyses.

Aim(s): To determine the effect of MSS on the level of consciousness among adult patients in the process of recovery from coma in comparison to routine care.

Methods: We followed PRISMA guidelines [6] and searched PubMed, CINAHL, PsycINFO, Web of Science and the Cochrane Central Register of Controlled Trials. The first author assessed eligibility of potential studies and extracted data. Studies that met the criteria of the review's aim were included. Quality of included studies was assessed independently by two authors according to the evaluation criteria of the Revised Cochrane risk-of-bias tool for randomized trials (RoB2) [7].

Results: 14 studies were included in this review. One study investigated recovery from coma after stroke, the others recovery after traumatic brain injury. Of the latter studies, 6 investigated the effect of MSS applied by a family member trained by nurses. In 3 of these studies only tactile and auditory stimulation was applied, while in the others, more senses were stimulated. 7 further studies with patients after traumatic brain injury investigated the effect MSS when applied by health professionals. All except one addressed four or more senses. Length of treatment ranged from 6 – 14 days. The level of consciousness at the end of treatment was mainly assessed with the Glasgow Coma Scale [8], apart from 2 studies that used the Coma Recovery Scale-Revised [9]. All studies with MSS applied by family members found a significantly higher level of consciousness at the end of treatment in comparison to usual care. MSS applied by health professionals showed similar results in comparison to usual care, except when only 2 senses were addressed.

Discussion: Most studies did not report on the side effects of MSS that may occur during the critical phase of treatment and to what extent they resulted in a deviation from the investigated intervention. Analyses of results were done per-protocol and only limited information was available on reasons for dropout.

Implications and future perspectives: MSS in the acute phase of coma after traumatic brain injury can have positive effects on recovery, but possible side effects need further investigation. Its effect on coma after stroke and in patients who are slow to recover from coma and need long-term treatment should be studied in the future.

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PERCEPTIONS AND ATTITUDES OF HEALTHCARE PROVIDERS TOWARDS DISCUSSING SEXUALITY AND SEXUAL PROBLEMS IN CANCER PATIENTS (FROM LGBTQ+ BACKGROUNDS).

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Background: Sexual dysfunction is a consequence of cancer treatment. Due to better survival rates and better cancer treatments there are more cancer survivors so there are more patients who are confronted with late effects such as sexual dysfunctions. Few oncology patients, however, have spoken with a healthcare professional (HCP) about sexual health during or after treatment although this was a need [1].

Aim(s): This study aimed to explore the perceptions and attitudes of HCPs towards discussing sexuality with cancer patients, as well as LGBTQ+ patients.

Methods: A mixed-method study was conducted. An online questionnaire about attitudes and knowledge towards talking about sexuality with cancer patients was distributed. The answers were statistically analyzed in SPSS using descriptive statistics and Chi2. Three monocentric focus group interviews with HCPs were conducted about their perceptions and attitudes towards discussing sexuality and sexual problems with cancer patients, as well as towards LGBTQ+ patients. Interprofessional HCPs working in oncology were purposefully recruited in one University hospital. Data were thematically analyzed and investigators triangulation was used during analysis.

Results: The questionnaire was completed by 259 HCPs. Participants who had been educated on sexual health were positively correlated to knowledge ($p \leq 0.001$). HCPs in more specialized functions had significantly more knowledge and felt more comfortable discussing sexuality (both $p < 0.001$). Six themes, for which data saturation was reached, emerged from the focus group interviews: (1) preconditions for discussing sexuality, (2) perceived barriers and (3) facilitators, (4) LGBTQ+ patients, (5) focus points, and (6) recommendations provided by HCPs.

Discussion: Most HCPs reported not feeling uncomfortable when discussing the topic of sexuality with cancer patients. However, when further explored, they mentioned finding it easier when patients took the initiative. Some HCPs even indicated only broaching the topic when patients asked more specific questions about sexual issues. Nevertheless, studies found that cancer patients wanted their HCPs to address the topic [2]. Sexual orientation was often presumed or perceived as something patients would bring up themselves. A study had the same findings and indicated that by treating each patient the same, invalidation of LGBTQ+ patients could arise [3].

Implications and future perspectives: HCPs have presumptions about patients' needs, while these might differ from their actual needs. This is especially true for minority groups. There is a need for more education and training among HCPs to facilitate the conversation about sexuality, as well as research focusing to improve care regarding sexual issues in cancer patients.

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EVALUATION OF PATIENT SATISFACTION WITH AN ENHANCED RECOVERY PROTOCOL (ERP) FOR ESOPHAGEAL RESECTIONS A CONCURRENT QUANTITATIVE AND QUALITATIVE ANALYSIS.

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Background: Esophagectomy is the mainstay of treatment with curative option for patients with resectable esophageal cancer, and is acknowledged as one of the most complex surgeries. Enhanced Recovery After Surgery (ERAS) is based on evidence-base principles, aiming for a faster return to normal activity and reducing postoperative morbidity. In our department, an ERP for esophagectomy was multidisciplinary developed and introduced in 2017. Main adaptations were: better patient information, active patient involvement, early active mobilization, early removal of drainages and enteral feeding support. For this ERP, we were able to demonstrate a significant reduction of postoperative complications, resulting in a shortening of median length of hospital stay (LOS) with 4 days [1]. However, patients' satisfaction with ERP has rarely been evaluated for enhanced recovery protocols [2].

Aim(s): The aim of this study was to evaluate patients' satisfaction with the ERP for esophagectomy and to identify which elements of the ERP could be improved.

Methods: A quantitative descriptive survey design was used to explore issues of patient satisfaction in following domains: information and communication, multidisciplinary care, LOS and specific adjustments of care in the ERP. One open question about experiences during the stay and suggestions for improvements to the ERP. was analyzed using a thematic content analysis.

Results: Out of 525 patients admitted for esophagectomy, 331 patients (63%) completed the voluntary questionnaire at discharge. Overall satisfaction rates were high: for information/communication (84.9%), multidisciplinary care (86.8%) and ERP specific adjustments (82.2%). LOS was rated as 'optimal' by 80% of the respondents. Older patients (>70 yrs.) found LOS more often 'too short' compared to younger patients (9% vs. 2%; p= 0.005). Subgroup analysis also revealed significantly lower satisfaction scores in patients with major postoperative complications (p< 0.0001). The timeframe where COVID-19 measures were in place had significantly higher satisfaction scores for information compared to the timeframe prior to COVID-19 (p= 0.041). In the qualitative analysis, most negative sentiments were found regarding postoperative alimentation and for contradictory communication. However, patients expressed positive sentiments for the multidisciplinary care, interpersonal relations and some ERP-specific changes in care.

Discussion: Because only few studies have evaluated subjective patient-reported outcomes with the use of ERPs, the aim of this study was to evaluate patients' satisfaction with a recently introduced ERP for esophagectomy in our institution. Overall, patients are satisfied with the changes in care after introduction of an ERP for esophagectomy. An ERP highly streamlines several aspects of care, yet a patient tailored approach must always have the upper hand over an 'one-size-fits-all' approach. This delicate balance is a challenge for every health care worker.

Implications and future perspectives: These results reflect the patient satisfaction during hospitalization only. The big challenge is to consolidate this after the discharge. For many patients, the return to the home situation is a very large step, with specific issues – such as nutritional and lifestyle adjustments. This will be part of future research, where we want to examine the effects of esophageal resection on quality of life after discharge, in the medium and long term.

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TIMELY ADMINISTRATION OF SYSTEMIC CORTICOSTEROIDS IN CHILDREN WITH ASTHMA EXACERBATIONS AT EMERGENCY DEPARTMENT: A MULTICENTRIC RETROSPECTIVE STUDY

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Background: Asthma stands as the most prevalent chronic respiratory condition in children globally, often leading to visits to Emergency Departments (ED) due to exacerbations [1, 2]. Various international guidelines, including the GINA guidelines, outline the management of such asthma exacerbations in children. [3]. Timely administration of systemic corticosteroids (SCS) within the first hour of ED admission is crucial for managing moderate to severe asthma exacerbations. [3, 4]. Insight into the compliance of healthcare providers with this recommendation remains scarce. Furthermore, there is a need for studies investigating the consequences and predictors of (non-)timely SCS administration in children.

Aim(s): As part of a quality improvement project, this study aimed to (I) assess and compare the timing of SCS administration, in children with moderate-to severe asthma exacerbations, to the standard of 60 minutes after ED admission, (II) examine the correlation between SCS administration timing with the length of stay and duration of oxygen therapy, and (III) explore patient-related characteristics that could predict timely SCS administration.

Methods: This retrospective multicentre observational study collected data using an electronic medical records (EMR) review. Children under 18 years of age with moderate- to severe asthma exacerbations, visiting EDs between January 1, 2019, and December 31, 2020, were included. The study encompassed seven EDs within hospitals comprising the Antwerp Paediatric Asthma Network.

Results: The study included a sample of 205 patients presenting with asthma exacerbations at the ED. Merely 28 patients (13.7%) received SCS within 60 minutes of their ED arrival. The median time to administer SCS was 169 minutes (Q1 92-Q3 380). A moderate correlation was observed between the timing of SCS administration and the duration of oxygen therapy (n=117) ($r=.363$, $p<0.001$), as well as the length of stay ($r=.368$, $p<0.001$). No patient characteristics were identified as predictors for timely SCS administration.

Discussion: The timing of SCS is a predicting factor for LOS and need for oxygen. The later patients received the SCS the longer they were hospitalised and the longer they were dependent on oxygen.

Implications and future perspectives: This study revealed that approximately 75% of children presenting with moderate to severe asthma exacerbations at the ED did not receive SCS within the first hour of initial presentation. A delayed administration of SCS was associated with a prolonged length of stay and an increased need for oxygen support. A following study will be performed to determine if education of ED healthcare workers can improve the timely administration of SCS.

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MUSIC INTERVENTIONS AND AROMATHERAPY AS STRATEGIES TO REDUCE PREOPERATIVE ANXIETY: AN UMBRELLA REVIEW

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Background: Preoperative anxiety (PA) is pervasive among patients awaiting surgical procedures, associated with increased risks for postoperative complications [1,2]. Music interventions and aromatherapy are promising strategies to reduce the risk for PA [3,4]. Notably, these strategies are easily implementable even in busy clinical settings. Since several related systematic reviews (SRs) have already been published, it is our objective to give an overview of the available evidence.

Aims: To conduct an umbrella review of SRs studying the evidence about music interventions or aromatherapy in reducing PA among adult patients.

Methods: We retrieved MEDLINE via PubMed, EMBASE, CINAHL, and Cochrane Library from inception until September 8th, 2022, to identify SRs assessing the effects of music interventions or aromatherapy on PA in adult surgical patients. Primary outcome was the efficacy of music interventions and aromatherapy in reducing PA levels. The details of music interventions and aromatherapy implementation (intervention content, delivery methods, etc.) were also summarized. We assessed the quality of included SRs using the MeaSurement Tool to Assess Systematic Reviews checklist (AMSTAR 2). This umbrella review was registered in PROSPERO (CRD42022333246).

Results: Eight eligible SRs (67 primary studies) were included, with four SRs for music interventions (1 high quality, 2 moderate, and 1 low), three for aromatherapy (all low quality) and one for both (moderate quality). The reporting of intervention content and implementation process was unsatisfactory, with numerous key messages missing. The pooled results on reducing PA using music interventions or aromatherapy were statistically significant (MD=-4.53, 95%CI (-5.83, -3.23), I2=58%; MD=-7.70, 95%CI (-13.02, -2.39), I2=98%, respectively). Subgroup analyses found that music interventions had greater effects when the duration of intervention was 20 minutes or longer (subgroup differences $p < 0.01$) and in patients younger than 60 years of age (subgroup differences $p = 0.02$); the effects of aromatherapy were not statistically significant when using rose oil and when administered to patients undergoing cardiac surgery (both subgroup differences $p < 0.01$).

Discussion: Meta-analyses indicated that both music interventions and aromatherapy may have a beneficial effect on reducing PA levels, but the results need to be interpreted with caution due to the high level of heterogeneity observed and the poor reporting and methodological quality of the included trials. In addition, the limited number of studies and small sample sizes in subgroup analyses may increase the possibility of finding positive results by chance alone.

Implications and future perspectives: To enhance the application of music interventions and aromatherapy in clinical settings and tailor them to patients awaiting surgery, more rigorous direct comparative studies are needed addressing the individual components of the interventions, especially regarding different elements of music (e.g., musical genre, tempo) or essential oil (e.g., essential oil types, concentration) and different delivery methods (e.g., frequency, duration).

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PERCEPTIONS OF MIDWIFERY STUDENTS ABOUT CLINICAL PRACTICE: A METAPHOR STUDY

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Background: Laboratory and clinical practices are important in teaching midwifery, which is an applied discipline. Uncertainties in clinical practice are very high, and the thoughts, perceptions, and experiences of midwife candidates, at the beginning of their education, should be taken into account.

Aim(s): This research was conducted using the "phenomenological design", which is one of the qualitative research methods, in a semi-experimental type, to reveal the perceptions of first-year midwifery students about clinical practice through metaphors.

Methods: The population of the study consisted of 98 students who were in the midwifery department of a health sciences faculty in Istanbul and would make clinical practice for the first time, and the sample consisted of 81 students (82.7% of the population). The data of the study were obtained by using the "Student Information Form" and "Clinical Practice Perception Form (CPPF)". In CPPF, "Clinical practice is like … because …", "Lecturer/research assistant/mentor in the clinic is like … because ...", "Healthcare team members in the clinic are like … because ...", "Patient is like …, because ..." were asked to fill in the blanks before and after going into clinical practice. Institution permission was obtained from the dean of health sciences faculty, and ethical approval was obtained from the ethics committee. Metaphor expressions were evaluated using content analysis.

Results: Before the practice, 51 metaphors were produced for the clinical practice, 47 for the lecturer/research assistant/mentor in the clinic, 44 for the healthcare team members, and 38 for the patient they care for. At the end of the practice, 48 metaphors were determined for the clinical practice, 35 for the lecturer/research assistant/mentor in the clinic, 49 for the health team members in the clinic, and 33 for the patient they care for. It was observed that the students compared the clinic to the "school" the most before and after the clinical practice, and perceived it as a "teaching/guiding" phenomenon. The lecturer/research assistant/mentor in the clinic, before going into practice, most was likened to “mother” and perceived it as a “lighting/guiding/teaching/experienced/informed/forming/productive” phenomenon; After the practice, it was determined that they compared it to “light” and perceived it as a “guiding/teaching” phenomenon. Before the application, health team members were most likened to “friends” and perceived as “parts that make up the whole/acting together/team/unity/harmonious/hardworking-disciplined” phenomenon; After the application, it was mostly likened to a “friend” and perceived as a “parts of the whole/complementary/orderly/seriousness/hardworking” phenomenon. Before the application, the patient was most likened to a “flower” and perceived as a “person in need of attention and care/requiring a solution”; After the application, it was mostly likened to a “flower” and perceived as a phenomenon that “needs care”.

Discussion: It was observed that mostly similar statements were repeated before and after the application. Expressing students' perceptions of clinical practice through metaphors gave us the opportunity to examine the current situation comprehensively [1,2,3]

Implications and future perspectives: These research data will contribute to determining and meeting the expectations of students regarding clinical practice.

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DIGITAL ADAPTABILITY OF NURSES AND MIDWIVES

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Background: The use of technology has been increasing in healthcare in the last few years. The use of technology affects the way midwives and nurses provide care to their patients [1]. Being flexible between their care at the patient's bedside and using technology is called digital adaptability.

Aim(s): Exploring the concept of 'digital adaptability' of Flemish midwives and nurses.

Methods: The first step of Intervention Mapping, conducting a Needs Assessment, was used as the framework for this study [2]. Using Structuration Theory and Intuitive Logics Scenario Planning, the need for digitally adaptable healthcare professionals became clear. By conducting an exploratory modified e-Delphi study, the concept of digital adaptability was identified and Factor Analysis was used to explore the different aspects of the concept. Results

First, three scenarios emerged from the Structuration Theory and Intuitive Logics Scenario Planning study, highlighting the need for digitally adaptable midwives in a multidisciplinary setting. Secondly, the e-Delphi study identified 29 items of the concept digital adaptability, competencies that midwives and nurses must possess in order to be digitally adaptable. At last, two aspects of digital adaptability were identified, "me & the digital world" and "me, the digital world and my patient". Discussion

From these studies, the need for digitally adaptable healthcare providers in the near future becomes clear [3], the concept is shaped, and the aspects that comprise this concept are identified [4]. It sets a benchmark for the digitally adaptable healthcare professional, it provides a picture of what aspects and competencies a digitally adaptable healthcare professional must possess to keep up in current and future healthcare practice. Implications and future perspectives

Further research will need to reveal how this corresponds to our current midwifery and nursing students and what aspects they already possess. Based on this, an intervention can be developed to deliver digitally adaptable healthcare professionals at the end of their training.

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RETAINING MIDWIVES ACROSS PROFESSIONAL LIFE COURSE: LESSONS LEARNED FROM A PAN-CANADIAN STUDY

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Background: Retention of midwives is of critical importance, primarily due to decline in maternity care provision by physicians and nurses and the aging nursing and midwifery workforce. Research suggests that many midwives are considering leaving their profession [1], but rarely links this decision to a specific career stage.

Aims: This paper utilizes a professional life course lens to explore the unique challenges faced by early-, mid- and late-career midwives. Specifically, it examines (a) what factors impact midwives' decisions to stay in the profession, (b) how does career stage (early-, mid-, late-) can shape midwives' decision to leave the profession, and (b) what can be done to improve retention of midwives at different career stages.

Methods: This paper is based on the results from a pan-Canadian mixed-methods study that involved a cross-sectional survey and qualitative interviews with midwives across Canada. Upon ethics approvals, the survey was completed by 615 midwives and focused on satisfaction with pay, coworkers, rules and regulations, fringe benefits, job physical demands, and work-personal life interface. Semi-structured interviews were conducted with 19 midwives across Canada to gain a more in-depth perspective on the challenges experienced in the workplace and the factors shaping their decision to stay in practice or leave the profession. Each dataset was analyzed separately and merged in the final stage of analysis. Results

Findings show that while 1/3 of midwives consider leaving the profession, midwives at different career stages face challenges unique to these stages, especially when it comes to issues at the interface of work and personal life. Specifically, midwives in earlier career stages often struggle to find suitable working arrangements and experience challenging work environments including tension with senior colleagues. Mid-career midwives experience challenges balancing the demands of work and personal life, especially those related to caregiving and family responsibilities. For late-career midwives, the physical demands of the profession and lack of opportunities for professional growth emerged as key challenges. Most participants felt the interference of work with personal life is a key factor in the decision to leave the profession.

Discussion: To improve midwifery retention in Canada, the challenges faced by midwives at various career stages should be taken into consideration. Anti-bullying and anti-harassment policies, flexible work models and more opportunities for professional growth within midwifery can positively impact retention of midwives in Canada. Life course approach provides a useful analytical lens to understand retention. This study did not consider how career stages intersect with other facets of professional identities, including race/ethnicity, gender/sex and context of professional practice (rural/urban). While this is a limitation of this study, the mixed methods approach adds to the robustness of the analysis. Implications and future perspectives

Applying professional life course lens to the analysis of midwives' retention enables to identify the unique factors that impact the decisions of early-, mid- and late-career midwives to stay in the profession and develop tailored interventions. While the findings from this study are based on the sample of Canadian midwives, lessons learned might be of relevance to other professional jurisdictions struggling to retain maternity care providers and other health care personnel.

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PROVIDING COMPASSIONATE CARE: A QUALITATIVE STUDY OF COMPASSION FATIGUE AMONG MIDWIVES AND GYNECOLOGISTS

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Background: Obstetric teams face complex challenges in providing care due to overburdened healthcare systems and stressful events during labor and childbirth. Consequently, midwives and gynecologists are at high risk of developing compassion fatigue; physical and emotional exhaustion resulting from exposure to suffering, stress, and a lack of self-care [1]. This can lead to diminished self-esteem and absenteeism among professionals. When left untreated, compassion fatigue can develop into burnout. Research shows resilience is inversely related to compassion fatigue [2]. Therefore, targeting interventions to improve resilience can alleviate or prevent the development of compassion fatigue.

Aim(s): The aim of this study is to explore experiences of compassion fatigue among midwives and gynecologists in Flanders and to identify needs, protective factors and coping strategies in order to enhance resilience and prevent the development of compassion fatigue.

Methods: A thematic analysis of semi-structured in-depth interviews was conducted. Snowball sampling led to the inclusion of seven midwives and three gynecologists from different hospitals and outpatient care in Flanders. The participant group was diverse in age (M = 39,3; SD = 8,86) and years of work experience (M = 14,8; SD = 7.86).

Results: Experiences and protective factors were identified as two organizing themes and further refined into sub-themes. Although only a few participants reported personal experiences of compassion fatigue, the majority recognized the manifestation within their teams. Interviewees defined compassion fatigue as a multifactorial problem caused by a confluence of personal and contextual factors, resulting in 'the inability to provide care as one normally would'. Protective factors in the organizational context were identified along with strategies for caring for team members, self-care and patient care.

Discussion: The concept of compassion fatigue is unfamiliar and ambiguous to obstetric professionals. Participants' experience of compassion fatigue was often confused with symptoms of burnout. This conceptual lack of clarity is not surprising as research shows an overlap between the two due to distress characterizing both conditions [3]. Differentiating between the two could prove useful in early intervention and prevention of further development into burnout. A safe and supportive team environment was identified by participants as the main protective factor. Cultivating a psychologically safe team environment could therefore not only facilitate team learning and innovation [4] but also strengthen resilience and well-being among obstetric teams.

Implications and future perspectives: These findings show promising pathways to develop strategies aimed at promoting resilience and preventing the development of compassion fatigue among obstetric teams. By increasing awareness and knowledge of compassion fatigue and reinforcing protective factors and coping strategies, midwives and gynecologists can feel supported in providing compassionate care. This could have a lasting impact on professional well-being and potentially improve the quality of patient care.

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STRESS AND BURNOUT AMONGST ITALIAN MIDWIVES DURING THE OMICRON WAVE: A NATIONAL OBSERVATIONAL SURVEY

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Background: Maintaining healthcare professionals' psychological wellbeing is a fundamental public health goal during and after an emergency period because it is often associated with increased emotional long-term consequences(1–3). Studies conducted during the COVID-19 first pandemic wave showed an increased level of stress, anxiety, burnout, post-traumatic stress disorder and depression experienced by healthcare professional(1,4). Midwives had higher risk of emotional discomfort than other healthcare professionals due to drastic changes in care pathways and policies(2,5–10), with struggles identified when providing high-quality woman-centred care following pandemic restrictions (2,8,11).

During the Omicron phase, Italian midwives had to deal with two main challenges: the highest incidence of COVID-19 positive childbearing women since the start of the pandemic and increased distress caused by the prolonged state of emergency.

Aim(s): The primary aim was to evaluate the level of stress and burnout during the COVID-19 Omicron phase among Italian midwives The secondary aims were to explore the impact of the COVID-19 pandemic on the midwives' personal and professional dimensions, and potential strategies to overcome challenges.

Methods: An observational study was undertaken, using a national online survey adapted from the 'Coping with COVID-19 for Caregivers Survey' by the American Medical Association (12). Qualified midwives practicing in Italy were recruited via Italian Colleges of Midwives. A Stress Summary Score (SSS) incorporated stress, fear of exposure, anxiety/depression, and workload. Descriptive and inferential analysis was performed to evaluate the impact of the pandemic on personal and professional dimensions. A deductive qualitative approach was used to analyse the final open-ended question. Data were analysed using Stata/MP 18.0 and NVivo.

Results: A total of 1,944 midwives participated in the survey and 324 of them (16.67%) answered the free-text question.

The SSS mean was 10.34 (SD=2.40) and 562 midwives (28.91%) experienced burnout. The intention to reduce working hours was reported by 202 midwives (10.39%), with 60.40% (n=122) of them experiencing burnout. The intention to leave clinical practice within the next 2 years was reported by 239 (12.29%), with 68.20% (n=163) of them experiencing burnout. Confusion about frequent changes in maternity services (41.7%) and difficulties of wearing PEEs without eating and drinking (35.6%) were two professional activities mostly affected by the pandemic. An increased SSS was recorded when midwives reported a higher negative impact of the pandemic on personal and professional activities ($p < 0.001$). Participants identified women's awareness of the midwives' role (55.14%) and emotional support by family, friends (38.37%), and colleagues (32.25%), as the most important potential supporting strategies. Qualitative data supported and confirmed the quantitative figures.

Discussion: The COVID-19 Pandemic emergency had a significant impact on midwives' emotional wellbeing. Our findings suggested that prolonged exposure to pandemic in health-work settings could influence both personal and professional dimensions, impacting on stress and burnout. High level of stress and burnout condition have a strong relationship with the intention to reduce working hours and to leave the clinical practice.

Implications and future perspectives: In the context of a pandemic, optimisation of midwives' physical, emotional and psychological wellbeing should be considered through the implementation of ad-hoc support services. Midwives should receive appropriate support and follow-up, including the opportunity to share and recount experiences, uncertainties and concerns in regard to personal and professional challenges they may face.

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THE EXPLORATION OF PROFESSIONAL MIDWIFERY AUTONOMY: UNDERSTANDING AND EXPERIENCES OF FINAL-YEAR MIDWIFERY STUDENTS.

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Background: The concept of professional midwifery autonomy holds great significance in midwifery education. Notably, clinical placements play a crucial role in introducing students to its concept. However, the understanding and experiences of students regarding midwifery autonomy are relatively unknown.

Aim(s): This study aimed to examine the experiences and understanding of midwifery autonomy among final-year midwifery students.

Methods: A qualitative exploratory study using focus group interviews with final-year midwifery students from each of the three Belgian regions; Flanders, Walloon and the Brussels Capital Region. Focus groups were recorded, transcribed verbatim and analysed using a thematic analysis.

Results: Students emphasized the importance of promoting professional midwifery autonomy through the ability to make their own professional decisions and take initiatives. They highlighted the need for a safe and supportive learning environment that encourages independent practice, nurtures self-governance and facilitates personal growth. Additionally, collaborative relationships with other maternity care professionals and increased awareness among women and the broader healthcare community were identified as essential factors in embracing and promoting professional midwifery autonomy.

Discussion: Our study provides valuable insights into the significance of midwifery autonomy among final-year midwifery students, emphasizing the need for supportive learning environments, collaborative relationships and further education to promote autonomy in midwifery. By actively cultivating a safe and supportive learning environment, educators can contribute to the development of a truly autonomous midwifery profession, ultimately improving maternal and new-born health.

Implications and future perspectives: The findings of this study have important implications for midwifery education and practice. Midwifery educators and preceptors can inform their practices by fostering a comprehensive understanding of professional midwifery autonomy and promoting independent yet collaborative work. Creating a supportive learning environment, addressing contextual factors, overcoming challenges to autonomy, and promoting dialogue and collaboration among midwives are key recommendations. By implementing these strategies, midwifery educators and preceptors can effectively support the development of midwifery students' autonomy, enhancing their professional growth and preparing them for autonomous midwifery practice. This, in turn, contributes to improving care for mothers and new-borns, ensuring optimal outcomes and well-being for both.

THE DEVELOPMENT OF AN ANTICIPATED CHALLENGES FRAMEWORK TO SUPPORT THE IMPLEMENTATION OF CENTERING-BASED GROUP CARE IN THE FIRST THOUSAND DAYS

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Background: Centering-Based Group Care (CBGC) is an evidence-based perinatal care model including three core components: health assessment, interactive learning, and community building [1]. Greater patient and provider satisfaction, higher attendance rates, and neutral to better outcomes on prematurity and birth weight are known advantages of CBGC compared to individual perinatal care [2-9]. Despite increasing interest in CBGC worldwide, its implementation is proving challenging. Adaptations to the model and its delivery, context, and/or implementation strategies seem necessary to obtain sustainable implementation.

Aim(s): The aim of this paper is identifying the common anticipated challenges categories requiring actions regarding the model and its delivery, context, and implementation strategies. In addition, this study aims to incorporate the identified challenges into a supporting framework that can enhance the implementation of CBGC. This study is embedded in the larger 'Group Care for the first 1000 days' implementation research, a Horizon2020 research with grant agreement number 848147.

Methods: The method of a Rapid Qualitative Inquiry to conduct context analysis is applied in 26 participating sites spread over seven countries (Belgium, Ghana, Kosovo, South Africa, Suriname, The Netherlands, and United Kingdom). Data trianugulation and investigator triangulation are applied. Different data collection sources are included, such as semi-structured interviews, focus group discussions, and site visits, amongst others. The results of the collected data are iteratively incorporated into the evolving framework, and are discussed among and within the involved research teams, leading to the final framework.

Results: The Rapid Qualitative Inquiries generated 330 semi-structured interviews with service users and key stakeholders such as health care providers and managers. 10 focus group discussions with service users and 56 review meetings with the research teams were included. In addition, perinatal guidelines were analysed, and site visits were conducted. We identified six surface structure anticipated challenges categories (content, materials, timing, location, group composition, facilitators), and five deep structure anticipated challenges categories (self-assessment/medical check-up, scheduling CBGC into regular care, enrolment, (possible) partner organisations, financials) where actions are required to obtain sustainable implementation of CBGC.

Discussion: This research revealed the common anticipated challenges in the pre-implementation phase when implementing CBGC. Taking into account the diversity of the countries and the characteristics of the sites, the framework is widely applicable in a variety of health contexts. Despite the limiting factor that all sites are in the pre-implementation phase, and there may be different challenges in further phases of implementation, the framework still offers great added value. Use of the framework in practice can contribute to early detection of challenges that need to be addressed, and therefore might support adjusting implementation strategies and, if necessary, modifying the distribution of resources to achieve sustainable implementation of CBGC.

Implications and future perspectives: Application of the framework may offer important insights to health systems administrators and other key stakeholders before implementing CBGC. In the medium- and long-term, insights gained may lead to greater possibilities for sustainability and to the most cost-effective approaches for implementing CBGC.

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EXPLORING MIDWIVES' AND MOTHERS' VIEWS ON EXTENDING POSTNATAL CARE TO ONE YEAR.

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Background: For long-term health and well-being, the first six weeks after childbirth are crucial for mother and child.1 However, many mothers experience physical or mental health problems for up to one year.2,3 In the Netherlands, postnatal care is mainly provided up to six weeks after birth, which may be too short for preventing, detecting or treating health problems.

Aim: This study explored midwives' views on possibly extending postnatal care until one year and, on the other hand, on mothers' experiences and views on (extending) the postnatal care period.

Methods: In March 2022, we conducted an observational quantitative cross-sectional study among practising midwives, collecting data through a digital questionnaire based on the literature. In March and April 2023, we conducted the same kind type of study among mothers who had given birth between ten months and three years previously. We mainly performed descriptive analyses and, for the qualitative part among the mothers, an exploratory 'thematic content analysis' using document analysis.

Results: Of the 113 midwives included in the study, midwives were satisfied with the current six-week period of care. On the other hand, they also thought it would be useful to extend the postnatal care period; 81% of midwives were open to being available for questions and consultations for up to twelve months, on condition that this was reimbursed by the health insurance.

Of the 260 mothers included, 88.5% experienced complaints in the first year postpartum; the most mentioned complaints were fatigue (62.7%), back pain (34.2%), depression (33.5%), and urine incontinence (30.4%). The majority of mothers experienced the current postnatal care as sufficient to excellent (65%), but unpleasant treatment, lack of information and organization of care were mentioned as main themes for improving care. On the other hand, the majority of mothers needed more care (69.1%) and preferred additional individual consultations in the first year postpartum as the ideal form of care. There was no association between receiving a six-week consultation (66.4%) and the need for more postnatal care.

Discussion (including limitations): This study provides insights into new mothers' complaints, needs, and midwives' views on postnatal care for up to one year. The care could be improved through more specific information about possible complaints in the first year, knowing which healthcare provider to go to, and a new organization of the postnatal period.

Our exploratory study cannot be generalised to the larger populations of mothers and health care professionals. Further research in a larger population of mothers, among family doctors and midwives, and outside the coronavirus period is needed to confirm our findings.

Implications: and future perspectives Most new mothers have several physical and mental health problems up to one year after childbirth and miss information about which healthcare provider to visit. Therefore, maternity care policy should consider extending and reorganising the postnatal period so that mothers know where to get the right care.

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We prefer an oral presentation

INTRAPARTUM QUALITY OF CARE AMONG HEALTHY WOMEN: A POPULATION-BASED COHORT STUDY IN AN ITALIAN REGION

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Background: Promoting healthy pregnancy and safe childbirth is a goal for the healthcare systems worldwide (1,2). To address this aim, the focus of maternity services has moved from the reduction of mortality and morbidity to the promotion and support of women's health and wellbeing (3,4). To improve maternal and neonatal health and to meet the Sustainable Development Goals(5), midwifery led care and evidence-based practices should be guarantee to all women and a systematically measurement of quality standard indicators is recommended by national and international health organizations (3,6–12). In Lombardy, an Italian region, a midwife led model of care is recommended for healthy pregnant women and a systematic measure of quality standards are suggested(12).

Aim(s): To evaluate intrapartum quality standards indicators, in healthy pregnant women. The secondary aim was to explore the impact of an organizational aspect (number of births per year) on intrapartum quality of care.

Methods: We conducted a population-based cohort study, including all healthy pregnant women who gave birth in Lombardy between 2018 and 2022. Data were extracted from the regional database and Italian birth register (CeDaP). Quality standards were assessed by the measurement of intrapartum indicators of process and outcomes. Descriptive analysis of each quality indicators was conducted. In addition, a comparison between hospitals with more or less than 1000 births per year was performed using a Chi-Square test with a 5% significance level to evaluate the p-values. Data were analysed using STATA/MP version 15.0.

Results: The rate of healthy pregnant women was 41.07% (n=144,107/352,544), of them 71.29% gave birth in hospital with more than 1000 birth. Considering process indicators, only 22.03% of women received one-to-one midwifery care. The presence of birth companion was guarantee to 84.46% of women and 69.09% of them experienced skin-to-skin contact. About intrapartum interventions, 25.51%, 2.83% and 0.11% of women underwent respectively epidural analgesia, oxytocin, and artificial rupture of membranes. At birth the presence of gynecologists and pediatricians were 59.21% and 31.54% respectively. Regarding outcome quality indicators, 87.31% of women experienced a spontaneous vaginal birth and almost all newborns (99.59%) had a normal transition (Apgar score >7 at 5 minutes). All quality indicators analyzed were significatively different ($p< 0.001$) between women who gave birth in hospitals with more than 1000 births compared to those who gave birth in smaller ones. In the larger hospital women had higher probability to experience skin-to-skin (OR 1.486) and to stay with their birth companion (OR 1.658), but they had lower probability to receive ono-to-one care (OR 0.887). In hospital with more than 1000 births, intrapartum interventions rates were higher, although the risk of cesarean section is lower (OR 0.791).

Discussion: Maternity services organization impacts on process and outcomes of quality intrapartum indicators in low risk uncomplicated pregnancy. Hospitals with more than 1000 births, exposed women to higher risk of intrapartum Commentato [MP1]: Da verificare interventions whereas they mainly promote and offer supportive care. One-to-one was not a routine practice in both groups and further research to explore this aspect is required.

Implications and future perspectives: To ensure high quality of intrapartum care, a systematic measure of quality standards need to be improved at local and regional level.

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THE RELATIONSHIP BETWEEN BIRTH PLANS AND MATERNAL OUTCOMES: RESULTS OF THE DUTCH BIRTH EXPERIENCE STUDY

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Background: The birth plan was developed as a resource for pregnant women to express and communicate their ideas and expectations to empower them during childbirth. Most birth plans contain the desired birthplace, attendees, thoughts about anesthetics and expectations of the first moments postpartum. It was reported that women who developed a birth plan with their maternal healthcare provider have a lower risk of medical interventions.[1] However, studies were not confirmative in whether having a birth plan increases satisfaction and control during labour.[1,2,3] Notably, birth plans with a higher number of wishes are associated with lower birth experiences.[4]

Aim: In this study, the relationship between having a birth plan or not, and different types of birth plans and maternal outcomes (i.e. obstetrics and childbirth experience) among Dutch women is studied.

Methods: We conducted a cross-sectional survey among Dutch women who gave birth between 2017-2022. The survey was distributed on social media and via flyers in midwifery practices, daycare and child health clinics. Women aged ≥ 18 years, who completed the survey in Dutch or English were included. In the current study multiple pregnancies, preterm birth, and/or elective cesarean sections were excluded. The online survey was based on the Dutch version of the international Birth Experience Study (BESt) and comprised demographic, pregnancy and birth characteristics and birth experiences. Women also completed items about whether they had developed a birth plan and what type, including defining several scenarios, their vision or wishes.

Results: The survey was completed by 1481 women. Preliminary results show that for this study, 1266 women were included; 1047 (83%) women developed a birth plan. Of these, 190 (18.1%) defined scenarios, 340 (32.5%) wrote down their vision and 517 (49.4%) women documented their wishes. There were no differences in childbirth experience (measured with the valid Childbirth Experience Questionnaire CEQ2.0 [5]), episiotomy, epidural use, caesarean section or assisted vaginal delivery, between women who did or did not have a birth plan. Women with birth plans, who defined scenarios, more often had a caesarean section compared to women who documented their wishes (adjusted OR 2.12, 95%CI 1.32 – 3.42). Women who wrote down their vision had a more positive birth experience (mean CEQ2.0 score 3.10, SD 0.66) compared to women who documented their wishes (mean CEQ2.0 score 2.96, SD 0.66), adjusted mean diff. 0.11 (95%CI 0.01 – 0.21).

Discussion: We were not able to distinct between women who planned birth in obstetric-led care due to medical indications and low-risk women who planned birth in primary midwife-led care. In obstetric-led care, women might more often discuss and define scenarios with their caregiver. These women have a higher risk to have a caesarean section, due to their risk profile.

Implications and future perspectives: Discussing women's vision about childbirth gives better birth experiences compared to creating wishes to prepare for labour. Caregivers should be encouraged to discuss women's vision about labour in general.

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TOWARDS AN EVIDENCE-BASED MULTIDISCIPLINARY GUIDELINE FOR POSTPARTUM CARE IN BELGIUM

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Background: There is a trend towards a shorter hospital stay after normal birth in all Western industrialized countries. In Belgium, the length of postnatal stay has declined from 7 days in 1911 to 4 days in 2011, which was the highest average length in OECD countries1. Since 2016, women stayed 3 days or 72 hours at the maternity ward, meaning a shift from hospital to postpartum home care. A multidisciplinary approach is needed to ensure continuity of care. Since clinical guidance regarding postnatal care is lacking in Belgium, a multidisciplinary guideline on postpartum care has been developed.

Aim(s): The objective of this guideline is (1) to optimize the quality of postpartum care and collaboration among different involved healthcare professionals and (2) to detect and manage maternal and neonatal complications early during the postpartum period in order to avoid life-threatening situations. The target population of this guideline is normal, healthy women and babies until 8 weeks after vaginal delivery.

Methods: The ADAPTE procedure has been applied to develop the guideline. After a systematic search for (inter)national guidelines, methodological quality of selected guidelines was assessed, using AGREE, resulting in three included guidelines. The quality of the evidence was rated (GRADE). A consensus procedure (Delphi) was used to formulate 'good practice points' (GPP). Additionally, further literature search and contextualizing was executed.

Results: Together with stakeholders seven clinical questions were determined on the following topics: Maternal and neonatal physical health (PART 1) and information/support, neonatal examinations/screening, mental health, sexual health and baby's feeding (PART 2). Following the ADAPTE procedure, recommendations in PART 1 for maternal (n=16) and neonatal (n=14) physical health were finalized and validated by the Belgian Centre for Evidence-based Medicine (CEBAM). Part 2 will be finalized end of 2023.

Discussion: This guideline is a step forward in optimizing maternal and neonatal follow-up in postpartum, including early detection of complications. It is a starting point towards an integrated postnatal care, thereby improving health outcomes and reducing variability in quality and provision of postpartum care.

Implications and future perspectives: Further attention is needed to the dissemination and implementation of this guideline into daily practice. This can be done by the development of additional resources and initiatives to encourage awareness and use of the guidelines2 as well as the elaboration of multidisciplinary (regional) clinical pathways.

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THE CONTRIBUTION OF REGIONAL PROTOCOLS ON PRACTICE VARIATION IN INDUCTION OF LABOR: A CRITICAL DOCUMENT ANALYSIS

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Background: Clinical practice guidelines have been developed to reduce practice variation in healthcare. Despite national guidelines with recommendations on induction of labor, large variation in the use of this intervention exists between regions in the Netherlands [1]. National guidelines are translated into regional protocols, which are more context-specific compared to guidelines. Possibly, protocols developed by regional multidisciplinary maternity care networks (MCNs) contribute to the regional variation in induction.

Aim(s): The purpose of this study was to analyze variation between regional protocols, and variation between regional protocols and national guidelines concerning recommendations on induction of labor. We focused on variation in regional protocols as a potential factor contributing to practice variation.

Methods: We performed a systematic document analysis using the READ approach [2]. National guidelines (n=4) and regional protocols (n=18) from six MCNs on obstetric topics linked to induction of labor were assessed between October 2021 and April 2022. An analytical framework was used to extract data for the comparison of regional protocols. The quality of the national guidelines was assessed using the AGREE II instrument [3].

Results: Some MCNs followed all the recommendations of national guidelines in their regional protocols, other MCNs developed their own recommendations, and for some MCNs this varied per topic. When developing their own recommendations, MCNs added additional risk factors, care options, or specific cut-off values. Resulting sometimes in more and sometimes in fewer situations in which induction of labor was recommended compared with the national guidelines. No clear relationship was observed between AGREE scores of the national guidelines and the extent to which regional protocols complied with the recommendations.

Discussion: From our study, the translation of national guidelines to regional protocols appears arbitrary and not systematic. We found a large variation between regional protocols, which indicates that regional protocols may contribute to current practice variation in induction of labor in the Netherlands. Besides alignment between regional protocols with national guidelines, regional protocols should also allow for contextual factors. This gives the possibility to reduce unwarranted practice variation, without increasing unwanted standardization [4]. Our study included a relatively small sample of regional protocols, however, our findings were in line with other studies. Because we only studied documents, we have no insight into the actual practice Implications and future perspectives

Guidance is needed for better alignment of regional protocols with national guidelines to actually reduce unwarranted practice variation in the use of induction of labor. Regional protocols that allow for contextual factors will stimulate healthcare professionals to act as evidence-based practitioners rather than evidence-based users. Also, more research into the mechanisms that contribute to practice variation is needed to understand this phenomenon.

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EVIDENCE-BASED GUIDELINE DEVELOPMENT AND IMPLEMENTATION IN MIDWIFERY: CHALLENGES AND OPPORTUNITIES.

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Abstract: Evidence-based practice (EBP) has become fundamental in modern health care, including midwifery. Women and their families can benefit from evidence-based midwifery practice, as it leads to improved health outcomes and reduces the variability in quality and provision of care. One way of disseminating and implementing EBP is through evidence-based clinical practical guidelines. These guidelines are systematically developed through a rigorous process that involves reviewing the most current and relevant research, considering clinical expertise, and incorporating the clients' preferences and values. However, it remains a challenge to integrate evidence-based guidelines into daily perinatal care.

During this round table, we discuss the role and involvement of midwives in evidence-based guideline development as well as the dissemination and implementation into daily midwifery practice. We reflect on gaps, barriers, challenges and opportunities during development, dissemination and implementation of evidence-based guidelines, taking an international point of view into consideration.

Overview round table
Duration: 60 min.
Introduction (10 min):

- short presentation of the authors and their expertise related to EBP - guidelines
- Objectives and approach round table

Discussion (40 min): three statements/questions (flipchart, post-its?)

1. Midwives have to take the lead in guideline development within perinatal care.
Which role do you think midwives should take in guideline development? To what extent are midwives in your country involved in the process of guideline development? What are current gaps and barriers/limitations? Which challenges and opportunities do you see? .

2. A multidisciplinary approach for guideline development in perinatal care is recommendable, but presents a challenge to develop recommendations in consensus with all healthcare professionals.
How can you translate the evidence into practical recommendations? How do you deal with different and conflicting interests? How can you reach consensus and what if no consensus is reached? Which criteria do you take into consideration?

3. The development of an evidence-based quality label for midwives is needed to incorporate EBP into perinatal care.
How are evidence-based guidelines disseminated and implemented in your country? Which efforts and investments are done by the government or other institutions/organisations on this level? What are barriers, gaps and challenges? Do you have any tips and tricks? Which role can the development of quality labels play into the implementation of evidence-based guidelines?

Conclusion (10 min)

EXPERIENCES AND PERCEIVED BARRIERS AND FACILITATORS OF WOMEN WITH CARDIOVASCULAR DISEASE THROUGHOUT THEIR PREGNANCY: A QUALITATIVE PHENOMENOLOGICAL STUDY

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Background: Cardiovascular diseases (CVD) are currently the leading cause of mortality in pregnant women. To date, the majority of empirical studies and guidelines include an assessment of clinical status, prognosis and outcomes of these women. However, we currently lack an in-depth understanding of the needs, expectations and experiences of women regarding the follow-up they receive during their pregnancy journey.

Aim(s): The current study aimed (i) to gain an in-depth understanding of experiences of women with cardiovascular disease and (ii) to describe barriers and facilitators of the received follow-up throughout their pregnancy.

Methods: This qualitative phenomenological study included data collection using semi-structured interviews, performed at a tertiary centre comprising a cardio-obstetrics outpatient clinic. Purposive sampling was performed. A thematic analysis of the transcribed interviews was done until data saturation was achieved.

Results: Five main themes were identified. Awareness of the disease came for many patients when they experienced symptoms or when delivery was premature and their baby was admitted to neonatal care. Facilitators were caregivers' skills, such as delivering humane care and providing congruent information, thus ensuring continuity of care. Barriers were that patients often had to seek help themselves and felt lonely in their journey. Patients had the feeling that they were not listened to when being symptomatic or felt something was off leading to potentially detrimental, but preventable, complications. Due to a lack of visibility, the Heart Pregnancy team was not widely known to care providers in referring hospitals. The entire patient journey had an important impact on patients' psyche, unfortunately the current psychological follow-up was experienced as insufficiently addressing their needs.

Discussion: More visibility and knowledge about this condition as well as the implementation of a structured, patient-centred care pathway, with special attention to psychological support, will better meet patients' needs.

Implications and future perspectives: With these results, the perspective of cardio-obstetric patients can be incorporated into guidelines and the development of an integrated care pathway.

ADHERENCE TO REMOTE MONITORING IN THE PRENATAL FOLLOW-UP OF GESTATIONAL HYPERTENSIVE DISORDERS

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Background: Five to eight percent of pregnant women worldwide develop gestational hypertensive disorders (GHD). In 2021, the prevalence of GHD in Flanders was 4.1% [1]. A close follow-up of those women at risk is recommended to perform timely interventions when necessary. The follow-up of women with GHD can be improved by adding remote monitoring (RM) to the current prenatal follow-up [2]. A high adherence rate is necessary to succeed in the RM follow-up. We hypothesize that the midwife can perform a crucial role in the adherence rate of pregnant women to RM.

Aim(s): This study tries, as a part of the Pregnancy REmote Monitoring (PREMOM) II study, to investigate if there is a significant difference in adherence between an RM group with the supervision of a midwife vs an RM group without the supervision of a midwife (patient self-monitoring group; PSM).

Methods: This study is a part of the PREMOM II study, a multicentric randomized controlled trial (RCT). Via a 1:1:1 ratio were women at risk for GHD divided into an RM group (n = 272); a PSM group (n = 268); or a control group (CC; a group of women without RM supervision; n = 329). The women measured their blood pressure twice daily (one measurement in the morning, one in the evening) and registered their body weight weekly in the app. Their adherence is calculated by comparing the actual taken measurements with the expected measurements for both the blood pressure (in the morning and the evening) and the body weight.

Results: Based on Welch's t-test ($p < 0.0001$), there is a significant difference in the adherence between the RM group and the PSM group. The mean of taken blood pressures in the morning is significantly higher in the RM group (71.72%; SD 28.37%) vs. the PSM group (53.02%; SD 35.14%), and also in the evening between the RM group (74.79%; 27.49%) vs. the PSM group (58.30%; SD 36.43%). The mean adherence for measuring the body weight for the RM group is 53.90% (SD 37.69%) vs. 33.60% (SD 36.06%) in the PSM group.

Discussion: The primary outcomes of this study show that the addition of a midwife when using RM improves adherences. This could lead to faster detection of hypertension during pregnancy, resulting in faster treatment and better outcomes for both mother and child. Furthermore, fewer admissions and lower costs can also be seen as secondary outcomes.

Implications and future perspectives: The role of the midwife is important in the use of RM for the prenatal follow-up of GHD. It ensures better adherence to therapy. The use of RM in obstetric care is still very limited despite its potential benefits.

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LESSONS LEARNED FROM LISTENING: HOW YOUTUBE STILLBIRTH STORIES CAN HELP US IMPROVE OBSTETRIC CARE

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Background: Telling birth stories empower individuals to transform from a pregnant being into a parent [1]. However, one in 160 pregnancies end in stillbirth [2]. Some parents use social media to talk about their pregnancy loss experience [3]. These women are intentionally or unintentionally advocating for their own care and treatment as part of their obstetrical care by sharing their stories.

Aim(s): We aim to examine which met and unmet needs are discussed in stillbirth stories shared on YouTube to improve obstetrical care.

Methods: We analyzed 19 English-language stillbirth stories uploaded to YouTube. To analyze the data, we conducted a thorough textual reading of the transcripts following Braun and Clarke's guidelines for thematic analysis [4].

Results: While some women actively used their birth videos to call out shortcomings in their care, most others used their platform for other purposes such as destigmatization, awareness and support, and rather unintentionally provided insight in their met and unmet needs. When analyzing their birth stories, three major themes emerged: choice and decision making, education and information, and behavior of care personnel.

Discussion: This study demonstrates the value of birth stories in research. We identified three major opportunities for improvement of obstetrical care, all three of which are embedded in the shared-decision making framework [5]: being provided options and being able to make choices in the decision-making process is clearly valued, but there are some caveats, women and other childbearing individuals need timely and continuous information, and more attention is needed for emotional intelligence training of care personnel. Despite these issues, many parents also discuss positive experiences, demonstrating the value of good and women-centered care.

Implications and future perspectives: Recognizing the importance of shared decision-making, care providers should actively involve parents in the birthing process. In addition, considering that parents often lack information and education about stillbirth, care providers should consider including more stillbirth-education during prenatal care. Finally, addressing the lack of emotional intelligence among care providers is crucial to improving obstetrical care. Healthcare professionals should receive training and education on emotional intelligence, empathy, and effective communication skills.

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CULTURAL COMPETENCE IN MATERNITY CARE MATERNITY CARE RELATED TO RELATED TO MAJORITY WOMEN WITH A LOW SOCIO -ECONOMIC POSITION

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Background: Although maternity care is associated with improved health outcomes, it is often inadequately tailored to the needs of women of low socio-economic position (SEP) in high-income countries, creating barriers to good health [1]. A study in four large cities in the Netherlands shows that a Western, non-migration background of women is associated with health inequalities [2]. Access to maternity care for women with low SEP is unsatisfactory for a number of reasons, according to both women and care providers [3,4,5,6,7]. Culturally competent care delivery by health professionals has the potential to improve access to adequate care and to improve maternity care outcomes [5,8]. Cultural competence is defined as "the combination of knowledge, attitudes and skills necessary for care providers to effectively interact with culturally and ethnically diverse patient populations" [9].

Aim(s): The aim of this study is to examine current evidence related to the cultural competencies of maternity care professionals related to majority low SEP women.

Methods: A scoping review was conducted using inclusion criteria established by the PCC-elements (Participants,Concepts and Context) of the research question. Data-extraction was performed by two researchers according to a predetermined procedure.The framework of Seeleman (2009)consisting of Knowledge, Attitude and Skills was used to analyze the data.

Results: Out of 6541 records 32 articles were eligible for data-analysis. Preliminary results show that health care professionals express a lack of knowledge and skills to assess the socio-economic vulnerability of women and to refer to care options in relation to socio-economic vulnerability. Women experience a lack of respect, stigma and poor relationships with their health professionals. On the other hand, positive experiences in community settings were expressed.

Discussion: Preliminary results reveal that the cultural competence of health professionals involved in maternity care related to majority women of low SEP needs to improve. Professionals should be equipped with knowledge and trained in skills, and further research is recommended. Results call for a debate about the quality of maternity care for low SEP majority population women. Final results can be presented in an oral presentation because data analysis will have been completed by then.

Implications and future perspectives: Professionals need to be educated to tailor their care to the needs of majority low SEP women. The conditions and maternity care systems in which health care professionals are involved in the care of women with low SES should be studied more closely. The findings call for a debate, with the participation of professionals and women, on the scope and obligations of professional profiles and logistical care structures in relation to maternity care for women with a low SEP majority.

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MENTAL HEALTH DURING THE INTERPREGNANCY PERIOD & THE ASSOCIATION WITH PRE-PREGNANCY BMI AND BODY COMPOSITION.

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Background: Two of the most common complications during pregnancy and after childbirth are obesity and mental health problems. A healthy lifestyle before pregnancy is key to reduce these pre-and postnatal complications. Reaching women in the preconception period is a major challenge and research on the impact of mental health during the preconception period is lacking. Therefore, the interpregnancy period, is considered an appropriate time window for the prevention of mental health problems. Moreover, insight into interpregnancy mental health and the impact on weight and body composition can assist in the development of effective and timely weight management strategies in women at risk.

Aim(s): To study the difference in women's mental health during the interpregnancy period and the association with pre-pregnancy body mass index (BMI) & body composition and whether this association is affected by socio-economic factors, sleep and interpregnancy time interval.

Methods: Secondary analysis of the INTER-ACT eHealth supported lifestyle trial. Women were eligible if they had a subsequent pregnancy and mental health measurements at 6 weeks after childbirth and at the start of next pregnancy (n=276). We used univariate analyses to assess differences in mental health and performed regression analysis to assess the association with pre-pregnancy BMI and body composition at the start of next pregnancy.

Results: Our results show a statistically significant increase in anxiety and depressive symptoms between 6 weeks after childbirth and the start of the next pregnancy (sSTAI-6≥40: +13%, p=≤0.001; GMDS≥13: +9%, p=0.01). Of the women who were not anxious at 6 weeks after childbirth (sSTAI<40), more than one third (39%) developed anxiety at the start of the next pregnancy (p=≤0.001). Regression analysis showed that sense of coherence at the start of the next pregnancy was independently associated with women's pre-pregnancy BMI and fat percentage.

Discussion: We believe that the development of preconception lifestyle interventions that focus on both weight reduction and support in understanding, managing and give meaning to stressful events (sense of coherence) may be of added value in optimising women's preconception health.

Implications and future perspectives: Further research on preconception interventions focused on coping strategies that enable women to cope with stressful daily situations may be of added value.

AN ONLINE RESILIENCE-ENHANCING INTERVENTION FOR PREGNANT WOMEN: A FEASIBILITY STUDY

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Background: Pregnancy and the transition to parenthood are accompanied by multiple changes and stress exposure. There is a lack of prenatal programmes that aim to promote resilience by stimulating existing protective factors or focus on prevention of mental health problems [1]. A 28-week online intervention program inspired by the Behaviour Change Wheel Framework and the theoretical model of perinatal resilience was developed [2,3]. The intervention consists of three online group sessions, resilience-enhancing exercises, and an online peer-support platform, aiming to enhance resilience and to prevent mental health problems during and after pregnancy [4].

Aim(s): The aim of the current study was to evaluate the feasibility of this intervention for pregnant women.

Methods: In total 70 women enrolled in a resilience-enhancing intervention. Postintervention the Client Satisfaction Questionnaire (CSQ-8) was assessed (4). Additionally, from the group of women active at follow-up 12 months after childbirth (N=43), 17 women participated in a semi-structured interview about their experiences and perceptions regarding their participation. Interviews were recorded and transcribed verbatim. The data were analyzed using the Qualitative Analysis Guide of Leuven (QUAGOL) [5].

Results: Women participating in the intervention reported a high mean satisfaction score of 3.07 (SD-.156) on the CSQ-8. All interviewees reported a positive experience supported by content-related factors and the method of delivery. Content-related factors were: peer-support, openness to speak and reflection. Factors related to the method of delivery were: group features, benefits of online participation and flexibility. Several women reported that their subjective feeling of resilience had been enhanced through the intervention.

Discussion: Evidence was found for the feasibility of an online resilience-enhancing intervention for pregnant women. Participants emphasized the importance of peer-support and targeting perinatal mental health by creating the openness to speak about positive and negative emotions, thoughts and experiences throughout the perinatal period. This study is one of the few qualitative studies to date investigating how an online intervention can be implemented and can affect the mental health of pregnant women in a general healthy population. The development of the online resilience-enhancing intervention is based on a thorough development process inspired by the Behaviour Change Wheel Framework and the theoretical model of perinatal resilience. However, some limitations need to be considered. Our sample was limited to Dutch, Caucasian pregnant women with a higher educational degree. Secondly, only women who completed minimum two group sessions were invited for the postintervention interview. At last, partner's needs regarding perinatal mental health support were not directly investigated in this study.

Implications and future perspectives: Supported web-based interventions are a promising, cost-effective approach for promoting resilience and preventing the onset of mental health problems. Recommendations for future interventions were: a combined program with group sessions and resilience-exercises, extending interventions till at least 6 months postpartum and an integrated online platform.

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'NAMING AND FAMING' MATERNITY CARE PROVIDERS: A MIXED-METHODS STUDY

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Background: Positive benchmarking can serve as a catalyst for maternity care improvement.

Aim(s): To retrospectively benchmark Flemish maternity care providers as well as explore their excellent characteristics and attributes, based on women's positive perinatal care experience.

Methods: The study consisted of a sequential two-phased mixed-methods study among Flemish pregnant and postpartum women. Rating scores and free text responses were used to benchmark the community midwife, the hospital midwife, and the obstetrician. Rating scores were categorised according to the Net Promoter Score (NPS): detractors, passives, and promoters. Kruskal-Wallis tests established the differences between types of clinicians and between antenatal, intrapartum, and postpartum Net Promoter Score mean scores. Bonferroni post hoc tests examined further significance. Content analysis was used to construct a final pool of keywords representing characteristics and attributes of care professionals, accumulated from the promoters' free text responses. Ranks were assigned to each keyword based on its frequency. The significantly different keywords benchmarking the different care providers, were visualised with word clouds.

Results: A total of 2385 Net Promoter Scale scores and 1856 free-text responses of 1587 responders were included. The community midwife received the highest NPS scores ($p<.001$) from the total sample. The promoters ($n=1015$) assigned community midwives the highest NPS scores (9.67, ± .47), followed by obstetricians (9.57, ± .50) and hospital-based midwives (9.51, ± .50). The distinct benchmarking characteristics/attributes of community midwives were availability ($p<.001$), supportive ($p.04$) and personalised care ($p<.001$). Being honest ($p<.001$), empathy ($p<.001$) and being inexhaustible ($p.04$) benchmarked hospital midwives. Calmness ($p<.001$), a no-nonsense approach ($p<.001$), being humane ($p.01$) and comforting ($p.02$) benchmarked obstetricians.

Discussion: The findings indicate that all care providers are highly valued, but community midwives are ranked the highest. This seems the first study benchmarking different maternity care provides from a positive perspective, based on women's experiences.

Implications and future perspectives: Understanding the distinct differences between the care professionals can facilitate a positive culture in maternity services, serve as exemplary performance for professional development and shape the profiles of maternity care professionals.

MIDWIFERY-LED CARE DURING CHILDBIRTH IN BELGIUM ANNO 2021

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Background: Midwives are primary healthcare providers for childbearing women worldwide. Studies showed that women receiving midwife-led care (MLC) were less likely to experience interventions (such as instrumental delivery, epidural anesthesia, etc.)1,2. Women were more likely to be satisfied with their care3. Despite the positive effects of MLC, autonomy of Belgian midwives to guide labor and delivery is restricted. Additionally, Belgian data on MLC and midwifery support during childbirth is missing. Therefore, the Flemish Midwives Organisation started a registration on maternal/neonatal outcome of MLC.

Aim(s): The objective of this registration is to represent MLC to be in Belgium and to report epidemiological data in a transparent and structured way, since these data is important to improve the quality of care for mother and child.

Methods: Midwives registered anonymously perinatal outcomes about autonomously performed births in 2021 by completing an online form. In total, 31 midwifery practices with 108 independent midwives in Flanders and Brussels, reported 1587 registrations. Descriptive statistics was used for data-analysis.

Results: In total 1587 labors, started at home and were initially planned to give birth under supervision of a midwife. Most deliveries were autonomously performed by midwives (83%, n=1311), either at home, in a birth center, assisted intramurally or in a MLC unit. One fifth of the women (17%) needed an intrapartum transfer, ending in a delivery by the gynecologist. Women receiving MLC opted mostly for hands—and-knees positions (43%), had a bath delivery (43%), intact perineum (41%) and no maternal complications. Also neonatal outcomes (e.g. Apgar) were good.

Discussion: Our findings are in line with previous research, demonstrating the quality of MLC in Belgium, leading to good perinatal outcomes and showing that midwives are the gatekeepers of physiological childbirth.

Implications and future perspectives: Efforts are needed to further optimize the registration and visualize the work of primary care midwives. Further research is recommended to explore the impact of MLC on the autonomy of the woman, the process of decision-making and birth experience.

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PERCEIVED REALITY AND SUBJECTIVE IMPORTANCE OF SHARED DECISION-MAKING DURING PERINATAL CARE

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Background: Perceived reality and subjective importance are valid indicators of shared decision-making during pregnancy, labour and birth and postpartum.

Aim(s): To explore women's reports of shared decision-making in maternity care, examining the differences between perceived reality and subjective importance of shared decision-making, between the different perinatal periods and between various maternity care professionals.

Methods: A cross-sectional study was conducted among women in Flanders, Belgium. Shared decision-making was measured with the OPTION scale. Wilcoxon Signed-Ranks tested differences between perceived reality and subjective importance of shared decision-making. Kruskal-Wallis tested the differences of shared decision-making between the perinatal care periods and the different types of maternity care providers. Bonferroni post hoc tests examined further significance.

Results: 1216 pregnant and postpartum participants completed 1987 self-reports of perceived reality and subjective importance of shared decision-making. During antenatal, intrapartum, and postpartum care, subjective importance was significantly higher than perceived reality of shared decision-making ($p < .001$; $p < .001$; $p < .001$). Perceived reality and subjective importance of shared decision-making showed significant differences between the perinatal periods ($p < .001$; $p < .001$) and between maternity care professionals ($p < .001$; $p < .001$). There was no discrepancy between perceived reality and subjective importance of shared decision-making during antenatal care provided by the community-based midwife. Participants assigned the highest scores of perceived reality and subjective importance of shared decision-making to the community-based midwife.

Discussion: There seems to be a dichotomy in shared decision-making between primary and secondary care settings, in which highest scores for shared-decision making are attributed to the community-based midwife. This said, characteristics of the sample indicate that mainly women with a distinct interest in decision-making and physiology including home birth responded and might bias the findings.

Implications and future perspectives: Community-based midwives and women who are early adopters might be powerful agents for shared decision-making, aiding the promotion and optimisation of shared decision-making in Flemish maternity services. It would be of merit to explore why certain care providers were chosen to score as well as what their specific attributes consist of.

MIDWIFERY STUDENTS SUPPORTING FLEMISH AND DUTCH MENOPAUSAL WOMEN THROUGH TAILORED HEALTH PROMOTION

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Background: The menopausal period can affect the quality of life significantly, usually in terms of vasomotor and sexual symptoms. Different menopausal symptoms can influence women's physical and mental health. Different sociodemographic and lifestyle factors can be related to the gravity of their symptoms. Therefore health counselling can improve the quality of life in (peri-)menopausal women. [1,2]

The WHO (2022) suggests that (future) health care providers may not be adequately trained to recognise climacteric symptoms and counsel menopausal women. Physiological menopause is not a part of the current curricula of many pre-service health care providers. Raising awareness and facilitating access to health promotion interventions are needed to adequately support healthy aging and good quality of life of women.

Aim(s): This study aims to determine if a tailor-made, evidence-based health promotion and lifestyle change plan, in a menopausal consult (with a student midwife), decreases (peri-)menopausal symptoms in Flemish and Dutch women.

Methods: A prospective cohort pre- and post-study of the climacteric symptoms according to the Greene Climacteric Scale (GCS) in Flanders and the Netherlands was conducted. From February 2018 until February 2023 each first year Bachelor midwifery student collected data on one (peri-) menopausal woman as part of an assignment which involved patient history taking, clinical observations and climacteric symptoms. Supported by lecturers-researchers, each student developed a tailored health promotion and lifestyle plan addressing the main complaints of the woman they interviewed. Non-parametric statistics for both influencing factors and pre-post score analysis were performed.

Results: For 325 menopausal women pre-intervention data were collected, of which 182 provided post-intervention GCS-scores. The pre-intervention univariate data analysis revealed that women living in Flanders (p .031), in an urban environment (p .007), with a diet without vegetables (p .004), not drinking any alcohol (p<.001), using antidepressants (p .007) and with a history of depression/burn-out (p<.001) had higher total GCS- scores. Overall, total GCS scores decreased significantly between pre and post measures. The mean total GCS pre-intervention score was 18,25 (SD±8,53) compared to a post-intervention score of 15,87 (SD±7,57) (p <.001). Which resulted into a small effect size (Cohen's d= .42, 95%CI=.27-.58).

Discussion: A tailor-made health promotion and lifestyle plan can decrease climacteric symptoms in women in physiological menopause. Our findings should be handled with caution due to its preliminary nature and small effect size. Nevertheless, even with novice experience in data collection and communication of a tailor-made plan, students showed an added value to research and accessible care.

Implications and future perspectives: Health care educational programmes can contribute to awareness, knowledge building and access to lifestyle support regarding physiological menopause by implementing research-based projects.

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USING REALIST METHODOLOGY TO DRIVE CHANGES IN PRECONCEPTION CARE

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Background: People with pre-existing health conditions benefit from preconception care, which enables improved health through medication and, or behaviour change prior to pregnancy; this is supported by evidence of poor maternal and newborn outcomes in cases where preconception care was lacking (1). With at least 30% of people with a potential to become pregnant in the UK having a physical or mental health condition (2), and poor uptake of preconception care, this is an area that requires urgent action.

Aim: To identify what works, for whom, and how, regarding preconception care for people with health conditions.

Methods: Realist methodology was used to identify causal explanations for why an intervention might or might not work (3). This was achieved by exploring configurations of context (such as circumstances, experiences, or views), mechanism (responses or reactions to the resources offered by an intervention) and outcome (any, or no, offer or achievement of preconception health improvement) for people with pre-existing health conditions. The midwife-led study was divided into two parts. In part one a realist review was undertaken using published research and grey literature. In part two a realist evaluation was undertaken involving online realist interviews (4) with three groups of people; individuals with pre-existing health conditions (n=20, including diabetes, epilepsy, mental health, auto-immune, high BMI, and cardiac conditions) who have been or have the potential to become pregnant, partners or supporting family members (n=2), and healthcare professionals (n=9, including nurses, midwives, allied health professionals and doctors). Participants from across the UK were recruited using social media. A realist approach to data analysis was applied, with initial analysis of data from the first two groups followed by triangulation using data from the third group (5).

Results: 35 programme theories were identified from the realist review, 10 of which were explored in depth (6). These informed the realist evaluation involving data from 31 interviews leading to 57 programme theories (identified demi-regularities) that were subsequently refined and compressed to 42. These theories contributed to a conceptual framework, highlighting three key areas that are required to achieve effective preconception care: therapeutic relationships with healthcare professionals, accurate information for all, and healthcare services that enable access to the support that an individual requires.

Discussion: This study has demonstrated that realist methodology is effective for use in complex situations such as preconception care for people with pre-existing health conditions, leading to refined programme theory that identifies key elements required for the implementation of effective healthcare interventions.

Implications and future perspectives: Findings from this midwife-led research highlight key areas for health service improvement that will support this group of people to achieve better preconception health and therefore improve the health and wellbeing of future generations. Further abstraction of the identified programme theories will lead to middle range theory regarding care and support for people with health conditions more generally.

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DEVELOPMENT OF THE PRECONCEPTIONAL HEALTHY LIFESTYLE BEHAVIORS SCALE

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Background: Assessment of the lifestyle related to the health of men and women in the preconception period is the first step in identifying and solving problems [1].

Aim(s): The aim of this study is to develop a valid and reliable measurement tool that measures healthy lifestyle behaviors in the preconception period of women and men.

Methods: The population of the study consisted of fertile women of reproductive age and married/partner men who applied to a Family Health Center. The sample of the study consisted of 6 people for face validity and 15 experts for content validity, 543 people for explanatory factor analysis and internal consistency analyses, 311 people for confirmatory factor analysis, 229 people for criterion validity analysis, and 50 people for time constancy. Data were collected with the Individual Information Form, Draft Preconceptional Healthy Lifestyle Behaviors Scale (PHLBS), and Healthy Lifestyle Behavior Scale II (HLBS-II). Institutional permission was obtained from the Ministry of Health General Directorate of Public Health, and ethical approval was obtained from the ethics committee. Lawshe Technique for Content Validity; Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) for Construct Validity; Spearman correlation for Criterion validity and Test-Retest Analysis; Cronbach Alpha and Item Total Score Correlation in Calculation of Internal Consistency Coefficient were used.

Results: The content validity index of PHLBS was calculated as 0.87. As a result of EFA made with Principal Components Analysis and Varimax Method, the draft scale consisted of 26 items and 7 factors, and factor load values of the items are between 0.472-0.878. CFA concordance values were obtained as CMIN/DF=2.014, RMSEA=0.057, CFI=0.871, SRMR=0.059. Although CFI and GFI among these fit indices were not within the required limits, all path coefficients of the items were found to be statistically significant ($p<0,001$). Cronbach's alpha values were examined in the sub-dimensions because the scale was not additive Cronbach's alpha values were determined as 0.73 for Factor 1, 0.73 for Factor 2, 0.69 for Factor 3, 0.64 for Factor 4, 0.71 for Factor 5, 0.62 for Factor 6, and 0.71 for Factor 7, and these values were found to be reliable. According to criterion-related reliability results, the relationship between the sub-dimensions of both scales (PHLBS and HLBS-II) was significant in some dimensions ($p<0.001$). The test-retest reliability of the scale was found to be statistically and positively significant for each sub-dimension ($p<0,001$).

Discussion: After the face, content, and construct validity of the scale were ensured [2], the Cronbach Alpa Coefficient, Item Total Score Correlation, and time invariance results were found within the desired limits [3]. It was thought that the insignificance of the relationship in some sub-dimensions in criterion-related validity was due to the special health behaviors specific to the preconception period.

Implications and future perspectives: Considering that not only women's but also men's health is important in pregnant and newborn health, PHLBS is a valid and reliable measurement tool that can be used to identify problems and meet needs according to the data obtained.

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RCN LEARN, THE NEW LEARNING AND EDUCUATION VIRTUAL PLATFORM AS PART OF THE ROYAL COLLEGE OF NURSING EDUCATION, LEARNING AND DEVELOPMENT STRATEGY

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Background: The Royal College of Nursing (RCN) Education, Learning and Development strategy1 (ELD) 2021 – 2024 launched in 2021. Part of the strategy was to develop a new exciting online space, offering easy access to learning and education required to fulfil continuing professional development (CPD) and support the delivery of safe and effective care. In collaboration with RCN and RCNi this new space is named RCN Learn2 and by using the feedback from the extensive RCN ELD strategy consultation process with members and partners from across the UK, RCN Learn has various access routes to support the nursing, health, and social care workforce.

Aim(s): RCN Learn is designed to support the nursing, health, and social care workforce with topics for nurses, midwives, students, healthcare assistants, nursing associates and nursing support workers. RCN Learn is available to with various access levels to RCN members, non-member, organisations, stakeholders and RCNi Plus Subscribers. Ensuring that all resources were accessible, quality assured and peer reviewed and easily located.

Methods: RCN Learn was scoped and developed over eighteen months using a true matrix approach with many different teams across RCN and RCNi. Workstreams were created to:

- Engage with members and stakeholders to form an 'expert reference group.'
- Ascertain requirements and development of a new virtual online platform to host RCN Learn
- Cataloguing and reviewing all RCN UK resources, implementing a strengthened robust RCN Quality assurance process, and assessing applicability for inclusion into RCN Learn
- Inclusion of a new revalidation RCNi portfolio in collaboration with RCN Learn for members.

Results: RCN Learn supports all roles across the health and social care workforce, from pre-registration students, nursing support workers, nurses, nurse associate and midwives in all health and social care environments. RCN Learn it is easily accessible on all devices. Resources are quality assured, peer reviewed and accessible for users with any neurodiversity disabilities and aligned to the RCN ELD live Equality Impact Assessment. Each resource has taxonomy applied supporting the search process. RCN Learn provides an inclusive, supportive, and inspirational environment, for the health and social care workforce who are encouraged to share their knowledge, skills, and experience, to underpin the delivery of safe and effective care.

Discussion: RCN Learn is an exciting first of its kind collaboration, an interactive one stop learning space for all roles across all environments, providing a variety of resources. It is designed to help the nursing workforce develop their clinical, leadership, research and innovation education and professional skills. From pre-registration onwards, including our nursing support worker colleagues. Resources are indifferent styles, for example, programmes of learning, bit size modules and web based resources.

Implications and future perspectives: A feedback facility within encourages users to feedback thoughts and queries, this is invaluable to the RCN Learn team in our ongoing development. We are continuing to develop an RCN and RCNi directory of evidence-based education, learning and development activities to empower the nursing workforce to influence and embed a learning culture with healthcare delivery

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THE SCAFFOLD EPORTFOLIO: AN INSIGHT INTO THE RESULTS OF A MULTIDISCIPLINARY RESEARCH PROJECT IN FLANDERS (2020-2023)

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Background: ePortfolios have become indispensable in current healthcare education. They are considered appropriate tools to support competency-based pedagogical approaches and promote lifelong learning. Notwithstanding the rapid development of designs and platforms, effective ePortfolio use in practice remains difficult.

Aim: Since 2020, researchers from different disciplines have been conducting research to design an evidence-based ePortfolio prototype appropriate for generic use in different healthcare educational programmes. The SCAFFOLD ePortfolio aims to optimally support self-regulated learning and to promote and facilitate continuous competency development considering the complexity of the workplace (www.sbo-scaffold.com/EN).

Methods: We used an educational design research approach.1 Design research is conducted with two main goals: creating an intervention (e.g. ePortfolio) that solves problems in practice, and producing theoretical understanding.

Results: The participants were ePortfolio users from different healthcare educational programmes in Flanders. During the analysis and exploration phase, the researchers mapped good practices, barriers and needs among ePortfolio users (students, mentors and educators) using focus group interviews. This resulted in a design document with common requirements. The insights gained from the focus groups were complemented by literature reviews (user training2, ePortfolios supporting healthcare education3, legislation) and Delphi studies4–6 to incorporate in the prototype evidence-based decisions. The design of the prototype was conducted in three sub-cycles, each with a different focus: 1) feedback formats; 2) competencies and learning artefacts; 3) assessment and user guide. Each sub-cycle consisted of three phases: 1) analysis with stakeholders, 2) software development of a prototype, and 3) evaluation with users. The results were documented in reports and in scientific publications.

Discussion: The results of this project show the complexity of designing an ePortfolio that fits current competency-based education evidence. Considering the workload challenges that healthcare professionals face, all stakeholders agreed that a lean and technologically innovative ePortfolio is needed to facilitate workplace learning without losing its educational value.

Implications and future perspectives: Creating a state-of-the-art ePortfolio that scaffolds learning for multiple healthcare professions needs multiple perspectives including technology, user design, user training, legislation, ethics, competency-based education, interprofessional education and care.

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UNDERGRADUATE NURSING STUDENTS' LIVED EXPERIENCES WHEN ATTENDING HIGH FIDELITY SIMULATION TRAINING DURING THEIR BACHELOR EDUCATION PROGRAM

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Background: Simulation based training is broadly applied in nursing education and provides the opportunity to practice skills in a controlled environment without the potential to harm real patients [1]. High-fidelity simulation is a subtype that involves computerized life-size mannequins that replicate various signs and symptoms, providing a realistic and interactive experience for students [2,3]. It promotes teamwork, critical thinking, knowledge acquisition, and communication skills among nursing students [4-6].

Aim(s): This study aims to explore the lived experiences of nursing students participating in high-fidelity simulation throughout the four-year undergraduate nursing program.

Methods: Design: A qualitative descriptive design based on focus groups was used.

Population: This study involved bachelor nursing students who started their education in 2016 at Karel de Grote University College in Antwerp (KdG), Belgium. This cohort was followed throughout their entire undergraduate education.

Data-collection: Data was collected through voluntary focus groups held at the end of each academic year from 2016 to 2020, resulting in a total of four focus groups. The sessions were audio-recorded, transcribed verbatim, and analyzed thematically using Braun and Clarke's six-stage approach [7]. The qualitative analysis software NVivo aided in the transition from inductive to deductive analysis.

Results: The thematic analysis revealed six themes: "anxiety/stress," "debriefing," "self-confidence," "internship," "learning," and "scenario." Participating in HFS and observing others' scenarios contribute equally to students' learning. High-fidelity simulation enhanced self-confidence through successes, close alignment of scenarios with real internships and a safe learning environment. Important preconditions for this safe environment included allowing mistakes, absence of examination, and familiarization with the simulation room and manikin. The instructor's role in maintaining a friendly, positive attitude and following an fixed debriefing-format was also highlighted. These factors collectively contributed to a reduced sense of anxiety among students during HFS. Third and last year students perceived HFS as an even greater learning opportunity than younger students.

Discussion-limitations: Comparisons with previous research should be approached cautiously due to the limited clarity and comparability of understanding, application and integration of HFS within the existing literature. While prior studies confirmed the positive impact of successful debriefing on learning effectiveness [8-13], this study contributes by introducing specific preconditions that enhance this understanding. The longitudinal design of this study is a strength; however, the recall of students' experiences might have varied in strength due to the time gap between HFS and the focus groups. Conducting focus groups earlier was not feasible due to organizational constraints. Several limitations should be acknowledged: including the researcher's dual role as a lecturer and researcher at KdG, the limited number of focus groups conducted each year and the potential influence of self-selection bias.

Implications/future perspectives: This study indicates that high-fidelity simulation not only empowers students but also enhances their acquisition and application of non-technical skills. Debriefing and a safe learning environment are key-elements in this process. Increasing high fidelity simulations combined with interprofessional simulation and multicenter research are recommended.

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MONITORING NURSING AND MIDWIFERY STUDENTS' STRESS LEVEL USING WEARABLE DEVICE DURING HIGH-FIDELITY SIMULATION: A RANDOMIZED CONTROLLED INTERVENTION

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Introduction: High-fidelity simulation is an effective teaching method that enhances critical thinking and clinical decision-making skills among healthcare students [1,2]. However, the use of simulation can also result in increased stress levels, potentially affecting learning outcomes and satisfaction [3]. Therefore, it is crucial to monitor stress levels and assess the effectiveness of interventions in reducing stress during simulation.

Aim(s): The aim of this study was to monitor the stress levels of nursing and midwifery students during highfidelity simulation using a wearable device (Empatica E4 wristband©) [5], with a focus on assessing the impact of a short debriefing intervention. Additionally, this study aims to assess nursing and midwifery students' satisfaction with the simulation experience, providing valuable insights into their perceptions and experiences related to the simulation and debriefing intervention.

Methods: A randomized controlled intervention study [6] was conducted with 78 nursing and midwifery students (nintervention=41, ncontrol=37) enrolled in a simulation course at the Erasmus Brussels University of Applied Sciences and Arts (EhB) during 2022-2023 academic year. The students were randomized into two groups. Before the simulation began, participants were asked to sit at rest for 30 minutes (T0). Before the commencement of the scenario, students were provided with a briefing regarding the specific situation and their designated roles. Subsequently, they proceeded to encounter and participate in the scenario (T1). During the debriefing phase, the intervention group received a short stress and satisfaction debriefing, including a discussion on stress, while the control group received a standard debriefing (T2). After the debriefing phase, participants were asked to rest for an additional 30 minutes (T3). Physiological stress parameters, including heart rate (HR), blood volume pulse (BVP), electrodermal activity (EDA), and skin temperature (Temp) were continuously assessed using an Empatica E4 wristband© [5,7], divided into four time periods: T0, T1, T2, and T3. Psychological stress levels [8] were evaluated at two different time points, T0 and T3. Additionally, satisfaction with the simulation experience [4] was evaluated at T3. Interviews with the intervention group were conducted during the T2 time period. Quantitative data were analyzed using IBM SPSS 28.0 software, while qualitative data were analyzed using thematic content analysis. The Empatica E4 wristband data were processed using a Python program©. Ethical approval was obtained from the Brussels' University Hospital and the Vrije Universiteit Brussel (VUB) committees. All participants gave their written informed consent before participation.

Results: This study found that the intervention group had lower mean post-test scores in psychological stress when compared to the control group ($p<0.05$). Morever, the intervention group demonstrated higher mean post-test scores in satisfaction with the simulation experience compared to the control group ($p<0.05$). When comparing debriefing time periods (T2), we observed the median values of EDA and HR in the intervention group were lower than those in the control group ($p<0.05$). Additionally, most of the comments indicated the presence of stress during the simulation. However, students particularly valued the opportunity to discuss their emotions during the debriefing session.

Discussion: The findings show that the use of a wearable device, the Empatica E4 wristband, for monitoring stress levels during simulation among students is a valuable approach. This also highlights the positive impact of a debriefing intervention on students' stress and satisfaction with the simulation experience. The observed patterns in EDA and HR parameters during the debriefing period (T2) provide valuable insights into the physiological responses of the students to the simulation training. Furthermore, high satisfaction reported by the students indicates the value of a debriefing intervention.

Implications and future perspectives: Further research can explore the potential of real-time stress assessment to provide personalized feedback and tailored interventions. This has the potential to enhance the overall well-being and improve the learning satisfaction of nursing and midwifery students during simulation training.

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HUMAN FACTORS ONLINE: THE POWER OF DIGITAL FORMS OF EDUCATION TO RAISE AWARENESS ON THE IMPORTANCE OF HUMAN FACTORS

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Keywords: Crisis Resource Management, simulation, human factors, e-learning

Background: Crew/Crisis Resource Management (CRM) aims to improve non-technical skills (NTS) to reduce and prevent medical errors in healthcare. The demand for an e-learning that introduces CRM in healthcare is increasing. Previous research described the positive effects of an e-learning on reaction and knowledge. However, little is known about the extent to which the knowledge gained in an e-learning is transferred to practice.

Aim: The objective of the study is to develop an e-learning that introduces CRM and its principles and to determine the learning level achieved after completing the e-learning (reaction, learning, behavior; Kirkpatrick).

Methods: In 6 Hospitals in Flanders (Belgium) 86 nurses of acute and non-acute care settings tested and evaluated the developed e-learning between October 2022 and March 2023. At the first phase of the study, the nurses went through the e-learning. Before and after the e-learning the participants completed the Human Factors Attitude Scale (HFAS), that investigates participants knowledge, skills and awareness concerning human factors and NTS. Paired samples t-tests were used to assess differences between the pre- and posttest (HFAS). Next, a questionnaire concerning the quality and experience of the e-learning was completed. At the second phase of the study, the participants went through a simulation in an immersive room (270°projection). In these simulations (n=18), a realistic scenario was presented in which the learned CRM principles can be applied. The researchers evaluated, by completing the Clinical Teamwork Scale (CTS), the overall teamwork, communication, decision-making, situational awareness, role responsibility and patient-friendliness of the team completing the scenario. Additionally, in 18 focusgroups the extent to which the e-learning played a role in the application of CRM in the simulations was explored.

Results: Responses to the HFAS (pre versus post) indicated that the e-learning had a positive impact on 19 of the 23 items and the responses revealed significant attitude shifts ($p<0.05$) in 10 of the 23 items. Next, the mean overall score on the CTS was 6,27 (range 1=poor to 10=perfect). 10 of the 16 teams that went through simulation were rated as having 'average' teamwork according to CTS, 5 simulations were rated as 'good' and 1 was scored 'poor'. Based on the questionnaire concerning the quality and experience of the e-learning, and the focusgroups can be concluded that the e-learning was rated good and leads to an increased awareness according to CRM.

Discussion: The developed e-learning can be used to introduce and increase awareness about CRM in healthcare. However, more practical practice (simulation) is recommended to convert the knowledge and theory about CRM into behavior. Next, CRM needs to be supported by the entire healthcare team. In future studies it is recommended to carry out a pre-post CTS test, and to present a second simulation in which the learning effect can be increased.

Implications and future perspectives: The e-learning increases awareness according to CRM and is useful to introduce, repeat and reinforce CRM, and can be used as preparation of CRM training/simulation. It will be available and applicable in healthcare as well as education. Training (simulation) is recommended to further convert CRM into behavior.

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INTERPROFESSIONAL LEARNING AND COLLABORATION WITHIN A HOSPITAL, A QUALITATIVE STUDY OF EXPERIENCING INTERPROFESSIONAL LEARNING BETWEEN MEDICAL AND NURSING STUDENTS

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Background: In both medicine and nursing attrition is high, work stress and work culture are main causes. Interprofessional collaboration forms the basis of high quality person-centred care. It also minimize work stress and attenuate positive work culture and job satisfaction. However interprofessional collaboration is merely teached explicit.

Aim(s): To support and strengthen a culture in which interprofessional collaboration in the medical and nursing profession is seen as the norm and necessity for high quality care and job satisfaction.

Methods: Qualitative research was conducted in two hospitals. 12 pairs were formed of nurse and medical students in their third or fourth year, doing their internship on a ward. They interviewed each other 3 times with intervals over period of some weeks. The first interview was to discuss the image of each others role. The second interview focussed on reflecting about a recent joint experience during care. At the third evaluative interview participants reflected on each others roles, values and how the previous exchange influenced this.

Results: All pairs experienced the conversations as valuable. Both professions mentioned the same expectations and characteristics needed to collaborate. The students could not always tell what the other profession entails. Taking perspective provides greater understanding. In addition a difference in the use of language is noticeable. The medical student communicates more decisively and less insecurely and more independently compared to the nurse student. At the end there was more unity, more understanding of each others perspective, more awareness and motivation to collaborate.

Discussion: The current curricula of both professions are still mainly focussed on their own discipline, interprofessional feedback is hardly seen during educational programs. Using a joint experience and that both are trainees ensures more equality and safety. The interventions used in this study have potential and will therefore be continued. A small addition during internship seems to provide more understanding and more equality. Furthermore it is recommended to include interprofessional learning and collaboration as a structural component within both curricula of medicine and nurses.

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DIABEZE: DIABETES SELF-MANAGEMENT IN A BELGIAN NURSING HOME: A BEST PRACTICE IMPLEMENTATION PROJECT

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Background: Diabetes is a common chronic condition with significant comorbidity. The incidence is increasing [1]. The treatment of diabetes requires a multifactorial approach. Treatment guidelines on diabetes recommend involving patients in monitoring their condition because supported self-management improves daily glycemic control [2].

Aim(s): The aim of this project was to improve self-management of diabetes (SMD) among elderly in a Belgian home for the aged.

Methods: This evidence implementation project used the JBI Evidence Implementation framework, which is grounded in audit and feedback along with a structured approach to the management of barriers to compliance with recommended clinical practices [3]. In the first phase, the role of the stakeholders is investigated, and the baseline audit takes place. Design and implementation of strategies to improve practice (GRiP) are considered in the second phase. In the third phase, a follow-up audit leads towards post implementation of change strategies.

Results: At baseline, no criteria met full compliance. Six criteria had zero compliance. The procedure for treatment for hypoglycemia was known by 49% of the healthcare workers. Two criteria had a compliance lower than 50%: Strategies for Getting Research into Practice were developed in the second phase. Dissemination strategies, implementation process strategies, integration strategies, capacity-building strategies and scale-up strategies were used. In the follow-up audit, compliance with all criteria improved, although the effects varied. One criterion, went from zero to 100% compliance. Three criteria improved from zero to 85% compliance.

Two criteria reached the threshold of 50% compliance. One criterion reached 19% compliance. Follow up audit is needed to reach sustainability for this project.

Discussion: This best practice implementation project successfully led to the improvement of self-management in elderly people with diabetes, living in a Belgian home for the aged. An in-depth pre-implementation phase with internal facilitation and interdisciplinary collaboration between all co-workers tackled the barriers of quality systems, structure, communication and education. Despite the difficult circumstances of health care workers in this residential care home, for example during COVID, significant improvements have been made.

Implications and future perspectives: The screening of the residents, the development and documentation of the self-management plan are successfully implemented in Hof de Beuken. However, additional follow up audit will be worthwhile to improve compliance to the knowledge of the procedure and the knowledge of the treatment of hypoglycemia. We can conclude that the JBI Implementation framework has demonstrated to be of added value in Belgium.

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SUPPORTING CHRONIC ILLNESS SELF-MANAGEMENT AND PATIENT-PARTNERSHIP: REALITIES FROM THE EASTERN CONTEXT

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Background: The growing burden of chronic illness poses challenges for patients and healthcare professionals (HCPs), particularly in some Asian countries, which have limited resources and imbalances in decision-making authority among patients, their families, and the HCPs. Supporting the self-management (SM) of patients living with chronic illness is crucial in such a situation to improve their life quality. Patients sometimes do not express an explicit desire to participate in their illness management plan. Partnering with patients is crucial for achieving patient-centred care to enhance their autonomy and foster their health and well-being. Nurses, as the most available and affordable care professionals, can perform a critical role in supporting patients' SM during their illness trajectory. Different challenges exist in establishing patient-partnership and promoting nurses' supportive roles [1]. However, these realities are unclear and less explored, particularly from the Asian context.

Aim(s): This study aimed:
1. to explore the perspectives of patients living with a chronic illness about self-management and their role as chronic care partners from the Asian context
2. to understand the perspectives of healthcare professionals on nurses' role in supporting the self-management of patients living with chronic illness in the Asian context.

Methods: An explorative-descriptive qualitative study was conducted in three teaching hospitals in Pakistan, a South Asian country. A self-developed semi-structured interview guide was used. We interviewed 15 patients to obtain their perspectives. Correspondingly, the healthcare professionals' data was collected from 16 key informant interviews (with consultants, and those nurses and consultants having an administrative role in chronic care management) and through seven focus group discussions (with nurses and nurse educators). Total professional participants were n=54. Purposive and theoretical sampling was used. The constant comparative method was utilized to identify core categories from the data and establish connections between emerging concepts.

Results: A differing perspective on self-management, patient partnership, and nurses' supportive role within was evident from the data. Patients' SM appeared as a complex and situation-driven process [2]. The patient's role as a partner is acknowledged; however, both families and expert professionals share decision-making in chronic care management. The closely interdependent factors and inner drives gleaned from patients' perspectives play a significant role in the acquisition of diverse self-management roles. Nurses were regarded as reliable healthcare professionals in supporting chronic illness SM. However, the nurses' perspectives reflect a fragile motivation to support patients' SM, which was greatly dependent on external factors.

Discussion: The learnings from Eastern perspectives realize glitches and potential implications to enhance patients-as-partner of care in chronic illness. The Asian countries experience a distinct interdependent community structure, creating an imbalance in decision-making authority among patients, their families, and the HCPs in chronic illness management [2]. Each patient adopted dynamic SM roles based on the situation, reflecting their efforts to harmonize relationships with themselves and significant others. The narrow perspective of professionals regarding SM created a feeling of being stretched among nurses as they experienced a discrepancy between the expected versus documented role. The clarity on what is needed in chronic care self-management and the uncertain position of nurses in the Asian context requires a careful adaptation of well-developed practices and learning from the Western context [3] [4].

Implications and future perspectives: The lessons from existing approaches and strategies to partner with patients in the management of their chronic illness can be adapted between the Eastern and Western contexts. Furthermore, these strategies can promote the establishment of a productive and mutually interactive relationship between the HCPs, particularly nurses, and activated patients, as needed in the Asian context. The conceptual figures proposed from this study can serve as a foundation to devise measures to promote collaborative partnership with patients [2] and enhance motivation among nurses to perform a supportive role [3].

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ATTITUDES OF PATIENTS WITH SCHIZOPHRENIA SPECTRUM OR BIPOLAR DISORDERS TOWARDS MEDICATION SELF-MANAGEMENT DURING HOSPITALISATION

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Background: Medication self-management (MSM) is defined as a person's ability to cope with medication treatment for a chronic condition, along with the associated physical and psychosocial effects that the medication causes in their daily lives. For many patients, it is important to be able to self-manage their medication successfully, as they will often be expected to do after discharge.

Aim(s): The aim of this study was to describe the willingness and attitudes of patients with schizophrenia spectrum or bipolar disorders regarding MSM during hospital admission. A secondary aim was to identify various factors associated with patient willingness to participate in MSM and to describe their assumptions concerning needs and necessary conditions, as well as their attitudes towards their medication.

Methods: A multicentre, quantitative cross-sectional observational design was used to study the willingness and attitudes of psychiatric patients regarding MSM during hospitalisation.

Results: In this study, 84 patients, of which 43 were patients with schizophrenia spectrum disorders and 41 were patients with bipolar disorders, participated. A majority of the patients (81%) were willing to participate in MSM during their hospitalisation. Analysis revealed negative correlations between willingness and age (Pearson's r, r=-0.417, p<0.001) and between patients' willingness and number of medicines (Pearson's r, r=-0.373, p=0.003). Patients' willingness was positively associated with the extent of support by significant others during and after hospitalisation (Pearson's r=0.298, p=0.011). Patients were convinced that they would take their medication more correctly if MSM were to be allowed during hospitalisation (65%).

Discussion: Most of the patients were willing to self-manage their medication during hospitalisation, however, under specific conditions such as being motivated to take their medication correctly and to understand the benefits of their medication. Patients needed to be motivated to take their medication correctly and to understand the benefits of their medication.

Implications and future perspectives: Future research should focus on the development of a feasible MSM procedure that begins with the assessment of a patient's willingness to participate in shared decision-making. Processes of shared decision-making emphasise patients as people, taking into consideration their preferences, needs, beliefs and concerns about treatment, while incorporating their experiential knowledge. Ongoing medication counselling and regular consultations help build confidence and understanding that could help patients adhere to their treatment plans.

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RECOMMENDATIONS FOR HEALTHCARE PROVIDERS TO SUPPORT PATIENTS WITH MEDICATION SELF-MANAGEMENT PROBLEMS

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Background: Patients often encounter difficulties in medication self-management, which can affect medication adherence and safe medication use [1-5]. Providing support to patients during the process of medication self-management, as a partner in care, is crucial to addressing medication management challenges and empowering patients in self-care activities. However, there is a lack of tools for healthcare providers to assist patients with medication self-management problems.

Aim(s): To develop recommendations for healthcare providers to support patients with polypharmacy who experience problems with medication self-management.

Methods: A three-phase study was conducted. First, medication self-management problems were mapped. Second, a scoping review was carried out to compile a list of relevant interventions and actions for each respective problem. Third, a three-round modified e-Delphi study with experts was conducted to establish consensus on the relevance and clarity of the recommendations. The cut-off for consensus on the relevance and clarity of the recommendations was set at 80% agreement among the experts. The expert panel consisted of 23 healthcare professionals with specific expertise in medication management of patients with polypharmacy. Simultaneously with the second Delphi round, a panel of eight patients with polypharmacy evaluated the usefulness of recommendations. Results obtained from the patient panel were shared with the panel of healthcare providers in the third Delphi round. Descriptive statistics were used for data analysis.

Results: Twenty medication self-management problems were identified. Based on the scoping review, a list of 66 recommendations for healthcare providers supporting patients with identified medication self-management problems was compiled. In the Delphi study, the expert panel achieved consensus on the relevance and clarity of these recommendations, clustered according to the six phases of Bailey's medication self-management model.

Discussion: The recommendations presented in this study can serve as a valuable resource for healthcare providers in supporting patients who encounter problems with medication self-management, thereby enhancing patients' competences in medication self-management. However, it is important to use the guide with recommendations in an interdisciplinary context. In other words, individual healthcare providers can contribute to improving medication self-management by applying the recommendations within their areas of expertise, preferably after coordinating with the members of their team.

Implications and future perspectives: Future research should focus on the evaluation of the feasibility and user-friendliness of the guide by healthcare providers in clinical practice.

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THE EFFECT OF NURSE-LED TELEPHONE CONSULTATIONS ON STROKE PATIENTS

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Background: Globally, stroke is a common disease and can cause people to suffer from longlasting physical problems, cognitive symptoms, limitations in daily life and reduced quality of life after a stroke 1,2,3. Patients indicate a need for information, advice and social support 3. Self-management support interventions create positive outcomes in stroke patients 4,5. Nurse-led telephone interventions can facilitate the possibility of offering these self-management support programmes to patients 6,7. Stroke care is becoming increasingly reliant on advanced nursing practice (APN), however, little is known about these roles within the stroke specialty.

Aims: The aim of this study was two-folded: (1) to examine the effect of nurse-led telephone consultations on patients' (a) self-efficacy, (b) self-management, (c) quality of life, (d) medication adherence and (e) risk factors such as weight, blood pressure, physical activity, smoking and alcohol; and (2) to explore the experience of stroke patients regarding telephone follow-up by an APN.

Methods: Using a triangulation mixed methods design 8, a randomised controlled study with a pretest-posttest design was combined with an exploratory qualitative design with semi-structured interviews 9,10,11. 161 participants were randomly assigned to the intervention or control group and completed five questionnaires at baseline and after twelve weeks. The intervention group received three nurse-led telephone consultations from a neurology APN. Thirteen participants, who received the intervention, were included for an interview.

Results: A significant difference was observed in five of the eight subscales of self-management1, medication adherence, weight, blood pressure, physical activity and smoking between the intervention and control group. In addition, a trend towards a significant difference was observed in self-efficacy between the intervention and control group (p=0.05). The other variables were not significantly different. The participants experienced the telephone consultations as an added value in terms of moral support and information. The APN served as a key point of contact in the follow-up of stroke patients.

Discussion: Nurse-led telephone interventions can be an added value in the follow-up and treatment of stroke patients. With caution it can be assumed that the interventions contribute to the self-efficacy of stroke patients. This is an important statement since self-efficacy has a direct impact on the treatment goals. The study design and frequent follow-up by the APN (3 nurse-led telephone consultations) are the main strengths of this study 12.

Despite achieving the predetermined sample size, the narrow inclusion criteria, the narrow setting and the lack of a retention test (second measurement after one year), no statements about the target population can be made. Because of the duration of this study, the inclusion criteria and the lack of interest to participate, data saturation could not be achieved 10,13,14,15.

Implications and future perspectives: It is important to maintain follow-up of stroke patients after hospitalisation. These self-management support interventions can be developed by an APN and provided by nurse consultants. A multicentre study with more post-measurements can strengthen the obtained results. More in-depth interviews with a diverse sample are recommended to achieve data saturation. Further research regarding the cost-effectiveness of these interventions is recommended as well.

1 (1) positive and active engagement in life, (2) health-focused behaviours, (3) acquisition of health skills and techniques, (4) constructive attitudes and approaches, (5) self-monitoring and understanding, (6) health care navigation, (7) social inclusion and support, and (8) emotional well-being

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DEFINITION AND OPERATIONALISATION OF PATIENT SAFETY IN HEALTH PROFESSIONAL EDUCATION: A GROUNDED THEORY STUDY

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Background: Challenges in patient safety need to be addressed in clinical practice. However, the foundation for capacity-building in patient safety competencies for upcoming health professionals must be provided in health professional education. The World Health Organisation (WHO) published an extensive guide on incorporating relevant clinical and socio-cultural patient safety topics in today's curricula [1]. In 2014 Canadian researchers found health professional educators to articulate the need for more formalised teaching about patient safety [2]. Neither nursing educators nor medical faculty knew of specific patient safety courses within their curricula. In assessing students' self-perceived competence in patient safety in the Euregion Meuse-Rhine (EMR), students express the need to address patient safety more extensively in the curriculum [3]. This is relevant, as the European Union directive clearly states that all nurses (regardless of their training level) must develop the necessary competencies to collaborate interprofessionally, assure quality of care, communicate effectively and improve professional practice [4].

Aim(s): This study explored the definition, meaning, and operationalisation of patient safety in health professional education in medicine and nursing education in the EMR.

Methods: A multi-site constructivist grounded theory study was conducted in various health professional education facilities in the Euregion Meuse-Rhine. Initially, purposive sampling was applied to recruit medical faculty and nursing educators, followed by theoretical sampling. Both individual and focus group interviews were conducted, involving a total of 38 participants.

Results: A formal or operational definition of patient safety is lacking in both medical and nursing education in the EMR. In their definition, respondents focus mainly on the health organisation's ability to perform risk detection and avoid preventable harm. Although respondents are unanimous about the importance of patient safety, a shared vision on its meaning in the curriculum is non-existent. Patient safety tends to be implicitly present, hidden in the curriculum. There are no specific patient safety courses, yet clinical (i.e., infection prevention) and socio-cultural dimensions (i.e., effective communication) of patient safety were scattered throughout the curriculum. According to educators, this causes students to develop a "blind spot" for patient safety.

Discussion: The findings in this study correspond with previous literature on health professional educators' views on the definition and translation of patient safety in the curricula of health professional education. One of the study's limitations is the underrepresentation of nursing education in the Netherlands.

Implications and future perspectives: When health professional education fails to educate students about the importance and width of patient safety and its dimensions, this could significantly impact health professionals' patient safety competencies when entering clinical practice. Medical faculty and nursing educators endorse its importance by stating that patient safety needs to be mentioned more explicitly in the curriculum.

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NURSING CLIMATE RESOURCES FOR HEALTH EDUCATION (N-CRHE): BRIDGING THE GAP BETWEEN ASSESSMENT AND ACTION

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Background: Climate Resources for Health Education (CRHE) is an evidence-based, peer-reviewed, online repository of climate change and planetary health-related resources created by students and faculty advisors in conjunction with the Global Consortium on Climate and Health Education (GCCHE) to create capacity building among health educators, students, and professionals. CRHE was initially developed to support medical school education.

Aim(s): The authors of this abstract and a global team of nurses are developing a nursing version of the CRHE, known as N-CRHE, to support nurses at all levels of nursing education (bachelor's, master's, and doctoral).

Methods: The N-CRHE is population-focused to align with the nursing curricula. Each category (adult, pediatric, public/community health, healthcare systems) has a global team of expert nurses in the respected fields creating learning objectives and providing resources to support planetary health concepts (air pollution, extreme heat, food/water security, mental health, soil/ water/waste pollution, and vector-borne diseases) (1).

The N-CRHE aligns with evidence-based best practices, GCCHE competencies, planetary health frameworks, and the Nurses Planetary Health Report Card (N-PHRC), a student-led initiative to evaluate university utilization of planetary health principles and metrics to bridge evaluation with action. The N-CRHE leadership team created a Strategic Actions Group, a team of nursing experts working to provide templates, mentorship, and simulation opportunities for nurses, students, and faculty interested in implementing sustainability solutions.

Results: Each of the global teams of expert nurses has carried out the creation of the learning objectives (LOs) for the identified climate and health concepts, which have been peer-reviewed by experts. All LOs have been created to emphasize the links between climate and health and/or underscore the relevance of the topic to nursing practice. Each of the community/public health nursing LOs have been designed to help students identify the topics and challenges affiliated with climate change, and develop potential mitigation and adaptation strategies considering local contexts and climate-informed health interventions applicable to the area of nursing practice.

The next phase of the project will focus on the creation of case studies; slide decks; simulation; and podcasts by global teams of nurses and student nurses according to each specific learning objective, incorporating planetary and global health principles.

Discussion: N-CRHE aims to be a hub of climate and planetary health-related resources designed to support, contribute, and amplify work currently implemented at all levels of nursing education and nursing practice. Nurses can model and lead in ways that planetary health strategies can be adopted in clinical and community settings. Nurses can be the driving force of sustainable change. In order to do so, it is essential to provide nurse educators and practicing nurses with tools to appropriately train the next generation of nurse leaders.

Implications and future perspectives: The goal is utilization by faculty in schools of nursing to support a climate and planetary health curriculum to prepare the global nursing workforce; support the professional development of the existing global nursing workforce; and leverage nursing as instrumental to build, contribute, and prepare a climate-ready health sector for a worldwide community of nursing practice.

[1] Planetary Health Nursing : AJN The American Journal of Nursing (lww.com)

EXPLORATORY STUDY ON SUSTAINABILITY IN MEDICAL ITEMS UTILISED IN NURSING CARE: A CASE STUDY IN BELGIAN HOSPITALS

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Background: Over the past decades, the use of single-use devices (SUDs) in healthcare has considerably increased and further intensified by the COVID-pandemic [1]. SUDs used to be preferred due to their advantages such as patient safety, low cost, and time savings. However, the environmental implications were seldom questioned.

With the urge to comply with the sustainable development goals (SDG) and waste reduction [2], Ghent University Hospital aimed to investigate waste reduction by considering the dichotomy of SUD and reusable (RU) equipment. The study was commissioned by the Federal Public Service for Health, Food Chain Safety and Environment, the Directorate-General for the Environment.

Aim(s): The purpose of this study was to identify the most sustainable and feasible options for three of the most relevant SUDs used in nursing care in Belgian hospitals.

Methods: A cross-sectional multi-centre study was conducted between August-November 2022, involving a hospital survey across all Belgian hospitals to collect procurement data on SUDs. Based on consumption and cost rates, three SUDs and their RU alternatives were selected, with each alternative requiring a different process for reuse. Subsequently, an exploratory study assessed the selected SUDs and their RU alternatives in terms of environmental sustainability, safety, costs and efficiency [3-5].

Results: Based on the procurement data from the 12 participating hospitals the single-use kidney tray (thermal disinfection), blanket (laundry), and cover caps for thermometer (change item) were selected. RU kidney trays were found to be more environmentally friendly than SUD, with the disinfection method impacting both the environment and cost. Safety was comparable, while the SUD kidney tray showed better efficiency in terms of time consumption. RU blankets were more beneficial for sustainability and cost than SUD. Safety and efficiency were similar, unless the hospital has its own laundry facility. The use of cover caps for tympanic temperature measurement showed lower cost and better sustainability than when disinfection was needed between patients. Non-contact thermometers, requiring no disinfection or additional equipment, proved to be the cheapest, most sustainable, safest and most efficient alternative.

Discussion: The findings contribute to hospitals' efforts to reduce waste and promote sustainability. RU alternatives of commonly used items in nursing care are more sustainable. RU medical textiles emerged also from literature as the most sustainable approach [6-7]. Safety was not a concern as long as adequate and correct cleaning & disinfection and washing methods are employed. However, limited data availability and underrepresentation of actual costs post challenges in analysing and comparing the items. The sustainability assessment did not include a life cycle analysis (LCA) and should be interpreted with caution.

Implications and future perspectives: This study suggests several implications for hospitals and nursing care, including 1) integrating sustainability requirements and RU options into the procurement process, 2) implementing more RU textiles, and 3) adapting logistics and procedures for cleaning, disinfection, laundering of RU items when switching from SUD to RU alternatives. Further research using LCA to compare RU kidney trays and SUD, considering disposal and disinfection methods, would provide valuable insight into making sustainable choices. Additionally, designing and testing reusable textiles as alternative for SUD, such as isolation gowns, surgical caps, could be studied.

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DETERMINATION OF NURSING STUDENT'S ATTITUDES TOWARDS REFUGEES AND AFFECTING FACTORS

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Background: Negative attitudes of nurses who will provide care to refugees may negatively affect the quality of healthcare services. The curricula of nursing students, who will have a direct encounter with the positive and negative situations caused by migration and refugees, especially after graduation, need to include positive attitudes and behaviours as well as knowledge and skills to provide healthcare to individuals, families, and communities coming from different cultures [1,2,3].

Aim(s): This study was carried out in a descriptive and cross-sectional type to determine the attitudes of nursing students towards refugees and the factors affecting them.

Methods: The study consisted of 1665 nursing students studying in the three universities in Istanbul between the 2020-2021 academic years. The sample of the study consisted of 646 students determined by power analysis. Data were collected by Students Data Form and the Attitude Scale Regarding Syrian Refugees [4]. Institutional permissions and ethics committee approval was obtained (Approval code: 14901). Students were informed about the study. The findings of the study were evaluated with the SPSS 24 program. Data analysis was performed using the Mann-Whitney U test, Kruskal-Wallis H test, Spearman correlation, and Bonferroni post hoc test.

Results: The average age of students was 20.07±1.68 years, and 84.8% were women. When the sub-dimension means of Attitude Scale Regarding Syrian Refugees were examined, the mean scores of the students were recognized as follows; 3.52±0.89 defended the rights of Syrian refugees, 3.45±0.96 had negative opinions about Syrian refugees, 3.32±0.96 supported finding radical solutions for Syrian refugees, 2.76±1.20 helped the Syrian refugees 2.47±0.69 agreed to find the moderate solutions for Syrian refugees. Examination of individual characteristics such as age, gender, number of siblings, education level, parent's education level and place of residence, factors such as job anxiety in the future, traveling safely, having refugee friends, presence of refugees in the family, disaster management education, the Attitude Scale Regarding Syrian Refugees sub-dimension, revealed a significant difference between the dimension mean scores ($p<0.05$).

Discussion: It was determined that the attitudes of nursing students toward Syrian refugees were partially negative and that some individual characteristics and influencing factors were effective in their attitudes toward refugees.

Implications and future perspectives: In line with the results obtained from the study, it can be recommended that students need to be supported to determine their attitudes towards refugees and the factors affecting them and to develop positive attitudes in this context and that courses related to migration and refugees be added to the undergraduate curriculum.

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INTERNSHIP OF ADVANCED PRACTICE NURSES-STUDENTS IN UNEXPLORED AREAS: A PROCESS OF SEARCHING AND ADAPTING

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Background: Integration of advanced practice nurses (APNs) in health care is increasing, also in Belgium. Today, APNs are mainly integrated into hospital settings, however, there is a need and potential for implementation of this role in other healthcare settings as well. The increasing attention on APN also impacted on the development of educational programs for APNs in Flanders. Since the academic year 2020-2021, four universities in Flanders organize an academic master of nursing science with a major in APN, including an internship in clinical practice areas. APN-students are regularly imbedded within settings or organizations that are not yet familiar with the integration of APNs (e.g., long term care settings, primary care). Exploring experiences of APN-students and their supervisors in these organizations can be of added value in revising and optimizing the APN-internship.

Aim(s): To gain insights into the experiences of APN students and their supervisors on the integration of APNstudents into organizations not yet familiar nor experienced with such APN-functions.

Methods: An exploratory qualitative study, using semi-structured interviews, was performed. Six supervisors from 14 healthcare organizations in Flanders, and 12 APN-students from three universities were interviewed. The interviews were audio-taped and transcribed verbatim. A thematic analysis with researcher triangulation was performed.

Results: In general, the internship was considered as a positive experience for all participants. APN-students and their supervisors described the expectations and aims about the internship as divers and initially rather vague. It appeared to be a process of searching and adapting both expectations and learning objectives along the course of the internship. Factors such as gaining autonomy, ensuring flexibility with regard to the aims of the internship and influential key figures facilitated the integration of APN-students. The fragmented period of the internship, a lack of communication, but also role ambiguity and role unclarity were perceived as barriers. The internship facilitated the initiation of future ideas for sustainable integration of APNs within the organization.

Discussion: Our findings indicated that a qualitative and meaningful internship in organizations not familiar with APNfunctions was possible. This study provided insights to improve future internships for APN-students. All researchers were intensively involved in APN-students master programs which might potentially have impacted on social desirability. However, no indication for too positive results from the participants perspective was available.

Implications and future perspectives: Our findings underpin the importance of clarifying what can be expected from APN-students before the start of an internship. It is essential that universities monitor the process, interact regularly with supervisors and APN-students and are flexible in adapting learning objectives during the internship. It is promising and very hopeful that APN-students' internship can be a catalyst for initiating APN functions in unexplored areas like long-term care settings in which APN integration in the future is urgently needed.

THE IMPACT OF BLENDED LEARNING ON HEALTHCARE STUDENTS CRITICAL THINKING: A PRE-TEST/POST-TEST STUDY

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Background: Major challenges face today's healthcare system in a rapidly evolving, technology-mediated world, for which healthcare professionals have to be prepared [1, 2]. Critical thinking (CT) is a 21st-century skill that every healthcare student needs to possess to approach these challenges [3]. The American Philosophical Association (APA) Delphi study by Facione (1990) defined CT as a combination of two dimensions, namely cognitive skills and dispositions [4].

Aim(s): This study aimed to evaluate the effect of a blended curriculum on healthcare students' CT skills and dispositions.

Methods: A one-group pre-test/post-test study was set up during the Past, present, and future healthcare course in the bridging program Master of Science in Nursing and Midwifery and Master of Science in Systems and Process Innovation in Healthcare at Hasselt University. The course consisted of a blended learning concept (i.e., online learning, debating, and reflective paper writing). Students were asked to complete a self-assessment using a 5-point Likert scale (1 = weak, 2 = room for improvement, 3 = acceptable, 4 = good, and 5 = excellent) [4]. The final questionnaire also included open questions to evaluate the impact of the didactical methods on CT. The Likert-style questions were analysed using the Mann-Whitney U test or Wilcoxon Signed-Rank test, as appropriate. Open questions were analysed using thematic synthesis. The level of statistical significance for all analyses was set at 0.05, and the analyses were performed using SPSS 28.0 (IBM, Chicago, IL).

Results: From 68 students, 47 (69%) completed the pre-test, and 35 (51%) completed the post-test questionnaire. For 24 students, a matched-pair sub-sample was available. In the unpaired sample the cognitive skills: questioning information, formulating conclusions, evaluating credibility, detecting bias, and self-examination significantly improved during the course (Pre-test, Med [range]: 3 [2-4], 3 [2-4], 3 [2-3], 2 [2-3], 3 [2-3], resp.; Post-test, Med [range]: 3 [3-4], 3 [3-4], 3 [3-4], 3 [2-3], 3 [3-4], resp.; Mann-Whitney U test, Ps<.05). Considering the dispositions, no significant differences were found between the pre- and post-test questionnaires in the unpaired sample. Analysis of the matched pair showed significant improvement in all the CT skills (interpretation, analysis, inference, evaluation, explanation, and self-regulation; Pre-test, Med [range]: 3 [2-4]; Post-test, Med [range]: 3 [3-4]; Wilcoxon Signed-Rank test, Ps < .05). Analysis of the matched pair showed a significant enhancement of the dispositions: seeking truth, analyticity, self-confidence, and cognitive maturity (Pre-test, Med [range]: 3 [3-4], 3 [3-4], 3 [2-3], 3 [2-3], resp.; Post-test, Med [range]: 4 [3-4], 4 [3-4], 3 [2-4], 3 [3-4], resp.; Wilcoxon Signed-Rank test, Ps<.05). The didactical methods that contributed the most to students' CT were the e-learning module (63%) and debating (60%), followed by writing a reflective paper (43%) and the in-class session (40%).

Discussion: The blended curriculum positively affected students' CT skills and dispositions. The most stimulating methods for CT seemed to be online learning modules and debating.

Implications and future perspectives: Further research is needed in a larger student group with objective and subjective measurement tools to evaluate the true impact of blended learning on students' CT skills and dispositions.

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EVOLUTION AND INFLUENCING FACTORS OF PROFESSIONAL ROLE IDENTITY IN FLEMISH NURSING STUDENTS DURING THEIR EDUCATION

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Background: The current shortage of nurses, resulting from high turnover rates and a limited influx in nursing education, creates a significant challenge for health care. According to the Federal Knowledge Centre for Health Care, one in four nurses is dissatisfied with their job, and 36% are at risk of burnout [1]. Previous findings suggested that intention to leave is highest amongst nurses with low job satisfaction and inadequate development of their professional role identity [2]. Developing your professional identity is a dynamic process which can be stimulated during nursing education, as well as during the transition from student to nurse in the workplace [3,4].

Aim(s): This study investigated the development and evolution of professional role identity of Flemish Bachelor nursing students. Furthermore, the influence of internships, sociodemographic factors, training-, work-, and perception-related factors were investigated. Additionally, the relationship between professional readiness and the level of professional role identity was investigated.

Methods: A quantitative, cross-sectional, observational study was performed in which 896 Flemish nursing students participated. A convenience sample was sought through the distribution of a poster within five nursing schools. Perceptions and self-reported readiness-to-practice were investigated using the 'Macleod Clark Professional Identity Scale' (MCPIS) and 'Readiness to Practice Casey-Fink Questionnaire' [5,6]. Data collection was performed using an electronic survey between Febr 1 and March 31, 2023.

Results: Students' respective stage of training did not directly influence their level of professional role identity (stage 1: mean 37.07 (SD 4.11) vs stage 2: mean 36.53 (SD 4.55) vs stage 3: mean 36.97 (SD 4.35) vs stage 4: mean 37.10 (SD 4.30); p = 0.475). However, analysis at item level revealed a significant increase in feeling part of the profession (p>0.001), but a significant decrease in happiness to be part of it throughout training (p= 0.036). Work experience (r=0.077, 9=0.003) and professional self-confidence (r=0.327, p>0.001, n=762) were positively correlated with the level of professional role identity. Respondents (n=647) who perceived reflection as important had higher professional role identity scores (mean 37.30 (4.18) vs 35.43 (4.94), p>0.001).

Discussion: This study found no significant differences in total scores on professional role identity between training stages. However, when analyzing specific statements, differences emerged. In contrast to socio-demographic data, this study showed that professional readiness is a significant predictor of the development of professional role identity. Furthermore, some methodological limitations should be mentioned. For each participating college, one measurement moment was organized once within each training phase, which resulted in unequal study groups.

Implications and future perspectives: The study emphasizes the importance of developing professional role identity as part of nursing students' training programs. It suggests integrating the concept of professional role development to different training stages, providing support systems like mentoring, and offering educational sessions on nursing-related topics. Given the predicted shortage of nurses, nursing retention has become a global concern [7,8]. Understanding and promoting professional role identity can guide educational pathways and curricula, leading to increased engagement with the nursing profession. These findings provide a basis for creating more targeted training programs and encouraging additional research.

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DRIVING CHANGE IN NURSING: THE ROLE AND IMPACT OF INDIVIDUAL, INTERPERSONAL AND TEAM LEARNING PROCESSES AND INTERVENTIONS

***Katrien Cuyvers**, Belgium; Veronika Anselmann, Germany; Katrien Cuyvers, Belgium; Julie Daes & Giannoula, Belgium; Jasperina Brouwer, The Netherlands*

Description of the symposium

Nursing is a dynamic profession where in the midst of continuing technological and healthcare innovations high standard quality care needs to be delivered in the clinical environment. Furthermore, almost all European countries face staff shortages in nursing and recent studies show that nurses' and student nurses' turnover intentions are increasing. Continuous learning which initiates processes of change, is key to acting upon the challenges and demands of today and prepare for the needs of the (near) future. On an individual level, perceptions of how one individual can initiate change in teams, are among the factors majorly influencing ongoing individual nurses' and nursing teams' performance in the clinical environment. The same is assumed for nurses' and student nurses' ability to self-regulate one's own workplace learning, as well as for other generic competences such as interprofessional collaboration, technological agility, entrepreneurship and ethical behaviour. On an organizational level, working conditions have been found to interfere with nurses' effectiveness in making a positive change.

This symposium aims to provide a collection of studies on nurses' and student nurses' individual and team learning and development. Changes in nursing team learning activities, self-regulated workplace learning (SRwpL), and interprofessional collaboration competencies are focused on in the presentations. Furthermore, determinants and conditions fostering or restricting change on an individual and organizational level are brought. Four different topics will be addressed by researchers of three different countries.

The first study, conducted by Anselmann1, Brouwer2 and Mulder3 (1Institute of Nursing Science, University of Education Schäbisch Gmuend, Germany; 2Educational Sciences, Faculty of Behavioural and Social Sciences, University of Groningen, The Netherlands; 3Faculty of Human Sciences, University of Regensburg, Germany), examines how nurses' individual learning is related to team learning activities in nursing teams. Furthermore, the study wants to gain insights in how individual and team related factors such as psychological empowerment and team boundedness are connected to learning activities and how these learning activities can foster team effectiveness. Therefore, a cross-sectional questionnaire study with 149 nurses working together in 30 teams was conducted. Results of the Structuring Equation modelling indicate that individual learning activities are related to team learning activities. Knowledge sharing as a team learning activity is related to nursing teams´ performance.

Cuyvers4, Van Oostveen5, Struben5 and Endedijk6 (4Faculty of Social Sciences, department of Training and Education Sciences, University of Antwerp, Belgium; 5Spaarne Gasthuis, The Netherlands; 6Department of Professional Learning and Technology, University of Twente, The Netherlands) follow with the results of an intervention designed to foster the development of nurses' SRwpL. A multiple baseline design (MBD) with additional post-intervention phase, as a type of single-case experimental design was used to investigate the effects of the intervention. Five nurses

of the chirurgical department of a hospital in the Netherlands participated. A multi-method approach with repeated quantitative and qualitative measurements was used. Besides visual analysis, as the primary method of data-analysis in single-case research, the baseline corrected TAU analysis was used, investigating the within-person change in SRwpL between the different phases in the MBD. Different intervention effects for different nurses were found indicating that no one-size fits all intervention can be designed to support the development of SRwpL of all nurses in a hospital or other healthcare organisation.

In the third presentation, Daes and Tsakitzidis, present the results of a participative action research applied within the 'ZORO- workforce in healthcare project'. In this project, an interprofessional training was developed, implemented, and evaluated for nurses and caregivers levels 2 to 6 of the European Qualification Framework. In total, 49 students, starters and seniors took part in the training and evaluation, focusing on the development of four competences: interprofessional collaboration, technological agility, entrepreneurship, and ethical behaviour. Overall, 80% of the participants indicated they learned a lot all four competences. For 91% of the participants, the training met their expectations. 76% recommend the training to colleagues and 84% are motivated to implement the training content in practice. Overall, the ZORO-training received a score of 8/10.

Finally, Brouwer2 and Dedinca4 (4Educational Sciences, Faculty of Behavioural and Social Sciences, University of Groningen, The Netherlands), present the results of a large scale cross-sectional survey study investigating to what extent human and social capital contribute to nurses' ability to cope with work stressors. In particular, protective factors of human and social capital such as self-efficacy, communion striving, team collaboration and supervisor relationship on turnover intentions of 518 German nurses were examined, while controlling for working conditions. Logistic regression analysis revealed work pressure, and fatigue to significantly predict turnover considerations. Nurses reporting a need for communion striving were at an increased risk for planning and deciding to leave their job. Protective factors against turnover intention found were self-efficacy, work-life balance, and supervisor relationship.

Expected learning outcomes for the audience

The collections of studies in this symposium demonstrate that to be drivers of change, navigating the future of healthcare, (student) nurses' and nursing teams' ongoing competency development is very important. For the purpose hereof, the different presentations offer important insights on how an idea or perception of the individual can be the initiator for changes in a team and by this have an impact on the team's performance. Also, it can be learned how a differentiated approach is needed to foster SRwpL, and how interprofessional collaborative training is needed and appreciated for the continuous development of competences important to reactively and pro-actively deal with healthcare demands and challenges. Finally, from the results of this symposium it can be learned which factors of human and social capital in the workplace can act as buffers against the stressors of the nursing profession.

LEARNING COMMUNITIES OF PRACTICE FOR PERSON-CENTRED CARE: INSIGHTS FROM AND FOR DAILY NURSING PRACTICE.

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Heleen Reinders- Messelink, Rehabilitation Center 'Revalidatie Friesland', the Netherlands
Gonda Stallinga, Nursing Science, University Medical Centre Groningen, the Netherlands.

Background: As much as nurses want to provide person-centred care (PCC), today's healthcare practices, often driven by organizational routines, are an obstacle. Therefore, a learning culture at the workplace is needed. Learning communities of Practice (CoP's) are considered promising to facilitate such a culture. However, there is yet not enough insight into factors that contribute to successful learning in CoP's nor their contribution to PCC.

Aim: To share the outcomes of the ZonMw-funded research project 'LeerSaam Noord' in which CoP's are implemented.

Set up: Insights are presented from monitoring local CoP's (a university hospital, two centers for rehabilitation and a long-term care organization) which lead to four studies addressing how CoP's can contribute to: (1) learning of professionals; (2) what actually is being discussed related to person-centred care; (3) daily functioning of patients; (4) patients experiences with shared decision making (SDM).

Implications and future perspectives: To enhance the focus of nurses on person-centred care, including shared decision making and daily functioning of patients, a toolbox with guidelines was developed. Further research should address how the toolbox, representing the overall findings, can be implemented.

Session 1. Learning communities of practice in care, a study into contributing factors for professional learning of nurses.
Presenter: Margreet van der Cingel

This session describes what learning in CoP's looks like in various healthcare contexts during the start-up phase of the project. A thematic analysis of eleven patient case-discussions in these learning communities took place. In addition, quantitative measurements on learning climate, reciprocity behaviour, and perceptions of professional attitude and autonomy, were used to underpin findings. Themes about learning emerged from the data such as: the perceived urgency, collegial support and the way professionals show cooperative behaviour during meetings. Reflective questioning and choosing patient cases in which there appear to be conflicting interests between the care recipient and the professional, are of importance for successful learning. Strikingly, there seems to be an inner conflict of professionals between what is perceived as patients' self-management and professional responsibility.

Session 2. Person-Centred Care in communities of practice: a study on how nurses discuss patient situations.
Presenter: Heleen Reinders

PCC is often characterized by concepts such as a holistic approach, the uniqueness of a person, and patient participation within the care relationship. We studied what elements of PCC are demonstrated by nurses in CoP-meetings, each discussing various patient situations. Concepts of PCC found in a preliminary literature review were used as a conceptual model to support analysis. Nurses demonstrated aspects of PCC such as emphasizing a holistic approach as in having compassion for their patients and being able to see the uniqueness of patients. Nurses also endorse the importance of patient autonomy and active involvement in their own care, being the

participative aspect of PCC. PCC seems a natural way to deliver nursing care. Leadership, knowledge about and practicing how to communicate the issues important for patients is necessary to further improve PCC. Methodical dialogue in CoP-meetings seems of added value in this professional development and improving PCC.

Session 3. Patients' functioning discussed in nursing learning communities: a qualitative deductive content analysis using the International Classification of Functioning, Disability and Health.
Presenter: Gonda Stallinga

The aim in this study was to describe whether, and if so, which aspects of patients' functioning, in terms of the International Classification of Functioning, Disability and Health (ICF) are addressed in CoP's. Patients' functioning, in the biopsychosocial model, is one of the central concepts in PCC. We performed a content analysis on 23 learning community discussions. They were deductively analyzed to identify themes related to patients' functioning by using ICF. Patients' functioning is addressed in all CoP's discussions with the exception of one. In total 49 unique ICF codes are represented. Most codes are in the ICF chapter 'mental functions', in particular 'emotional and cognitive functions'. Codes related to participation, environmental factors and structures are less represented. The discussions demonstrate that nurses do address patients' functioning but are mainly focused on the biopsychological part. To make further improvements in person-centered care, it is recommended to develop tools picturing person's body, mind, situation and context in the holistic perspective for which the ICF has the best credentials.

Session 4. Patients' experiences of shared decision-making in nursing care: A qualitative study.
Presenter: Heleen Reinders

To explore patients' experiences of SDM in nursing during their stay in a healthcare institution we performed this study employing a descriptive design. Twenty participants were interviewed from participating care organisations. A constant comparative analysis method was used. The main unifying theme was 'feeling seen and understood', which seems to be a prerequisite for SDM. The themes included the importance of a positive nurse-patient relationship as a foundation for SDM. Next to that, patients experienced collaboration which was influenced by verbal and non-verbal communication. Other themes revealed that patients often felt overwhelmed during their stay affecting SMD and that many decisions were not made through SMD processes. Also the study highlights patients' perspectives on their role in decision-making. For nurses this implies the importance of building a good relationship, effective communication, collaboration and empowerment, acknowledgement of patients' feelings and circumstances, and awareness of other ways of decision-making.

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SUPPORTING HOME NURSES IN THE ASSESSMENT OF CARE DEPENDENCY AND NEEDS BY USING ARTIFICIAL INTELLIGENCE TECHNOLOGIES

Yelliz Mattheus *- staff member at Wit-Gele Kruis (WGK) Vlaanderen.*
- 2 presenters from WGK Vlaanderen (Belgium): (incl. the chairperson) - The WGK represents the largest non-profit organization for home nursing in Flanders, withover 5000 nurses taking care of 150.000 patients.
- 2 presenters from the Vrije Universiteit Brussel (VUB, Belgium): The electronics and informatics dept. (ETRO) of VUB, has extensive expertise in developing sensor systems, signal processing and clinical decision support systems based on Artificial Intelligence (A.I.) methods.

Description of the symposium

Background: The enormous growth of the older population will increase the number of older adults that will need care at home and the number of older adults in residential care. In particular the cost for society of the latter fraction of the older population is predicted to become huge. This, together with the personal preference of many older adults to stay at home, explains the need to prolong independent living [Uddin et al., 2018], [UN 2015]. The most important prerequisite for care and support to extend independent living, is that the need for dedicated care is detected early. Without timely interventions, older adults might gradually lose independency related to basic activities of daily living (ADL) such as bathing, dressing, toileting, transferring, continence and feeding [Diehr et al. 2013]. These declines may result in a situation where home care is no longer feasible and hence admission to residential care becomes necessary. To help tackle these giant challenges, and to counter the lack of resources, the WGK and VUB are setting up a series of projects to investigate how technologies such as A.I. can provide help. This is the first project and focusses on: objectively and correctly assessing the care needs of the older adult living at home, starting from the existing clinical scales for evaluating a person's level of dependency: the KATZ and BelRAI scales. Today, the residential care and home nursing sector uses a Belgian version of the Katz-scale to evaluate a person's level of dependency on the six ADLs [Katz, 1983]. This methodology is based on an observation of the person and requires training of the assessor. Hence, Katz-scores are often given subjectively. As the Katz-score is used to determine the care need, and thus a nomenclature code (and corresponding fee) is decided upon, they are frequently prone to discussion. A large field study showed significant differences in the scores given by home nurses and the health insurance funds [Paquay, De Vliegher, 2014]. Recently, the Federal Government launched pilot projects to evaluate the BelRAI scale as a multidisciplinary instrument to identify care needs of frail and dependent older adults (BelRAI.org). However, scientific and political unity on its use within the national health insurance hasn't been reached yet.

Aim: The ultimate goal of the project is thus to develop and validate a cost-effective and minimally invasive sensor-based system for the objective detection of early care needs in independently living older adults. This sensor system would tackle both the challenge of scoring discussions as to enable earlier detection of care needs.

The first phase of the project is a feasibility study in which research is conducted to gain insights in the current state of the art, the existing sensors/technologies that are available to measure ADLs, the applicability of these technologies in daily life and the environment of patients and the applicability of the system in the current care process.

Set-up and topics of symposium: In the context of the feasibility study of this project, we would like to organize an interactive symposium in which an inspiring discussion can take place about the topic: "early identification of care needs in homecare using A.I. Technologies". The discussion will be facilitated by the 2 presenters of WGK and the 2 presenters of VUB. The symposium will be composed of three parts:

- Part 1: Introduction of the project and workshop by chairperson and announcement of preliminary results (15 min.)
- Part 2: Workshop in breakout sessions (60 min.) The audience will be divided into 3 groups. In each group, an interactive dialogue can take place to provide an answer to the below three questions (20 min. per question). The discussion will be facilitated by one of the presenters.
    1. What are the relevant clinical parameters that need to be measured to evaluate care dependency and care needs at home?
    2. How can sensor/AI technologies help nurses with the evaluation of care needs? Which sensors are suited for this?
    3. How ready is the home nursing sector (patients & nurses) for the introduction of this kind of system? What are the conditions that need to be met in order for the sector to be ready?
- Part 3: Plenary feedback of the group discussion – take home messages (15 min.)

Implications and future perspectives: The insights gained in the discussion above will be used as input for the feasibility study, which will be followed by a development project, in which an automated intelligent decision system that detects care needs will be developed and validated in a patient study.

Learning outcomes for the audience: The goal of the symposium is to exchange experiences and opinions about current evaluation systems of care needs and about the possibilities of the use of sensor/AI technology in home care, including end user experiences.

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DESIGNING COMPARATIVE ASSESSMENTS IN NURSING AT FIRST AND SECOND CYCLE LEVEL.: THE IMPORTANCE OF ASSESSMENT LITERACY AND SCOPE OF PRACTICE. FINDINGS FROM THE EUROPEAN UNION CALOHEE PROJECT (2020-2022). [MEASURING AND COMPARING THE ACHIEVEMENTS OF LEARNING OUTCOMES IN HIGHER EDUCATION IN EUROPE]

Marja Kaunonen, Fi, Mary Gobbi, UK, Kate Meier, BE, Majda Pajnkihar, SI, Roberta Sammut, MT. Reet Urban EE, Dominika Vrbnjak, SI, Paul Mahon, IE, Thomas Kearns, IE

Description of the symposium (including background, aim, set-up/topics that will be presented, implications and future perspectives):

Paper 1: Background: Modernising Level 6 and Level 7 nursing competences in the European space: designing assessment metrics for comparison.

Paper 2 Methods: Designing differential assessment levels: 'lost in translation?

Paper 3 Findings: Factors that influenced cohort enacted competence: development of 2023 model

Paper 4 Future directions: Practical realities, technological advances, and political implications

Aim: To raise debate and critical discussion concerning the methods and findings of the CALOHEE project. These include revised nursing competences for level 6 and Level 7, assessment rubrics, assessment examples for comparative assessment and ethical issues.

Four papers comprising 30 minutes of meaningful discussion with participants. The audience will be invited to participate in a pretest Scope of Practice example, the findings of which will be shared during Paper 4.

Paper 1 Background: Modernising Level 6 and Level 7 nursing competences in the European space: designing assessment metrics for comparison

The ability to compare learning outcome achievement between countries and institutions requires the development (and initial testing) of a blueprint/test items bank that caters for variations in cultural, disciplinary, and educational specificities of national and local entities. Without relevant international metrics, the CALOHEE project intended to design agreed measurement instruments for subject specific disciplines in Higher Education. Paper 1 sets the stage by outlining the CALOHEE project steps and the rationale for the revised Tuning Nursing Competences (2023).

Paper 1 reveals the 'Elephant in the Room', namely the significant variation in nursing activity across the Europe in relation to the role of registered nurses in society, the organisation of the health and welfare systems, the legal authority and accountability afforded to nurses, and the available national economic and human capital resources. Noticeable advances in the nursing scope of practice indicated in our previous work are now more prevalent. Including nurse prescribing, telenursing, advanced, specialist and consultant nurses. The rate of adoption of these roles varies significantly between jurisdictions, particularly at post qualification or post graduate level.

The six countries comprising the nursing group, represent, and will illustrate, these variations, even though at level 6, the nursing profession has been technically 'harmonised' since the original Nursing Directive of 1977 and its subsequent revisions (the latest being Directive 2013/55/EU). At second cycle level,

international benchmarks for advanced practice roles have informed programme competences and therefore, in principle, enabled face similarity. A concurrent case study from Estonia offers useful practical examples throughout the symposium.

Paper 2: Methods: Designing differential assessment levels: 'lost in translation?

Key to devising assessment rubrics, frameworks and measurement tools that can be applied across jurisdictions, is articulating the variables that may inhibit or promote the enactment of not just an individual's competence, but the competence expected of a given cohort of students. International comparisons are based on cohort results. Furthermore, concepts like competence, assessment, and scope of practice are complex phenomena that influence the assessment literacy of students, teachers, and practitioners. Understanding these factors enables assessments to be meaningful and valid. Paper 2 summarises how, building on our previous work, the CALOHEE1 Assessment Framework, and the 2018 enacted competence model, we developed a schema and instruments capable of identifying and analysing cohort differences in the Tuning competences selected for comparative assessment. This meant we could design, and evaluate, the assessment rubrics and measurement tools to take account of recognised cohort variations (e.g. scope of practice).

Paper 3: Findings:

One key finding is that the reductionist nature of the initial Assessment framework meant it did not prove useful. In contrast, our ability to further develop the enacted competence model (2018 above) and apply it through our country profiles, enabled us to frame the influencing factors in their wider political, environmental, social, technological, legislative, economic, and regulatory context, drawing on multiple ways of knowing. The schema demonstrates, and accommodates, the integrated nature of nursing competence, theory, and practice, and better informs the development of valid, reliable, and relevant assessments. Exploring cohort assessment and data handling revealed several ethical issues. Illustrative rubrics, scenario-based assessments and answers will be presented.

Paper 4 Future directions: Practical realities, technological advances, and political implications

The implications for future work, policy and practice in educational research and practice. Survey findings from the beginning of the symposium will be shared and used to inform the audience debate concerning the implications of assessment literacy, varying scope of practice and practical assessment methods. We highlight future work involving real world pilot testing, the potential for further Adoption of Technologies in assessment and the key necessity to develop international standards of assessment in theory and practice. New standards will also need to address the role of assessors, the assessment design, delivery, evaluation, interpretation, and dissemination of the results as well as issues of translation and ethics.

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LIFE STAGE AND CROSS-POPULATION NURSING RESEARCH: FROM EVIDENCE TO APPLICATION

***Professor Mats Eriksson**, Sweden; Dr. Emma Olsson, Sweden, Professor Dimitri Beeckman, Belgium and Sweden, Dr. Malin Karlberg-Traav, Sweden*

Description of the symposium (including background, aim, set-up/topics that will be presented, implications and future perspectives): Örebro University has embarked on a strategic endeavor to establish a robust international nursing research environment encompassing all stages of life and types of healthcare. Our commitment spans from the care of preterm infants, children, and adolescents, to adults, the elderly, and various healthcare settings, including health promotion, general nursing, prehospital care, intensive care, and perioperative nursing.

In this symposium, our primary objective is to showcase selected areas of our research and underscore their collective contribution to the development of sustainable and robust nursing research with a significant international impact on healthcare. Through focused presentations, we will highlight research findings within two distinct age groups: newborn infants and adults and elderly individuals. Furthermore, we will explore the role of evidence-based nursing practice and its profound influence on patient care. Lastly, we will summarize how our research translates into clinical implications, our efforts in fostering international outreach, and outline our future trajectory as an integral part of the new European University alliance, NEOLAiA.

1. Advancing Pain Research in Vulnerable Populations: Enhancing Understanding and Care

Presenter: Emma Olsson

This presentation delves into the extensive research conducted by Örebro University on the topic of pain management in preterm and sick newborn infants. Numerous studies, carried out through both national and international collaborations, have unequivocally demonstrated the profound impact of pain on the short and long-term health outcomes of these vulnerable infants. The research endeavors have focused on various facets of pain assessment, pain treatment, and the integration of evidence-based practices in clinical settings. Our studies have garnered significant attention within the academic community, reflected in their high citation rates. Furthermore, the outcomes have translated into tangible improvements in the well-being of newborn infants by employing innovative approaches such as the use of sweet solutions and facilitating skin-to-skin contact during painful procedures. The ongoing projects encompass a comprehensive investigation of both pharmacological and non-pharmacological pain alleviation strategies. For instance, we examine the pain-relieving effects of Clonidine during painful eye examinations in preterm infants. Additionally, we explore the potential benefits of infant-directed lullaby humming by parents during venipuncture. Collaborating with Cochrane-projects, we also contribute to the synthesis of evidence regarding diverse aspects, including pain assessment scales, opioids, and pain management during therapeutic hypothermia. The findings from these multifaceted research endeavors shed light on effective interventions to mitigate pain experienced by preterm and sick newborn infants

2. Advancing Understanding of Skin Health and Wound Care in Adults and the Elderly

Presenter: Dimitri Beeckman

This presentation highlights the collaborative research endeavors between Örebro University and Ghent University, aimed at enhancing skin health and wound healing to optimize patient outcomes. The studies encompassed a wide range of investigations, including clinical evaluations of surface support systems, development of novel technologies for incontinence products to prevent skin damage, predictive models for assessing wound risk associated with incontinence, and the development of advanced wound dressings and innovative therapies to prevent chronic wounds in adults and the elderly. Moreover, researchers initiated studies to establish a novel framework for a person-centered approach to support self-management in home wound care, with a specific emphasis on older individuals. At Örebro University, researchers explored the potential of technology and artificial intelligence in improving outcomes for individuals with wounds. Key areas of focus included understanding age-related changes in skin structure and function, as well as the impact of tapes and adhesives on patients with sensitive skin. Methodological research centered on the development of core outcome sets (COS) for evaluating interventions and products targeting the prevention and treatment of wounds within clinical settings. The collective efforts of Ghent University and Örebro University have significantly advanced our understanding of various aspects of skin and wound research. Through their studies, innovative strategies such as advanced wound dressings and tailored interventions for the elderly have been developed. By expanding our knowledge of skin health and wound healing, these research endeavors hold the potential to improve clinical outcomes and enhance the quality of life for individuals with chronic wounds, both in adults and the elderly population.

3. Enhancing Clinical Practice: Empowering Nurses with Evidence-Based Approaches

Presenter: Malin Karlberg-Traav

This presentation focuses on a project aimed at studying and exploring the utilization of evidencebased nursing (EBN) in a clinical context, with a specific emphasis on the four cornerstones of EBN: research, nursing theory, clinical competence, and the patient's perspective. By examining various perspectives and their relation to EBN, including work climate, research utilization, nursing theory, leadership, and the patient's perspective in nursing interventions, the project contributes to a deeper understanding of the concept of EBN. Through a phenomenographic study, it was discovered that working with an implemented nursing philosophy facilitated clinical work, allowing nurses to reflect on and share concepts and values. The presence of a dedicated leader was identified as a prerequisite for organizing work in this manner, and interviews with first-line managers highlighted the need to bridge the gap between vision and reality to promote EBN. In the final study of the project, an integrative literature review examined how the patient's perspective was addressed in articles reporting on interventions designed to enhance nursing. Preliminary findings revealed that the patient's perspective encompassed five key aspects: respect, relationship, independence, relief, and well-being as a patient. The conclusion drawn was that reporting the clinical implications of nursing research is essential for successful implementation of research findings in a clinical context. Overall, this project provides valuable insights into the utilization of EBN in a clinical setting, offering a comprehensive understanding of the interplay between research, nursing theory, clinical competence, and the patient's perspective. The findings highlight the significance of academic qualifications, work climate, leadership, and the incorporation of the patient's perspective in facilitating the application of EBN in practice. By sharing our research endeavors and outcomes in this symposium, we aim to demonstrate the multifaceted aspects of our work and how they collectively contribute to the advancement of nursing research.

CLINICAL LEADERSHIP AND INTRAPRENEURSHIP IN NURSING: PROFESSIONALISM AT THE BEDSIDE

***Veerle Duprez**, Ghent University Hospital, Belgium (chair)*
Sabrina Nachtergaele, University college Artevelde Ghent, Belgium
Nele De Roo, University college Artevelde Ghent, Belgium
Margreet Van der Cingel, University College NHL Stenden Groningen, the Netherlands

Description of the symposium: The growing complexity of care requires constant innovation and visionary leadership from healthcare professionals in all positions, and nurses in particular. Contemporary nursing also requires nurses at the bedside to exhibit leadership and innovative behaviour. Participative and transformational leadership styles demonstrated by staff nurses are required to facilitate individual and collective efforts to accomplish shared clinical objectives. To date, there is limited empirical understanding of how nursing clinical leadership and intrapreneurship can be developed, on what it exists in terms of behaviour, and on the role of organizational culture in the demonstration of (clinical) nursing leadership and intrapreneurship.

This symposium **aims** to (1) discuss evidence on the development of competencies for leadership and innovative behaviour in healthcare in hospital nurses in Belgium and the Netherlands; (2) unravel how strategies that develop staff nurse clinical leadership competencies among work; and (3) discuss the role of organizational culture in clinical leadership development.

Set-up of the symposium

Session 1: Understanding interventions to act as nurse clinical leader: a realist review
Presenter: Veerle Duprez
Given the benefits of clinical leadership, it is important to strengthen leadership among frontline nurses by targeted strategies. Evaluating how and why these targeted strategies work, or do not work, in certain circumstances is of utmost importance. From the findings of a realist review, this session will answer the following question: How and under which circumstances were strategies successful to foster staff nurses to act as clinical leaders in hospital care? A logic model was developed that explains how certain contexts shape mechanisms, and thus suggest how and why clinical leadership is fostered among nurses. These insights can be used to develop future interventions that enable nurses to act as a clinical leaders, and to fit contextual conditions.

Session 2: Contextual factors in the development of clinical leadership: a qualitative study
Presenter: Sabrina Nachtergaele
Given the beneficial effects of informal clinical leadership on residents, healthcare professionals and organizations, it is necessary to investigate the influencing context factors to exhibit clinical leadership in nursing homes. The aim was to define the influencing context factors to develop clinical leadership within multidisciplinary healthcare professionals. A qualitative study with semi-structured focus group interviews was organised with Flemish healthcare professionals in nursing homes. The analysis resulted in four themes to identify the influencing context factors in development of clinical leadership competencies: work environment, leadership style of the formal leader, professional identity and team dynamics. Awareness of the influencing context factors is essential to optimize the context and to support the development of healthcare professionals in nursing homes.

Session 3: Supporting changemakers: a framework for innovation and intrapreneunership in healthcare professionals
Presenter: Nele De Roo
There's an increasing need for creative and innovative behaviour in healthcare professionals in order to tackle some of the most important challenges in current healthcare and to ensure a continuous high standard of care. Based on the European Entrepreneurship Competence Framework (Entrecomp), focus group with experts and Delphi method a healthcare-specific intrapreneurial competence framework was developed and validated. This framework identifies the knowledge, skills and attitudes a healthcare professional should acquire to develop intrapreneurial competencies. The framework is built on three key clusters: ideas & opportunities, into action and resources. Each cluster consists of a set of indicators outlining the necessary competencies towards intrapreneurship. All these competencies are further defined and described according to the achieved skill level starting at a foundation level, over intermediate to advanced and ending at expert level. Thus helping and stimulating healthcare professionals to grow their level of proficiency, their intrapreneurial mindset and competencies.

Session 4: A research program into perceptions, experiences, and self-assessment of leadership competencies of nurses in a top-clinical hospital in the Netherlands.
Presenter: Margreet Van der Cingel
Nowadays, nursing leadership has evolved from a mere management perspective into descriptions that emphasize leadership of nurses during professional performance. Nevertheless, there is poor empirical evidence on what nursing leadership consists of in terms of practical behaviour. The research aims for empirical grounding of nursing leader-ship as defined in the CANMEDS competencies. Action-research studies among hospital nurses provided rich qualitative data gathered in focusgroups and in-depth interviews. Results focus on generic aspects of leadership as well as on the occurrence of leadership during daily work. A nursing leadership model was developed, in which personal leadership competencies combined with clinical expertise form the essence of shared nursing leadership. Nurses see leadership as multi-layered concept with aspects such as autonomy, empowering colleagues and patients, knowledge enhancement and collaborating skills. In conclusion the program shows that nurses do know how to show leadership but often do not describe their performance as such and are inhibited by cultural workplace factors.

Implications and future perspectives: Round-up and discussion with the audience by means of provocative statements related to the presented content.

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IMPLEMENTATION OF NURSE-LED CONSULTATIONS AND NURSE-LED CLINICS: FROM EVIDENCE TO REAL-WORLD PRACTICES

***Prof. dr. Ann Van Hecke**, UGent/UZ Gent, Belgium*
dr. Pieter Heeren, KU Leuven/UZ Leuven, Belgium
Marie Cerulus, KU Leuven/UZ Leuven, Belgium
Ine Decadt, AZ Groeninge, Belgium
Patient expert and Elsie Decoene, UZ Gent, Belgium

Background: In many countries, healthcare systems are under pressure as evidenced by prolonging waiting times and decreased healthcare access. A key explanation for these challenges are societal evolutions, such as ageing of populations and increasing prevalence of chronic conditions. As a result, patients not only need more care, but also need care that is more comprehensive. The debate on future-proof healthcare systems has long been suggesting that nurses can take on more advanced roles and set-up nurse-led consultations/clinics (NLC).

Learning objectives: (1) To describe the effectiveness of NLC on patient and organisational outcomes; (2) To describe and compare NLC in five international bestpractice regions anno 2023; (3) To provide insights in perspectives of stakeholders involved in the development and implementation of NLC in an oncology department, and (4) To provide insights in the patient's experience when care is provided in NLC

Contributions

Contribution 1: Impact of NLC on patient and organisational outcomes: overview of the evidence
Presenter: dr. Pieter Heeren
We will present the impact of NLC on patient and organisational outcomes using an umbrella review. Sixty systematic reviews of randomised controlled trials were included. These described the effectiveness of NLC on patient (i.e. quality of life, physical status, psychosocial health, health behaviour, medication (adherence), mortality, clinical outcomes, patient satisfaction) and organisational (i.e. health care resources and costs) outcomes. Forty-four systematic reviews focused on disease-specific populations: cardiovascular disease (n=12), oncology (n=8), endocrinology (n=7), respiratory disease (n=5), mental health (n=4), chronic kidney disease (n=2), rheumatoid arthritis (n=1), HIV (n=1), and fatigue (n=1). Sixteen reviews included populations with any chronic disease. Twenty-five reviews evaluated interventions in the community care setting, while seven reviews focused on hospitals. Our findings align with previous systematic reviews reporting that NLC have the ability to achieve outcomes that are similar to those of physician-led or usual care. Data summary suggests that NLC are more effective than physician-led or usual care regarding quality of life, health behaviour, mortality, patient satisfaction, medication (adherence), and costs.

Contribution 2: What can we learn from NLC-implementation in international best-practice regions?
Presenter: Marie Cerulus
We will present how NLC are organised in five international best-practice regions (the Netherlands, France, Ireland, Finland, Canada). Data was collected through extensive desk research and 27 semi-structured interviews with key informants. We summarized objective characteristics of NLC, related to their availability in different healthcare settings, the profile of nurses performing NLC and their level of autonomy. We report contextual factors that have perceived as facilitators or barriers in implementation of NLC in these regions. NLC have been implemented in all different care settings. In all best-practice regions, NLC are performed by nurses at two different levels: by registered or specialised nurses who have a Bachelor of Nursing and some additional training/expertise, and by nurse practitioners / advanced practice nurses who have a Master degree. The level of autonomy and the extension of authorities differ significantly between the regions, with a high level of autonomy in Ontario and the Netherlands and large expansions of legal rights and responsibilities in Ontario, the Netherlands and Ireland. In Ireland and France, the practical organisation of task delegation from physicians to nurses is regulated in collaboration protocols which are site-specific. Key informants expressed the need for clear role delineation. All favoured the fact that working experience is required to start APN-training at master-level and that a portfolio is helpful to monitor whether the competency level of the nurses is maintained. A recurrent theme were strategies needed to overcome resistance from the general public, the medical profession and the nursing profession itself.

Contribution 3: What are the perspectives of stakeholders involved in the development and implementation of NLC in an oncology department?
Presenter: Ine Decadt
Internationally, a rise in NLC in oncology is noticed. In Belgium, research on NLC is scarce. In this presentation, the perspectives of stakeholders involved in the development of an oncology NLC for patients with gynaecological and head-and-neck cancer in a regional hospital in Flanders will be presented. The NLC is initiated by the Clinical Nurse Specialist (CNS). Nurse led visits alternated with medical visits in a complementary model. Interviews with 10 stakeholders (oncologist, head nurse, nurse manager, nurses, specialised nurses, CNS) were held. Drivers for the NLC were diverse. CNS, physicians and nursing managers were positive regarding the NLC. The physician seemed to be an important initiator. Nurses however questioned the need for a NLC and felt a dilution in their own role. Concerns raised about role clarity with other specialized oncology nurses in the team. The head nurse seemed to be a gate keeper with regard to the protection of the team. Nursing managers stressed to avoid mainly task substitution of physicians. The implementation of NLC had a positive impact on patient satisfaction and optimized patient flows and continuity of care. CNS were often considered as the bridging person between physicians and nurses. Increased immersing of CNS in direct patient care led to detecting more unmet needs in patient care provided by the interprofessional team.

Contribution 4: What can we learn from patient experts when care is provided in NLC?
Presenter: Patient expert and Elsie Decoene
Description: The story of a patient expert with cancer will be presented by means of an interview with Elsie Decoene. The patient will address his experience with care provided in NLC.

Discussion on implications and future perspectives, chaired by Prof. dr. Ann Van Hecke
Interactive discussions with the audience will be held (1) to facilitate the translation of the evidence-based knowledge on NLC into recommendations applicable for their personal working context, (2) to discuss on future implementation of NLC in other domains/settings, and (3) to reflect on barriers and facilitators in future implementation of NLC in health care in Belgium.

1.1

MORAL NURSING LEADERSHIP, NURSE STUDENTS PERCEPTIONS AND CONCEPT CLARIFICATION ON IDENTITY FORMING.

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Background: Nowadays the demand for nurses is high due to population ageing. At the same time too many nurses leave their jobs and work dissatisfaction is high. Therefore, the question rises if nurse education prepares them well enough now and for the future. Key competences such as being responsive, adaptable and compassionate are required. Moral leadership could be an important key to retain nurses and it seems to lead to more job satisfaction. Knowledge of how these concepts relate and how students apprehend them ensure a better understanding which can benefit nursing curricula.

Aim(s): This study explores how professional identity and moral leadership relate to each other and how baccalaureate students reflect on these concepts and implement them in practice. These insights will be used to substructure a curricular workshop focused on professional identity, moral leadership and job satisfaction.

Methods: In an explorative qualitative study semi-structured in-depth interviews with nurse students was conducted. Personal experiences about professional identity and moral leadership and how they relate were asked. 8 pairs and 3 focus groups participated.

Results: All students assess moral leadership as the basis of their profession, professional identity is seen as the underlying concept. Remarkably, the same values and competencies were mentioned within both concepts, such as self awareness, reflecting and person-centred care. The influence of student coaches on the development of identity and moral leadership was also mentioned. Working from a personal experience strengthens the comprehension and application. Reflecting these concepts in peer groups resulted in recognition, a broader perspective and self-awareness of their own identity and moral leadership.

Discussion: The results corresponds to the literature in which other studies also state that moral leadership is formed by developing a professional identity. Providing a supportive working environment and reflecting with peers is essential to internalize professional values to form identity and moral leadership. Highly developed moral leadership and organisational support lead to better stress tolerance, greater job satisfaction and a smaller gap between education and work. The workshop will be implementing the results, such as the use of personal experiences and reflecting in peer groups. It helps to apprehend the concepts and the process of forming identity and moral leadership. Follow-up research will focus on how moral leadership and job satisfaction relate and the implications of this for education.

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1.2
NURSING LEADERSHIP, STUDENT BEHAVIOR AND DEVELOPMENT

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Background: Nursing practice is constantly changing and nursing leadership behavior is assumed to be necessary for good care. Therefore, nursing leadership is already included in nursing curricula. However, it can be questioned how bachelor nurse students can develop nursing leadership behavior. Role models in daily practice find it difficult to demonstrate nursing leadership behavior for themselves and there is poor empirical evidence on what nursing leadership consists of in terms of practical behavior.

Aim: This study examines nursing students' perspectives on demonstrating nursing leadership in daily practice and what they need to develop their one nursing leadership behavior.

Methods: In-depth interviews are performed with 41 final year nursing students. Opinions of nursing leadership and personal experiences with demonstrating nursing leadership and facilitating and hindering factors were asked.

Results: Initially, nursing students find nursing leadership a vague and broad concept. On further questioning, it is clearly linked to quality of care, taking initiative, a proactive attitude, coordinating care activities and care that is in line with the wishes and interests of patients. Collaboration with patients and team members is important. Nursing leadership is also linked to their own performance, and the substantiation and reflection on practice situations. Students want to develop leadership competencies by asking questions to their supervisors and experimenting with behavior. Facilitating factors to develop nursing leadership are a safe work environment, with support and positive feedback of team members, and substantial focus on nursing leadership behavior during their internship. Work experiences and knowledge strengthens their confidence in being able to show leadership behavior. Participating in the study gave them a more concrete picture of nursing leadership.

Discussion: Like nurses, students see a clear relationship between nursing leadership and quality of care. However, like nurses, they do not experience it as a joint responsibility of the team. Nursing students link nursing leadership more as responsibility for their own performance and learning process and see opportunities to further develop nursing leadership during their internship. Talking about nursing leadership and what is means in practical behavior encourage awareness. They are, however, dependent of their supervising nurses and teachers at school.

Implications and future perspectives: These insights are input for nursing curricula and can be used to support nurse students at their internship. A closer cooperation between students, supervising nurses and teachers during internships is recommended to better align nursing leadership development in training and practice.

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1.3

FLANDERS NURSING HOME (FLANH) PROJECT: PROTOCOL OF A MULTICENTER LONGITUDINAL OBSERVATIONAL STUDY ON STAFFING, WORK ENVIRONMENT, RATIONING OF CARE, AND RESIDENT AND CARE WORKER OUTCOMES

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Background: While the demand for high quality of care in nursing homes is rising, it is becoming increasingly difficult to recruit and retain qualified care workers. To date, evidence regarding key organizational factors such as staffing, work environment, and rationing of care, and their relationship with resident and care worker outcomes in nursing homes is still scarce.

Aim(s): Therefore, the Flanders Nursing Home (FLANH) project aims to comprehensively examine these relationships in order to contribute to the scientific knowledge base needed for optimal quality of care and workforce planning in nursing homes.

Methods: FLANH is a multicenter longitudinal observational study in Flemish nursing homes based on survey and registry data that will be collected in 2023 and 2025. Nursing home characteristics and staffing variables will be collected through a management survey, while work environment variables, rationing of care, and care worker characteristics and outcomes will be collected through a care worker survey. Resident characteristics and outcomes will be retrieved from the Belgian Resident Assessment Instrument for long-Term Care Facilities (BelRAI LTCF) database. Multilevel regression analyses will be applied to examine the relationships between staffing variables, work environment variables, and rationing of care and resident and care worker outcomes.

Results: This study will contribute to a comprehensive understanding of the nursing home context and the interrelated factors influencing residents and care workers. The findings will inform the decision-making of nursing home managers and policymakers, and evidence-based strategies to optimize quality of care and workforce planning in nursing homes.

1.4
DEVELOPING CLINICAL ACADEMIC PARTNERSHIPS: THE SOUTHWEST CLINICAL SCHOOL MODEL

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Background: Research active hospitals with staff engaged in research have better patient outcomes, including patient confidence in care (1,2). The current health care labour crisis demands innovative and transformational strategies to retain and develop the nursing and midwifery workforce (5). NHS England has introduced a variety of policy imperatives to support nurses and midwives to pursue clinical academic careers (3,4). The implementation of these policies has resulted in local models to drive nursing and midwifery led research, which are largely under-researched in terms of how they have been implemented and their impact on workforce and patientcare.

Aim(s): 1) To illustrate the implementation of the local Southwest Clinical School (SWCS) Model, which consists of a partnership between the University of Plymouth and health and social care systems in the Southwest Peninsula of England. 2) To Demonstrate the importance of SWCS as a driver for developing nurse and midwifery led research, clinical academic pathways and mobilizing a research culture to improve practice.

Methods: The SWCS began in 2014 as a partnership between the School of Nursing and Midwifery, University of Plymouth and five acute hospitals and one integrated acute community and social care organization. A Nursing or Midwifery Professor, linked to each area, spends at least one day a week supporting the Chief Nurse's research strategy. There are a cadre of clinical fellows in each organization with time and/or funding to support the SWCS. Each partnership is working to respond to local need but there is also a consolidated strategic development across the whole. Stakeholder engagement with nursing, midwifery and research leaders and a co-produced approach has been key. Ongoing evaluation of interventions and impact will be presented across six themes.

Results: The six themes include: supporting/ mentoring developing and funding Clinical Academics; formalising relationships between the University and Hospitals, community and social care; working with local priorities (such as workforce issues, quality improvement, research relevant to the local need); developing mechanisms to support and engage the workforce; embedding knowledge exchange and dissemination; measuring local and wider impact.

Discussion: The SWCS demonstrates the local impact of implementing a national policy aimed at driving nursing and midwifery research in health and social care and developing the skills and retention of the workforce. It is a partnership aiming to meet the needs of the local area across the whole system, including hospitals, spices and care homes. Increasingly allied health professions support wider regional work with a drive to embed research into everyday nursing and midwifery care.

Implications and future perspectives: A research environment that empowers nurses and midwives to lead, participate in and deliver research, enriches the profession, supports practice and decision making, for the benefit of patients and the wider public (3). The SWCS Model is an example of the impact of driving research across a local area and has implications regionally, nationally and internationally in the development of the nursing and midwifery workforce as the drivers of change in challenged and complex health and social care.

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1.5

CONTEXTUAL FACTORS & SKILLS INFLUENCING QUALITY IMPROVEMENT IN ACUTE CARE: A QUALITATIVE DESCRIPTIVE STUDY

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Background: Healthcare today is characterized by continuous change to improve quality of care and patient safety [1]. Improvement projects need to have complex and multi-faceted interventions that are developed iteratively, like the PDSA-cycle, in response to obstacles and unintended effects [2]. Despite the strong growth of various quality improvement (QI) initiatives, there is however limited knowledge about the efficacy of this QI programs [3, 4]. The diffuse results that are found may be explained by contextual differences in which these initiatives were implemented [4].

Aim(s): This qualitative research study aimed to investigate the perspectives of nurses and nurse managers working in acute care hospitals regarding the contextual factors and skills that influence the effective utilization of PDSA-based QI at the microsystem level.

Methods: Semi-structured focus groups and interviews with nurses (managers) were organized to explore there perspectives about QI. A thematic analysis was performed with themes inductively emerging from the data.

Results: Nurses (managers) indicate the importance of contextual factors and skills which varies in each stage of the PDSA-cycle. First of all the type of trigger for the project can have a great impact on the motivation and outcomes. Clear (organizational) vision and goals can feed this triggers and motivation. During project execution, involvement, empowerment and decision latitude of the team, leadership skills, peer-to-peer feedback and insights in the PDSA-cycle are facilitators for QI. Additionally, the support of management, collaboration with physicians, availability of data infrastructure, and collaboration with quality experts can facilitate QI. On the other hand, limited financial support and resource availability were identified as major barriers.

Discussion: Motivation of clinical microsystems for QI projects is crucial and the impact of triggers for improvement on this motivation is an important insight [5]. The support of management and strategy deployment is crucial to feed the QI journey. Peer feedback is mentioned in recent research as a game changer and was also stated as facilitator by nurses (managers) [6]. Recent focus on nurse involvement, clinical leadership, empowerment and decision latitude tends to have an positive impact [7, 8].

Implications and future perspectives: The identified contextual factors and skills can provide valuable insight to managers and organizations in in establishing an optimal environment for quality improvement (QI) at the microsystem level. Future research should aim to quantify the impact of these factors on the QI culture and effectiveness of PDSA-based projects.

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1.6
EXPLORATORY STUDY OF FACTORS INFLUENCING THE DEPARTURE OF INTENSIVE CARE NURSES AND RETENTION MEASURES

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Background: A significant number of intensive care unit (ICU) nurses inform their intention to leave the profession, which leads a major risk of staff shortage [1].

Aim: The aim of the study was to describe and understand the factors involved in the departure of ICU nurses.

Methods: A cross-sectional exploratory study was conducted from 24 February to 9 April 9 2023. An online survey was available to nurses who had worked in ICU but left the sector between January 2018 and March 2023, in French-speaking Belgium

Results: A total, 78 nurses who left the ICU participated at the study. Factors that influenced the departure were mostly perceived workload (74.4%) and a vision of care that did not correspond to the reality on the ground (69,2%). Other causes mentioned by more than 50% of respondents were also responsible for the departure, including: a lack of harmony between private and professional life (65.4%), working hours (65.4% and (60.3%), the experience of ethical dilemmas (55.1%), the COVID-19 pandemic (51.9%), relationships with hierarchy (50%) and perceived physical load (50%).

Discussion: In this study, different factors appeared to have influenced the departure of nurses. Measures must be taken to limit nurses' intention to leave and allow nurses retention.

Limits: The study was based on a convenience sample (voluntary participation) and the survey may. The questionnaire may not have been clearly visible have (nurses who have left ICU are difficult to recruit). We do not know the representativeness of the sample (the number of nurses who left the intensive care sector in the 5 last years is unknown). Therefore, the present study cannot be generalised to the whole of Frenchspeaking Belgium.

Implications and future perspectives: The factors identified in this study can help guide policy-makers and healthcare managers in improving ICU nurse retention. Completing this study with a qualitative study will provide a better understanding of the complex mechanism of the departure of ICU nurses.

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1.7

FACTORS INFLUENCING THE FORMATION OF BALANCED CARE TEAMS: THE ORGANISATION, PERFORMANCE AND PERCEPTION OF NURSING CARE TEAMS AND THE LINK WITH PATIENT OUTCOMES: A SYSTEMATIC SCOPING REVIEW.

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Background: Building a well-balanced care team that is adapted to patients' specific contexts and needs can be challenging due to the complex interactions between a team's capacity, culture, context, and job demands. However, decision-makers lack effective tools to address these interactions, and there is limited knowledge on how to optimally compose a balanced care team.

Aim: To bridge this gap, we conducted a systematic scoping review of literature from 2009 to 2022, aiming to identify influencing factors that significantly impact the work environment, team performance, nursing outcomes, and patient outcomes.

Method: We conducted a comprehensive search of relevant literature published between 2009 and 2022. We used predefined inclusion and exclusion criteria to select studies for review. After identifying eligible studies, we extracted data and analyzed the findings to identify influencing factors related to building well-balanced care teams.

Results: 363 studies were included for data extraction and qualitative synthesis. We found that most of the research was conducted in the acute hospital care setting and in residential care. A descriptive cross-sectional design was used in nearly seventy percent of studies. In contrast, an experimental study design (RCT, CT) was used in only two included studies. We included 3 meta-analyses and 36 systematic reviews using qualitative data synthesis. Most of the literature has focused on nursing and patient outcomes. Using a comprehensive matrix, our systematic scoping review identified 35 influencing factors that significantly impact the work environment, team performance, nursing outcomes, and patient outcomes. These factors were categorized into nine overarching domains: workload, leadership, team composition, stress and demands, professional relationships, safety, logistics and ergonomics, autonomy and responsibility, and transparency and task clearness.

Discussion: The identified factors from our scoping review offer valuable insights for policymakers, decision-makers, and nursing leaders in their efforts to improve the healthcare system. Policymakers and decision-makers should prioritize modifications to these factors to attract and retain nurses, while nursing leaders can utilize them to create well-balanced care teams that align with the demands of the healthcare setting and consider contextual factors. Addressing these factors can have significant positive impacts on patient outcomes and enhance job satisfaction among nurses. By optimizing workload, implementing effective leadership practices, carefully considering team composition, and addressing other identified domains, decision-makers and nursing leaders can contribute to a resilient workforce, ensure high-quality care, and enhance patient safety. To further advance the understanding and implementation of balanced care teams, it is recommended that future research delves deeper into this concept. Investigating the potential benefits and limitations of balanced care teams will provide valuable insights for decision-makers and nursing leaders. Additionally, integrating this research into decision support systems can aid in the achievement of balanced care teams by optimizing a team's capacity to meet specific demands while taking contextual factors into account. This will ultimately contribute to the improvement of healthcare delivery and patient outcomes.

Implications: The findings of our scoping review have important implications for practice and research. Practically, decision-makers and nursing leaders can utilize the identified factors as a guide to improve the work environment and team dynamics. They can make strategic changes to workload distribution, leadership practices, team composition, and other domains to foster a well-balanced care team.

For research, our scoping review highlights gaps in the current body of knowledge, indicating areas where further research is needed. Researchers can focus on exploring these gaps to deepen the understanding of how these factors interact and influence care team dynamics, job satisfaction, and patient outcomes. This will contribute to evidence-based practices and support the ongoing development of effective strategies for building and maintaining well-balanced care teams.

1.8
DEVELOPING AND TESTING A REFLECTION METHOD FOR THE USE OF THE INFORMAL CARE GUIDELINE IN COMMUNITY NURSING

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Background: Because of the changes in the healthcare, the role of the informal caregiver in taking care of relatives becomes even more important. Professionals have an important role in identifying, preventing, and reducing overload of informal caregivers. Therefore the clinical guideline 'Informal Care' was developed. Clinical practice guidelines aim to support clinical decision-making. However, they are often regarded as too extensive and limited applicable to the individual client. Strategies such as reflective practice are needed to improve guideline use in clinical practice.

Aim(s): This study aims to develop a reflection method to improve adherence to the Dutch guideline "Informal Care" for community nurses and certified nursing assistants.

Methods: A participatory design-based study was conducted, in which a design group, including community nurses, certified nursing assistants and a patient representative, and four test groups of nurses were formed to develop a reflection method that matches needs and preferences of its end-users. The design and test group meetings were video recorded, and analyzed and discussed iteratively with the design and test groups to adapt and refine the reflection method.

Results: Critical features for the reflection method were identified, and a final reflection method was developed. This reflection method includes two 2-hour meetings with up to six participants and a coach as a process facilitator. Participants appreciated the game element in the reflection method. It is an accessible way to work with specific cases about informal care and to come to actions. Participants were enthusiastic about discussing care for informal caregivers together based on the questions derived from the guideline. It appeared that participants had very limited knowledge about guidelines in general and also concerning the 'Informal Care' guideline.

Discussion: This study found that participants had little to no knowledge of guidelines in general and its use in daily practice in community care. A lot of research has been done about the knowledge that healthcare professionals have about specific guidelines they work with. However, no studies were found that address basic knowledge of guidelines in general. The participatory design-based approach allowed the reflection method to be developed with the end-users, ensuring a match with their nursing practice (2). The reflection method is a result of a co-creation process between researchers and end-users. A participatory design-based design produces results for that specific context and therefore it is difficult to generalize to another context. However, critical features were established, which are expected to be transferable to other contexts.

Implications and future perspectives: A reflection method for community nurses and certified nursing assistants for the use of the Guideline 'Informal care' was developed, which supported them to identify, prevent, and reduce overload of informal caregivers. To properly implement the reflection method within home care organizations, it is important to thoroughly examine the barriers and facilitators, and identify matching implementation strategies.

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1.9

THE EFFECTIVENESS OF DIFFERENT CARE DELIVERY MODELS IN A HOSPITAL SETTING ON PATIENT AND NURSE RELATED OUTCOMES: A SYSTEMATIC REVIEW

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Background: Worldwide, countries are dealing with nursing shortages, cost containment in nursing care and an increasing need for health care [1]. Alternative ways of organizing nursing care could be of value. Therefore, the organization of nursing care with the use of care delivery models should be of renewed interest. The most commonly known nursing care delivery models are total patient care, functional nursing, team nursing and primary nursing [2].

Aim: The aim of this literature review was to synthesize the effectiveness of different care delivery models in a hospital setting on patient and nurse related outcomes.

Methods: A systematic literature review towards studies in which a quantitative comparison was made between different care delivery models was executed. The search string consisted of four clusters: care delivery models, nursing, ward/hospital setting and the research designs. Four electronic databases were searched, looking at studies published between 2000 and January 2023: Medline (Pubmed & Embase), CINAHL and Web of Science. Exclusion criteria were emergency departments, delivery rooms, psychiatry, outpatient clinics and military hospitals. Papers reported in English, French, German, Dutch or Italian were included in this review.

Results: In total, 22 studies were included in this systematic review. These studies reported mostly a comparison between two care delivery models. The care delivery models most frequently compared in studies were primary nursing, functional nursing and team nursing. Only one randomized controlled trial was found, other included studies were pretest-posttest, quasi-experimental or cross-sectional designs. Studies reported almost all different outcomes. Only job satisfaction, patient satisfaction and quality of nursing care were reported several times. Due to this high heterogeneity in outcome measures between the studies and limited significant findings, a meta-analysis or even only a comparison between the included studies was difficult to conduct.

Discussion: This systematic review found mixed evidence, inconsistent reporting, heterogeneity in outcome measures and lack of long-term effectiveness and thereby indicates a limited knowledge base on the most effective nursing care delivery model. This leads us to question the knowledge base on nursing care delivery models, although a knowledge base is needed to further develop nursing and to counter the future challenges.

Implications and future perspectives: This systematic review gave us, although limited, some insights on the effectiveness of care delivery models and policy options in hospitals. The development of a core outcome set could be beneficial to advance the field of research in care delivery models. In addition, a qualitative evidence synthesis could give us a better view on the factors influencing the implementation of different care delivery models.

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1.10
CORRELATION OF MORAL DISTRESS AND MORAL SENSITIVITY OF NURSES WITH SAFE NURSING CARE

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Background: Moral distress is the situation in which healthcare professionals and nurses know the moral principles that should guide their actions but are not allowed by the constraints of the health system in which they work [1, 2]. Nurses, often face moral challenges that lead them to moral distress, as they must make difficult life-or-death decisions for their patients [3]. Moral sensitivity is the ability of nurses to perceive the moral dimensions of certain situations or actions. Safe care is a range of services provided to individuals/patients or societies, by health professionals and consequently nurses with the aim of monitoring, promoting, maintaining or restoring the health of patients. Moral impasse negatively affects safe health care. Moral sensitivity has generally been touted as the solution to moral distress.

Aim(s): The purpose of the present study is to investigate the relationship between both moral distress and moral sensitivity of nurses with safe nursing care.

Methods: A total of 163 Registered nurses from a Greek General Hospital participated in the research. The study included the Moral Resilience (RMRS), Safety Attitudes: Frontline Perspectives from this Patient Care Area, Moral Impasse (MMD-HP) and Moral Sensitivity Control (Byrd's NEST) scales.

Results: For the RMRS scale, higher scores are recorded for the moral efficacy dimension. Moderate scores are recorded for the MMD-HP scale, so health professionals are characterized by moderate moral sensitivity. Nurses answering Byrd's NEST scale are characterized by moderate moral sensitivity. Research shows that the greater the integrity of the relationships, the greater the reactions to moral adversity. The greater the moral distress, or the better the perceptions of the security offered by management, the greater nurses' personal integrity. As relational integrity or the moral distress measure decreased, moral efficacy increased. The higher the moral distress of the nurses, the greater the integrity of the relationships. Nurses who had children also felt more secure about working conditions than those who did not. The greater the dynamics of the clinic, the less reactions to moral adversity. Finally, greater moral distress was associated with both greater personal integrity and greater relational integrity, and less moral efficacy.

Discussion: Increased ethical sensitivity prevents the occurrence of ethical impasses and has a positive effect on the provision of safe health care. Moral sensitivity leads to moral resilience which is the antidote to moral dilemmas and ensures safe nursing care.

Implications and future perspectives: Low number of participants in this research study prevents us from generalization of our results. Future research should be done in other hospital settings as well.

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1.11
"I DON'T WANT TO FAIL THE NURSES": OPPORTUNITIES & BARRIERS FOR IMPACT OF PATIENT ACTIVATED RAPID RESPONSE SYSTEMS

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Background: Patient Activated Rapid Response (PARR) represent two of the 10 quality metrics by the Society for Rapid Response Systems (1). There is no standardised way to measure effectiveness of this service and published data suggests low call-out rates (2).

Aim(s): To develop a framework for effectiveness of PARR by describing opportunities and barriers.

Methods: Prospective observational service evaluation of a PARR based on the Call-4-Concern model (3). The service was tested in a cohort of patients recently discharged from the Intensive Care Unit (ICU).

Opportunities for PARR were defined as abnormal vital signs resulting in a National Early Warning Score (NEWS (4)) of 3 or more and other safety critical events (pain score ≥ 4, excessive post-operative bleeding and fever ≥ 38°C).

Clinical records from 9 patients were analysed, and 5 patients were interviewed about their experience of the service and barriers to activation of PARR during a two-week period.

Results: Post-ICU observation periods ranged from 4 to 12 days. Health literacy was not formally assessed but nearly half of the patients came from areas with a high index of multiple deprivation.

Patients had between 1 and 20 opportunities (median 2) for callouts: 31 occasions of high NEWS scores, 1 instance of a significant bleed, 10 elevated pain scores and 7 episodes of pyrexia. 5 patients had a Rapid Response Call-out. Patients or relatives raised concerns about conditions including severe hyperglycaemia, mental deterioration, and prolonged constipation.

Some patients had handed information about PARR to their relatives, and some had forgotten about the introduction to the service due to post-ICU delirium. Patients voiced concern about undermining overstretched nurses: "I don't want to fail the nurses." Integration into usual workflow was suggested: "This will make it easier for the patients to use the system, because they will understand that it is a 'normal' thing to do."

Discussion: Certain conditions might need to be met before patients will actively use the RRS. Patients expressed a need of spreading more awareness around rapid response systems and the use of it. The healthcare professionals are still seen as the experts, which might be barrier for patients to use the system Feelings such as betrayal or being unpolite towards the ward team when calling for concern is a major barrier that needs to be overcome by informing the patients correctly.

Lastly, our findings indicate the importance to include the family when spreading information about the RRS. Since they can also use the system, especially when patients aren't capable do use it themselves for example during period of deterioration.

The interviews were held in a single site hospital only including only adult patients discharged from the ICU to a medical/ surgical ward and a total of only five interviews were conducted due to the few discharges during the interviewing period, which was a short period of only one week. This has its implications on the transferability.

Implications and future perspectives: The number of opportunities for the activation of PARR was low. A possible metric for effectiveness could be the percentage of escalated opportunities (no of calls / number of trigger events). Concerns and suggestions by patients require further consideration: integrating information about PARR into pre-operative assessments or training patient programmes ('Joint school') and information packs for patients and relatives warrant further exploration to 'normalise' activation of the service.

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1.12
DEVELOPMENT OF A DIGITAL, HIGH-QUALITY AND USER-FRIENDLY PLATFORM FOR FAMILIES WITH (EX-) PREMATURE INFANTS

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Background: An emotional, difficult, stressful period starts for parents when their baby is admitted to the neonatology. Parents are looking for online information regarding prematurity and neonatal intensive care1,2. However, professionals are concerned about the quality and accuracy of this online information. Additionally, support and care for families with a premature infant is fragmented, often unknown by parents and caregivers, partly due to regional differences3. Therefore, a digital platform 'Too early' is developed for parents with (ex-) premature babies.

Aim(s): The objective of this platform is to bundle relevant, qualitative, reliable and evidence-based information around prematurity for parents with (ex-) preemies.

Methods: A user-centered design (UCD) model is used to develop the platform. This iterative design process, consists of four stages: (1) understand the context of use, (2) specify user requirements, (3) design solutions and (4) evaluate. Key elements in the UCD model is active involvement of end-users, focusing on the needs of parents as well as a multidisciplinary approach.

Results: A users' group of parents and advisory board with different experts and stakeholders was created. We explored needs of parents, based on previous research and a literature review. Existing resources for parents were mapped. The content of the platform, its priorities and functionalities were defined in a design sprint with parents. This results in a first version of the platform with following pages, validated by the advisory board: (1) homepage with general information about prematurity, (2) page 'on neonatology', (3) page 'discharge', (4) page 'peer support' with testimonials, (5) dictionary explaining medical and other terms and (6) contact page. Currently, pages on selfcare, follow-up of the preemie, feeding and financial/administrative issues are explored. An evaluation of the platform among parents is planned between October 2023-March 2024.

Discussion: This digital platform, developed through an innovative, user-centered approach with active involvement of parents, is a unique tool to help families with preemies and guide them to the appropriate care and support, thereby bundling relevant information and resources about prematurity.

Implications and future perspectives: Although the co-creation approach optimizes the conditions for a successful implementation, efforts are needed to promote and sustain the platform, in order to become the reference platform for prematurity in Belgium.

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1.13
RENURSE CONSORTIUM - OPTIMIZING NURSING RESEARCH

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Background: Scientific research in hospitals conducted by nurses and nurse researchers gained increasingly more attention in the last decade. Strengthening evidence-based nursing care not only positively influences the outcomes for patients, but also the nurses' work experience, as it increases control over their own practice [1][2]. Conducting scientific research stimulates the interdisciplinary collaboration with doctors and paramedics, and generates scientific output by means of publications and presentations. To provide an academic nursing infrastructure, a professor of Nursing Science, senior nurse researchers, managers and board members of ten Dutch Top Clinical Training Hospitals formed the RENurse consortium in 2017 [3].

Aim(s): The RENurse consortium aims to improve the quality of nursing care in hospitals by developing, disseminating and applying state-of-the-art nursing knowledge.

Methods: The RENurse consortium members collaborate in 1) teaching research skills to junior nurse researchers, 2) writing research grants, 3) conducting research in the participating hospitals, and 4) publishing results in scientific journals and presenting at conferences. The research program includes themes related to nursing outcomes, professional development and organization of care. Typically, the nurse researchers bring forward the themes that need investigation by writing a proposal. Following the approval of the senior researchers, they conduct the research in the participating hospitals, often in collaboration with peer nurse researchers within the consortium (and always under supervision of the senior nurse researchers).

Results: Since its inception in 2017, the RENurse consortium has expanded to fourteen hospitals. Thus far, the nurse researchers conducted nine research projects, of which four are still ongoing. Topics include 'nurses' knowledge regarding older patients', 'influencing factors of continuing professional development over a nursing career', and 'self-efficacy in Evidence Based Practice'. The results have been disseminated by means of seven publications in peer reviewed national and international journals. In addition, the researchers have presented their research at various conferences, both national and international. The RENurse consortium includes two PhD students. Recently two junior researchers were successful in obtaining grants.

Discussion: The RENurse consortium has proven to be a successful collaboration. However, the success is linked to the availability of senior researchers. Junior researchers take an average of 4-6 years to write a grant application or publication independently. To access more senior research capacity, it is important to collaborate with multiple universities and colleges. Also, hospital administrators can invest in these collaborations by funding professorships and chairs within which junior researchers and nurses can develop research skills.

Implications and future perspectives: In the coming years, the RENurse consortium is committed to further building the knowledge and academic infrastructure in the Dutch Top Clinical Teaching hospitals. The challenges they face in the coming years are staff shortages, rising demand for care and cuts in care budgets. Hence, together, the consortium members have conducted a knowledge agenda 2023-2026:

1. Care well for nurses (including inclusiveness, training, career opportunities, retention, positioning nurse scientist)
2. Care well for patients (including strengthening self-reliance, self-management and patient control)
3. Take good care of the (work) environment (including autonomy, interdisciplinary collaboration, green and climate-neutral care).

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1.14
A HUMAN FACTORS APPROACH: OPTIMIZING ORGANIZATIONAL STRUCTURES AND PATIENT OUTCOMES ON A MEDICAL WARD

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Background: Patient safety is one of the major priorities in acute care hospitals. A large number of patient experience adverse events. Root cause analysis demonstrates that aspects of human factors such as incorrect teamwork and ineffective communication are one of the underlying characteristics of adverse events1. Human factor research focuses on improving the work environment and the interactions between people within that particular work environment1. Specific interventions within human factor research are aimed at improving the system. Due to pathology without a clear diagnosis, uncertain treatment and unambiguous procedures medical wards are highly complex. Therefore, to face these complex work environments clear nursing ward organizational structures, processes and collaboration between nurses and physicians are a necessary precondition for achieving high-quality patient care2. In this study we used the SEIPS 2.0 model to conceptualize the intervention. Which was based on three pillars: the principles of Lean The Productive Ward, concepts of TeamsSTEPPS and Evidence Based Best Practices3-5. To evaluate patient outcomes and process statistical process control charts were used6.

Aim(s): The aim of this study was to evaluate nurse sensitive outcomes and serious adverse events after implementing the hospital quality improvement program.

Methods: Quantitative observational descriptive design with retrospective data-analysis. Statistical Process Control Charts were used to analyze the data. Implementation of the hospital improvement program at a medical ward took place in March and April 2018.

Results: 4884 patient records were evaluated. No statistical differences were established at the level of nurse sensitive outcomes, unexpected death and cardiac arrest. Significant improvement was found at the level of unplanned ICU admissions.

Discussion: Optimizing the organizational structure of the nursing ward shows a positive effect on unplanned ICU admissions. Due to the study design and sample size caution must be taken into account to generalize the results.

Implications and future perspectives: Further research is recommended to study the causal effect of the quality improvement program within the context medical and surgical nursing wards.

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3.1

AN INVESTIGATION OF THE GERMAN VERSION OF THE CARE DEPENDENCY SCALE FOR SELF-ASSESSMENT BY OLDER PERSONS IN SUPPORTED HOUSING

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Background: With increasing age, older people are at risk of becoming care dependent. Care dependency should be detected at an early stage to prevent further complications. In institutional settings, care dependency is assessed by professional caregivers, but in settings where older people live independently, self-assessment is required. Supported housing facilities in Austria are a setting where early identification of care dependency is necessary to ensure that residents receive support that meets their needs. A well-established instrument that allows both proxy- and self-assessment of care dependency is the Care Dependency Scale (CDS) [1]. Psychometric testing of the scale revealed different factorial structures depending on the country and setting where it was applied. Whereas older studies in hospitals and nursing homes identified a single underlying factor [2]., more recent studies in an ICU [3]. and among home-dwelling older persons [4] found a two-factor structure with one factor related to physical care and one factor related to psychosocial care. The factorial structure of the CDS, therefore, needed clarification prior to its application in supported housing.

Aim(s): The aim of this study was to determine the factorial structure of the German version of the CDS for self-assessment in assisted living in Austria and to determine how the scale relates to the established assessment of care levels according to the Austrian care insurance.

Methods: In a cross-sectional study self-assessments of care dependency were obtained from residents in supported housing in Austria. In a first step, exploratory factor analysis was used to determine the factorial structure of the scale. In a second step, the resulting factor models were compared by confirmatory factor analyses with a single factor model regarding the best fit. CDS total score and sum scores of the identified factors were correlated with externally assessed care levels according to the Austrian care insurance.

Results: 48.2%. of the residents in supported housing participated, but some of them were younger than 60. According to exploratory factor analysis the scale had three factors with two variants in the distribution of items, depending on whether people over 59 were included in the analysis or not. The second variant showed the best fit in confirmatory factor analysis. CDS total score and sum scores of the identified factors showed statistically significant correlations with externally assessed care levels.

Discussion: The three-factorial structure shows that older persons in supported housing distinguish between different aspects of support that they consider to be the task of different service providers. However, several cross-loadings of items limit the discriminant validity of the identified factors and indicate an ambiguous understanding of support needs among independently living older persons.

Implications and future perspectives: A modified version of the CDS for the self-assessment of independently living older people may capture more clearly the different kinds of underlying support needs that are relevant for this target group.

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3.2

MOTIVES OF CAREGIVERS IN HOME CARE ON THE USE OF COERCION IN THEIR CLINICAL PRACTICE: A QUALITATIVE STUDY

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Background: Despite an increasing focus on patient engagement, the use of coercion still appears to be present in all domains of healthcare. This causes "daily-practice" ethical dilemmas where more explicit forms of coercion tend to receive the most attention, while more subtle forms of coercion seem to be overlooked1.

Aim(s): The study aimed to gain a deeper understanding of the motives of healthcare practitioners working in mental healthcare, home care and nursing homes in situations that could lead to the use of coercive acts.

Methods: A qualitative, descriptive design was set up based on principles of respectively critical incident methodology2 , simulation-based education3and thinking aloud methodology4. Ten caregivers from one home care organisation and eleven bachelor nursing students from one university of applied sciences took part in the study. A three-phase data-collection process was utilised. Firstly, participants were invited to describe authentic situations where coercion was used in their daily practice. Secondly, participants were exposed to simulation scenarios derived from the collected situations in phase one, and subsequently interviews were conducted to unravel participants' underlying motives. Thirdly, participants were exposed to a fictitious but realistic scenario. They were encouraged to speak out all their occurring thoughts and feelings passing through the scenario presented. Consequently, underlying motives for the use of coercion could be uncovered. Rigorous rounds of data analysis took place after each phase of data collection.

Results: The following overarching themes emerged from the data: building a trustful relationship, acting proactively and guaranteeing safety. All interviewed participants emphasised the importance of building a trustful relationship with the patient, as conveying trust was considered essential to gain access to the home of the patient. Once nurses perceived a trustful relation was installed, analysis of the interviews showed how informal ways of coercion appeared in their interactions with the patients when the patients' health or safety was comprised. To prevent these situations, nurses acted proactively by warning patients for potential healthcare risks, or by persuading patients to comply with safety precautions to avoid these risks.

Discussion: The findings of this study displayed how caregivers in home care wanted to act responsibly by maintaining control. Safeguarding and containing the patient's behavior were the main drivers to use informal coercion. In contrast, fewer attention was paid to the personal narrative of the patient and the meaning of the non-compliant behaviour5.

Implications and future perspectives: Continued authentic dialogue between and within a diverse group of caregivers and patients can promote the paradigm shift towards person centered care with less disproportionate use of coercion. Therefore, the insights of the study appeal to develop reflective practices in home care settings, both on individual and group level.

Limitations of the study is that only one nursing organisation was involved in the study and only one scenario was used in phase 2 and 3 of the data collection. However, the scenario was perceived as very representative by all participants.

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3.3
EARLY BIRD PROJECT: TRANSMURAL CARE FOR PATIENTS WITH MAJOR TRAUMA

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Background: Quality improvement initiatives should not only focus on increasing survival rates, but also on optimising quality of life [1]. Little is known on the needs of major trauma patients, once discharged from hospital [2].

Aim(s): Early identification of trauma patients' physical, psychological, and social needs, arising post-discharge. Promoting initiation of targeted interventions/support.

Methods: The project was coordinated by a nurse specialist, in close collaboration with social workers. It consisted of five consecutive phases: 1) first estimation of patient's needs, during hospital stay and at one week post-discharge; 2) identification of needs at 3 weeks, 3 months and 12 months after the accident, using validated questionnaires (PROMIS® 29+2, EQ-5D-5L); 3) clarification of needs post-discharge, by telephone; 4) targeted interventions/support; 5) multidisciplinary team meetings with partners from hospital and first line.

Results: A total of 70 major trauma patients participated in the project. In 10 (14.3%) patients, unmet needs were identified at 1 week post-discharge. Preliminary results indicated that additional interventions were needed in 11/69 (15.9%) patients at three weeks follow-up, and in 7/61 (11.5%) patients at 3 months. Limitations in the physical, social and psychological functioning were identified at all points of follow-up. Patients appreciated the practical and psychological/emotional support, as well as the availability of support if needed.

Discussion: An important part of major trauma patients may benefit from additional support post-discharge, to optimise quality of life. A collaboration between a nurse specialist and social workers was effective in supporting or referring most patients. In complex cases, a multidisciplinary team meeting, involving intramural and extramural partners, was of great value. A strength of our project was, that all non-respondents got a telephone call to explore possible needs for support.

Implications and future perspectives: Long-term follow-up of major trauma patients is essential, but requires sufficient personnel and resources.

A strong need exists for specific initiatives to recognise these patients and to promote their functioning, quality of life and social participation.

A long-term, large scale study is recommended to draw strong conclusions on the extent of unmet needs in major trauma patients and possible influencing factors. Future studies should also focus on (cost-)effective strategies to timely identify and support major trauma patients and their families.

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3.4

OPTIMIZING THE TRANSMURAL CLINICAL CARE PATHWAY FOR PERSONS WITH DISORDERS OF CONSCIOUSNESS IN COLLABORATION WITH RELATIVES: A QUALITATIVE STUDY

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Background: The current transmural clinical care pathway for the rehabilitation of persons with disorders of consciousness (PwDOC) was developed in collaboration with different healthcare professionals. However, no information was available of persons directly involved.

Aim(s): The aim was to investigate whether relatives of PwDOC received sufficient support on psychological and administrative level and whether provided care is in accordance with their expectations and experiences. In addition, possibilities to involve relatives to the healthcare and decision making process were investigated.

Methods: Relatives of PwDOC, enrolled in the transmural clinical care pathway in Noorderhart Mariaziekenhuis (acute hospital) and Noorderhart Rehabilitation & MS were contacted by telephone for voluntary participation. Nine out of eleven relatives filled in a questionnaire about education, (para)medical information, satisfaction, interdisciplinary team, etc. Results were used for preparation of three focus groups (FG) that were organized addressing following themes: acute phase (n=3), rehabilitation phase (n=6) and discharge/follow-up (n=3). The study was led by a nurse practitioner and two staff members with active involvement of a rehabilitation physician. FG were video recorded after which transcription verbatim and thematic analysis was performed.

Results: Nineteen themes were discussed, of which following were retained: education of relatives, (para)medical information to relatives, psycho-emotional support, residence after rehabilitation, end of life/ DNR. Relatives' perception of PwDOC differs from reality. They don't know the meaning and different phases of disorders of consciousness. Further, there's need for more involvement of relatives in the transmural clinical care pathway. Relatives received sufficient psycho-emotional support from different professionals. There's a lack of facilities for housing PwDOC and there are long waiting lists. In addition, support/information about options and possibilities of residences after the rehabilitation program is missed. Although being reluctant/afraid of conversations about end of life/DNR, relatives indicated that talking about it is important and necessary.

Discussion: Psychological and administrative support are sufficient. Provided care is partly in accordance with expectations and experiences. Therefore the transmural clinical care pathway needs to be adjusted. There's a need for more involvement of relatives during an interdisciplinary team meeting, by a communication notebook, etc. Although the small sample size, study results are valid and reliable because of the small volume population. Because admission of some PwDOC was long time ago, it may be possible that information about the transmural clinical care pathway may have been forgotten due to a recall bias.

Implications and future perspectives: The next steps are: to inform the interdisciplinary team and relatives about results, adapt the transmural clinical care pathway, form initiatives to optimize communication between the interdisciplinary team and the relatives and form education for relatives.

3.5

THE TURKISH ADAPTATION OF THE PRESSURE INJURY PREVENTION BARRIERS QUESTIONNAIRE: VALIDITY AND RELIABILITY STUDY

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Background: Nurses are health professionals who have the most important role and responsibility in terms of preventing the development of pressure injuries. It is reported that nurses are not effective in preventing pressure injuries due to various barriers [1,2]. However, an assessment and measurement tool adapted to the Turkish population to identify pressure injury prevention barriers is not available.

Aim(s): This study aimed to evaluate the validity and reliability of the Turkish version of the Pressure Injury Prevention Barriers Questionnaire.

Methods: A methodological study design was used. The research was conducted with a total of 600 nurses working in a university in Istanbul between 2021 and 2022. The instrument was translated into Turkish and back-translated into English. Internal consistency analyses were performed with Cronbach's alpha coefficients and item analyses, construct validity with confirmatory factor analysis (CFA), and content validity with content validity index (CVI) [3]. The ethics committee approval of the study was obtained (16.11.2021/272). In order to determine its invariance over time, the Pressure Injury Prevention Barriers Questionnaire was administered to 150 nurses with an interval of two weeks, the test-retest method was used and in-class correlations were calculated. The data were analyzed with the SPSS 22 and Lisrel 9.2 package programs. The number, percentage distributions, item-total score correlation, and consistency coefficient, intra-class correlation coefficient (ICC), Kappa coefficient test were used to evaluate the data.

Results: The content validity index of the questionnaire was calculated as 0.92. With the confirmatory factor analysis, it was determined that the fit index values were at an acceptable level and the model was suitable. As a result of factor analysis, the questionnaire was gathered under three factors. It was determined that Factor 1 was 0.93, Factor 2 was 0.85, and Factor 3 was 0.77, and these values were found to be reliable. After CFA, item-total score correlation values and factor loads were observed to be 0.30 and above in all sub-dimensions. According to Confirmatory Factor Analysis, the fit values were NC=3.620, RMSEA=0.066, CFI=0.925, SRMR=0.091, GFI=0.922, and AGFI=0.857. The questionnaire's general internal consistency coefficient (Cronbach's Alpha) coefficient was highly reliable with 0.914. When the correlation between the Pressure Injury Prevention Barriers Questionnaire sub-dimensions and total scores was examined, a high level and statistically significant correlation was found ($p<0.05$; $p<0.01$).

Discussion: It was demonstrated that the Pressure Injury Prevention Barriers Questionnaire was appropriate in terms of language and content validity. At the same time, it was found to be a reliable tool for intercultural studies revealing the nursing barriers in the prevention of pressure injuries. As a result, it was determined that the Turkish version of the Pressure Injury Prevention Barriers Questionnaire is a valid and reliable tool. Implications and future perspectives Bringing this measurement tool into Turkish will reveal the barriers to preventing pressure injuries of nurses and will determine the strategies for the solution [3].

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3.6

DYNAMICS AND PROCESSES IN THE PERCEPTION OF COLORECTAL CANCER PATIENTS FACING SKIN TOXICITY DUE TO AN EGFR-I

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Background: Epidermal growth factor receptor inhibitors (EGFR-I), such as cetuximab and panitumumab, are treatments that are frequently used in patients with metastatic colorectal cancer (mCRC). An important side effect of these treatments is skin toxicity which has a negative impact on patients' quality of life.

Aim(s): The aim of this study is to explore the dynamics and processes in the perception of colorectal cancer patients facing skin toxicity due to a EGFR-I.

Methods: An exploratory qualitative study was conducted, based on the principles of grounded theory. Fifteen semi-structured interviews were performed within two settings. In a first phase maximum variation sampling was used and in a later phase, based on the preliminary results, theoretical sampling was used. The data were analyzed in a cyclical process through thematic analysis and using investigator triangulation. For the main themes data saturation was achieved.

Results: The dynamics and processes of the perception of skin toxicity were situated in three impact areas. First, patients described an impact on themselves due to the confrontation with symptoms, lower self-esteem and feelings of shame caused by the visibility of skin toxicity. This also affected their ability to cope with it and their self-management. Second, patients outlined an impact on others. Finally, patients stated that healthcare professionals (HCPs) provided emotional support and helped their coping process. In contrast, negative comments of others or from HCPs could lead to insecurity or frustration.

Discussion: The interviews revealed an ambivalence between struggling and tolerating skin toxicity. Thereby, skin toxicity could be tolerated since they saw it as a sign of a well-functioning cancer treatment. Research does confirm a relatively positive relationship between skin toxicity severity and tumor regression [1,2]. Additionally, restarting this targeted therapy gave hope when their previous cancer treatment did not have a favorable outcome. This hope may also promote tolerance of skin toxicity [3]. Next, previous research linked fear, frustration and shame to skin toxicity [3,4] which has been explored in more depth in our research.

Implications and future perspectives: Despite skin toxicity being an expected side effect of EGFR-I therapy, the interviews revealed that this side effect had a large impact. Therefore, this study emphasizes the importance of discussing this side effect with the mCRC patient in advance as a HCP and to counsel the patients and their relatives in depth when confronted with this skin toxicity. Thereby,

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3.7
THE EFFECTS OF BREATHING EXERCISES ON HEART RATE VARIABILITY AND BREATHING FREQUENCY IN CANCER PATIENTS

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Background: Nearly half of all patients with advanced cancer can experience symptoms such as pain, fatigue, insomnia, anxiety, depression and cognitive impairment often referred to as the symptom cluster [1,2]. An important system which influences the related symptom cluster, is the autonomic nervous system (and vagus nerve) which can be measured by means of heart rate variability (HRV). A higher HRV is a signal of good adaptation of vagus nerve activity and characterizes an efficient autonomic mechanism, whilst a lower HRV is an indicator of insufficient adaptation, which in turn might provoke poor physiological function and quality of life. The vagus nerve can be stimulated by means of invasive stimulation techniques although they often go along with side-effects. Therefore, a non-invasive stimulation technique such as deep breathing is a preferred method to increase HRV.

Aim(s): This study aimed to examine the effects of deep breathing exercises on HRV and breathing rest rate in cancer patients by means of subjective and objective measures.

Methods: Participants in the study followed a 6 week program. All participants were assessed for the symptom cluster by means of validated questionnaires and their HRV and breathing rest rate by means of an objective HRV measurement during pretest and posttest. During the first session, participants received instructions for the breathing exercises according to a validated protocol by Lehrer et al. (2013) [3]. All participants were asked to practice these exercise at home twice daily by means of a Heart Math® visual breathing guide. During these 6 weeks, all participants took part in two follow-up interviews with one of the researchers. The multi-disciplinary research team consisted out of 2 nurses, 2 physiotherapists and 1 psychologist.

Results: In total, 21 cancer patients started the study of which 12 patients completed full assessment at pretest and posttest. The HRV measure is expressed by means of SDNN which is the standard deviation of the time interval between heart beats (NN). A minimal SDNN of 50 ms is considered normal. After following the program, the mean SDNN measures of the participants was increased from 43,55ms to 49,5ms (+14%). Breathing pace at rest is considered normal for adults when between 6-18breaths/min. After following the 6 week program, the mean breathing rest rate of the participants decreased from 11,25 breaths/min to 9,84 breaths/min (-13%).

Discussion: Although breathing exercises can be a promising method to increase HRV which in turn might improve the symptom cluster, larger sample sizes are needed to continue to examine effects of deep breathing on HRV and health outcomes in cancer patients. Furthermore, long term support for participants is needed in order for the participant to continue the breathing exercises at home after completion of the study.

Implications and future perspectives: Efforts are made to increase the current sample size although the targeted population comes along with a higher drop-out considering the higher mortality and morbidity. Second, oncology nurses are encouraged to get acquainted with breathing techniques so that patients can receive instructions and support to maintain these exercises at home.

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3.8
CLINICAL EFFECTIVENESS OF THE CORRECTED NEX DISTANCE FORMULA IN DETERMINING THE INTERNAL LENGTH OF NG TUBES

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Background: Correct determination of the internal length of a nasogastric tube (NGT) is of utmost importance before the tube can be inserted blindly (i.e. without direct visual guidance from technology), a procedure frequently performed by nurses. The nose-earlobe-xiphoid (NEX) distance formula is commonly used for this purpose. However, this method lacks robust evidence to support its accuracy.1 A recent randomized controlled trial introduced an alternative, the corrected NEX distance formula, tested preliminarily in an observational study.2,3 However, applicability of this research-based formula in standard clinical practice remains uncertain.

Aim(s): This study aimed to evaluate the real-world clinical effectiveness of the corrected NEX distance formula for NGT length determination in adult patients in hospital or intensive care units.

Methods: This monocentric retrospective clinical effectiveness study utilized routinely collected observational data from adult patients (≥18 years) admitted to a general hospital, and requiring nasogastric tube placement between October 2020 and November 2022 (n = 358). The primary outcome assessed NGT tip positioning (with a correct tip position >3 cm below the lower esophageal sphincter) by an advanced practice nurse (APN) through X-ray verification. Additionally, secondary outcome data, obtained from patient records, related to tip position reporting by reviewing radiologists, were collected from a random subset of 100 participants.

Results: All NGT tips achieved correct positioning, remaining more than 3 cm below the LES. In the subset of 100 NGTs, the X-ray protocols, as documented by the reviewing radiologists, exhibited varying levels of reporting clarity regarding the tube tip. Specifically, these protocols indicated no report of the tube tip in 4.0% of cases, ambiguous descriptions in 33.0% of cases, and unambiguous reporting in 63.0% of cases.

Discussion: Study results for the primary outcome are consistent with those of previous efficacy research, thus providing valuable support for the corrected NEX distance formula.3 The application of this formula has the potential to mitigate both over- and underestimation of the internal length of nasogastric tubes (NGTs). Although this study did not examine the impact of over/underestimation of the internal length on adverse events, using the corrected formula could be beneficial in this regard. The lack of clarity in radiologist reports may be due to the absence of a diagnostic question on the request form, or insufficient training in reporting style and technique.4,5 Therefore, it is recommended to utilize a checklist for assessing the positioning of a NGT on an X-ray.5 This study had limitations: it was conducted at a single center, included only patients with X-ray-verified NG tube placement, lacked power analyses, and may have had confirmation bias. These limitations should be considered when interpreting the results.

Implications and future perspectives: The corrected NEX distance formula can be considered a safer alternative for determining the internal length of NGTs compared to other established measurement methods or formulas, whether evidence-based or not. Nevertheless, conducting multicenter studies comparing different formulas for determining the internal length of NGTs will help increase the existing but limited evidence base regarding this critical facet of NGT placement procedures. In addition, we advocate the development of a framework (including a checklist) that allows radiologists to unambiguously report the tip position of NGTs in their report.

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3.9

THE DEVELOPMENT OF A NURSE-LED INTERVENTION TO PREVENT A HIGH OUTPUT ILEOSTOMY: PREVENTION IS KEY

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Background: A high output (HO) ostomy is a ostomy which produces more than 1200 ml stool in 24 hours and is a common complication of an ileostomy with a prevalence of 20% [1,2]. It leads to a prolonged hospital stay and readmissions due to e.g. dehydration and impaired kidney function [Dr. Van Butsele, personal communication, February 2021]. Van Butsele et al. shows 11% of readmission within 90 days after a Total Mesorectal Excision (TME). TME is a procedure in which the malignant tumor in the rectum and the surrounding fatty tissue containing the lymph nodes are removed. Developing a nurse-led intervention improves knowledge among nurses, physicians, patients and relatives regarding the prevention and treatment of a HO ileostomy.

Aim: The aim of this nurse-led intervention is to reduce readmissions, prevent complications and guarantee continuity of care by providing education and follow-up postoperatively.

Methods: We used a multi method approach to start this nurse-led intervention, data were analyzed retrospective. First, literature review and expert opinion of abdominal surgeons, gastro-enterologists and clinical nurse specialists resulted in a patient brochure to inform them about a HO ileostomy. Second, a flowchart existing of the in-hospital clinical guidelines as well as medication treatment was developed to inform nurses and physicians on the ward. At last, every patient must complete a diary after discharge during two weeks and received a teleconsultation after one week of discharge to discuss patient overall wellbeing and different parameters of the diary. To improve the nurse-led intervention, patient satisfaction of the trajectory was questioned.

Results: 361 teleconsultations were performed between July 2019 and December 2022 of which 93 (25.8%) patients underwent a TME procedure. A teleconsultation takes about 20 minutes and includes discussing the diary and questioning the ostomy output, weight, fluid intake, loperamide intake, as well as the ostomy care. Additional medication or nutritional advice is provided in case of any problems. In case of severe problems, e.g. dehydration and/or electrolytes disorders, patients are admitted to the emergency department. Ostomy problems are taken care on the ostomy outpatient clinic. Since the start of nurse-led teleconsultation only 4.3% of the patients with an ileostomy were readmitted within 90 days after discharge due to a HO ostomy. The satisfaction rate of the follow-up was very high (94-100%), scored on different topics. Through this nurse-led intervention, nurses and physicians on the patient unit were better informed about the prevention and treatment of a HO ileostomy.

Discussion: By applying these interventions, the readmission ratio was only 4.3%. This is in contrast to the 11% of readmissions from a previous study [Dr. Van Butsele, personal communication, February 2021] and is a reduction of more than 50%. Although not all questionnaires were returned, patients did feel safer and better informed as a result of the follow-up. Also ostomy related-problems can be traced earlier. These interventions have a positive effect on several patient-related outcomes like a better patient satisfaction, physical functioning, treatment adherence and readmissions.

Implications and future perspectives: A further and more comprehensive analyses will be conducted in the future whereby not only the TME procedures will be included, but also creating more autonomy hospital-wide by teaching nurses to provide education to patients with a newly inserted ileostomy. Development of an application that includes the diary and questionnaires could improve the follow-up.

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3.10

DEATH RATTLE: CURRENT EXPERIENCES, MEASUREMENTS, AND NON-PHARMACOLOGICAL MANAGEMENT: A MINI REVIEW

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Background: Death rattle (DR) is a common symptom in dying patients [1], yet experiences regarding DR differ among relatives and health professionals. Two scales exist to measure DR intensity: the Victoria Respiratory Congestion Scale (VRCS) and the Death Rattle Intensity Scale (DRIS) but validity and reliability of these scales is unclear. Finally, little is known about the effects of non-pharmacological interventions on DR intensity or DR related distress.

Aim(s): This mini review aims 1) to explore the current experiences and needs of patients, family and health professionals in terms of DR sound and its management, 2) to map validity of current measurement tools for DR intensity and DR related distress and 3) to describe the effectiveness of non-pharmacological interventions in DR management.

Methods: A literature search was conducted in PubMed with the free-text term "death rattle" on January 3rd 2023 and included papers published in the last 10 years. Extracted data included: study design, setting, population, in- and exclusion criteria, sample size, objectives, and all results concerning experiences, measurement tools and non-pharmacological interventions of DR.

Results: Ten studies were included. For patients' experiences, no significant correlation was found between DR intensity and respiratory distress Most relatives experience high levels of distress and a strong need for DR care improvement. Health professionals are often influenced in their decision making to prescribe or administer medication by external pressure, even if they think it is not beneficial for the patient. No studies were found reporting on standardized measurement tools to evaluate experiences regarding DR. DRIS is not a useful tool for detecting distress levels related to DR in bereaved family members A Thai validation was the first to show criterion-related validity and reliability of the Thai VRCS to objectively assess DR intensity. Both repositioning and explaining DR to relatives are seen as useful first-line non-pharmacological interventions by health professionals. Severity of DR does not improve when suctioning is performed before starting anticholinergics. No other studies reporting on effectiveness of non-pharmacological interventions were found.

Discussion: The key question that needs discussion in clinical practice remains "Why are we treating DR and for whom?". Choices to intervene seem to be based on helping relatives rather than the patient as it is unclear if and to what extent patients experience distress by DR. Therefore, nonpharmacological interventions for DR management are recommended. At last, we need to keep in mind that DR intensity is not optimal to measure perceived DR related distress.

Implications and future perspectives: Future studies are needed regarding 1) who experiences DR related distress 2) the effectiveness of non-pharmacological interventions and 3) the validity and reliability of measurement tools for DR intensity and DR related distress.

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3.11
LIFE CYCLE ASSESSMENT COMPARING REUSABLE AND SINGLE-USE SPECULA IN A BELGIAN HOSPITAL

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Background: The ongoing climate change poses an increasing threat to public health [1,2]. Whereas healthcare aims to heal and care for ill people, the healthcare sector is also responsible for about 6% of global greenhouse gas (GHG) emissions, hereby contributing substantially to climate change. Reasons such as cost, patient safety, etc. created an unlimited shift from reusable to single-use materials leading to more medical waste. It remains questionable whether this shift is justified taking environmental implications into account. The Ghent University Hospital wanted to investigate the praxis of using throwaway medical material, using validated methods to one representative well-chosen medical device, the vaginal speculum. The study was financed by the Federal Public Service for Health, Food Chain Safety and Environment, the Directorate-General for the Environment.

Aim(s): Evaluate the environmental impact of the use of reusable (RU) compared to three types of single-use (SU) vaginal specula using a cradle-to-grave life cycle analysis (LCA).

Methods: The functional unit was one pelvic examination by either a sterile stainless steel RU, or a SU speculum of three different types: one containing fossil plastics, one containing biobased plastic, and one consisting of two types of fossil plastics and sterilised with ethylene oxide. For the RU speculum, life cycle inventory data were collected from the Ghent University Hospital, its sterilisation department, and its suppliers. Concerning the SU specula, data were collected from the suppliers. The ReCiPe 2016 v1.1 (H) method was used for the environmental impact assessment, and both midpoint results (e.g., global warming, water consumption, etc.) and endpoints results (e.g., damage to human health) were calculated.

Results: The most favourable option from global warming perspective, is the use of a reusable speculum producing 78% less GHG emissions than a SU speculum from fossil plastic, 65% less emissions than a SU biobased plastic speculum, and 74% less emissions than an ethylene oxide sterilised SU speculum. For the RU specula the packaging proved to have the greatest impact (76%), for the SU specula raw materials and manufacturing had the greatest impact on GHG emissions (between 57-72%). SU biobased plastic speculum had the least favourable outcome on two of the three endpoints.

Discussion: Our results demonstrated that a RU speculum is far better than SU types. Even for the RU type, further improvements are possible. Packaging accounted for most of the ecological footprint of RU specula, hereby questioning the necessity of double sterile packaging of RU specula [3]. SU specula made from biobased plastics have a smaller carbon footprint compared to SU made from fossil based plastic. At first glance, this could be the preferred option for SU specula and intuitively be considered as better for the environment, but our LCA has proven the opposite. The study demonstrated that a detailed and meticulously executed analysis leads to trustworthy result allowing decisions on the choice between SU or RU medical devices.

Implications and future perspectives: The following implications for practice emerged from the study: 1) packaging materials should be avoided or minimised whenever possible, as f.e. sterilisation bags have a large impact, 2) cautious use of bioplastics, 3) advise of an expert on sustainability, such as a sustainability coordinators, can help to make evidence based purchasing decisions 4) nurses need to be aware of the importance of sustainable choices. Further research on other frequently used medical items is needed to enable evidence based procurement decisions.

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3.12

PATIENT PARTICIPATION IN MTM'S IN RESIDENTIAL MENTAL HEALTH SERVICES: AN EXPLORATIVE STUDY OF PATIENTS' PERCEPTION

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Background: There is a global tendency in mental healthcare towards a more active involvement of patients in their care process. As a result, patients participate more often in multidisciplinary team meetings (MTMs). Knowledge about the perception of mental health patients on patient participation in MTM's is limited.

Aim(s): The aim of this study was to explore the perception of mental health patients on patient participation in multidisciplinary team meetings (MTMs) and to determine which factors are associated with this perception.

Methods: A cross-sectional study with 127 former and 109 admitted mental health patients was performed between 25 May and 28 June, 2020 and 16 and 23 October, 2020. For measuring the perception, the Patient Participation during Multidisciplinary Team Meetings Questionnaire (PaPaT-Q) was used.

Results: This study found that gender, educational level, nature of psychological complaints, and experience, are associated with the patients' perception. Women are more willing to participate in MTMs and have a more positive perception of the effects and the organizational preconditions. Higher educated and patients with psychological complaints related to depression, anxiety, or psychosis choose more often for an autonomous role for a patient in medical decision-making. Patients with experience in participation in MTMs feel more competent and choose more often for an active role for a patient in MTMs. Further, our analyses showed differences between former and admitted patients, whereby former patients are more willing to participate in MTMs and consider participation as more important. Further, they also feel more competent. Additionally, former patients prefer an autonomous role for a patient in medical decision-making where admitted patients choose more often for a semi-passive role.

Discussion: Our study found that currently admitted patients have a lower estimation level regarding to patient participation in MTMs than former patients. Nevertheless, there is a great willingness on the part of both groups to participate in MTMs and a large number of them also consider it important to participate.

Implications and future perspectives: The results can be used by mental healthcare workers to motivate patients in an even more tailor-made basis to participate in MTMs when admitted in a hospital. The findings of this study can be complemented with qualitative research data of mental health patients' experiences of patient participation in MTMs. For example, future research could focus on how admitted patients experience participating in a MTM and what is meaningful to them. Additionally, the focus can also go to those patients who do not wish to participate in a MTM and the motives that determine this. Research must also focus on the effectiveness of patient participation in MTMs. In particular, the focus should be on the effect on variables such as self-efficacy, therapy adherence, empowerment, sense of involvement, trust, and communication dynamics.

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3.13
ASSOCIATION OF ANTICHOLINERGIC EXPOSURE WITH ANTICHOLINERGIC BURDEN AND QUALITY OF LIFE IN A RESIDENTIAL PSYCHIATRIC WARD

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Background: Anticholinergics are associated with diverse adverse peripheral (dry mouth, constipation,…) and central (agitation, drowsiness…) drug events. Anticholinergics have been studied in older populations, but not in psychiatric patients. The prevalence and impact of anticholinergic usage in this context remain unclear, as well as the impact on the clinical consequenecs. This research aims to explore the prevalence and potential association between anticholinergic exposure and burden in adult psychiatric patients, as well as their associations with quality of life.

Aim(s): This research aims to explore the prevalence and potential association between anticholinergic exposure and burden in adult psychiatric patients, as well as their associations with quality of life.

Methods: A prospective observational design was used. The medication use (coded by the Anatomical Therapeutical and Chemical Classification), anticholinergic symptoms (frequency and impact on patient's life) and the quality of life (measured by EQ-5D-5L) were registered every three days. Anticholinergic exposure was quantified using the MARANTE scale, and anticholinergic burden was quantified through the multiplication of frequency and impact on patient's life.

Results: Participants (n=25) mean age was 34.5 years, with 64% being male. Most common diagnosis was psychotic disorder (52.0%). Participant took a median of 2 medications (range 1-6), predominantly antipsychotics (72.0%). The median MARANTE score was 1.5, with 72.0% of patients being exposed to anticholinergics (predominantly olanzapine and trazodone). At baseline, participants reported a median of 3 anticholinergic symptoms (range 0 – 8), predominantly drowsiness (48.0%), dry mouth (40.0%) and agitation (32.0%).

The anticholinergic exposure was positively correlated with the anticholinergic burden (Rs=0.42, p=0.032). There was no difference in mean rank scores for the burden (8.7 in those with no exposure, and 14.7 in those with anticholinergic exposure, Mann-Whitney U p-value 0.068). Increasing associations between proportions of patients having a symptom and higher levels of exposure were found for most anticholinergic symptoms, albeit not significant. Throughout the participant's stay on the ward, the anticholinergic exposure and burden increased (but not significantly).

Discussion: Anticholinergic exposure and burden was high in psychiatric patients. There were several trends suggesting a higher exposure was linked to a higher burden, yet associations couldn't be confirmed due to the small sample size.

Implications and future perspectives: Targeted interventions using nurse observations of anticholinergic symptoms may help reduce the burden.

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2.1
EXPLORING CLINICAL REASONING THROUGH THE PEDAGOGICAL CONTENT KNOWLEDGE OF NURSE LECTURERS

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Background: Clinical reasoning is widely recognized as an important skill in nursing. Yet a clear definition of this concept is lacking and little is known about specific methods and cognitive processes used by nurses to exercise this skill [1-3]. As a result, it remains unclear how to teach the principles and competencies of clinical reasoning to nursing students or to train practicing nurses [2,3].

Aim(s): This study aimed to (i) investigate how lecturers in a Bachelor of Nursing program in Flanders define clinical reasoning and (ii) formulate recommendations for education.

Methods: This qualitative study investigated clinical reasoning as part of lecturers' pedagogical content knowledge (PCK). PCK embraces the lecturers' knowledge of the curriculum's content as well as regarding possible ways to teach that content.. Lecturers' PCK can be made visible by drafting a Content Representation (CoRe) map using eight questions [4]. These questions were used in focus group discussions and interviews with fourteen lecturers of the nursing program at a university college in Flanders (Belgium).

Results: We could draw up a preliminary list of operational features of clinical reasoning which involves the application of knowledge, critical examination of observations, systematic and continuous analysis, and proactive decision-making. Furthermore, clinical reasoning was found to require experience and an extensive knowledge base in multiple scientific fields. To master clinical reasoning, the nurse (student) must develop cognitive, executive as well as motivational capacities [5]. In literature and in focus group discussions, mainly the importance of knowledge and experience was emphasized. Only limited mention was made of an open, empathetic, receptive attitude.

Discussion and future perspectives: The insights into different aspects of clinical reasoning in nurses (e.g. the content, importance, purpose , teaching strategies, difficulties and context) are deemed useful when explaining clinical reasoning to students, aligning expectations among lecturers and preceptors, and evaluating the extent to which students achieve competencies in terms of clinical reasoning.

Learning clinical reasoning requires experience through exposure to multiple clinical situations in all aspects of life, during multiple internships and simulation training sessions throughout the curriculum [6,7].

More research is needed on how to objectively assess a student's level of clinical reasoning. Our list of operational features of clinical reasoning may be a starting point. Also the contribution of each characteristic to the quality of clinical reasoning needs further investigation.

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2.2

UNRAVELING INFLUENCING FACTORS ON BELGIAN NURSES' KNOWLEDGE: DOES EDUCATION MAKE A DIFFERENCE?

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Background: Growing challenges in healthcare such as an aging population, an increase in care-dependency, new technological developments, and the importance of evidence-based practice result in a rising demand for highly educated nurses. To comply with European guidelines, an updated professional and competency profile was published in Belgium followed by the extension of the bachelor's program. In Belgium, two types of nurses are being trained at different educational levels to be allowed into practice (i.e., EQF level 6 and level 7). However, in practice, there is little differentiation in responsibilities between different levels of education. This raises the question if there is a difference in the acquired knowledge between education levels and if there could be other explanatory factors of nurses' knowledge?

Aim(s): This study aims to identify the influencing factors of knowledge in nurses in Flanders, Belgium.

Methods: In this cross-sectional survey study, we included Belgian nurses from various sectors to explore the factors influencing nursing knowledge. The online survey comprised demographics and a multiple-choice knowledge test which was developed and validated using the Delphi method involving educational experts and practitioners. Each test question had four answer options, with only one correct answer. A multiple linear regression analysis was used to investigate multiple influencing factors on nurses' knowledge.

Results: A total of 620 nurses were included in the study, with the majority being female (77,3%) and residing in Antwerp (55,5%). The mean age was 41,4 years (SD 11,0). Nurses tend to score higher when they work in a hospital ($p<0.001$). In univariate analysis male nurses scored higher compared with female nurses ($p=0.016$). Additionally, education makes a difference in the total score of the questionnaire ($p<0.001$). Graduate nurses scored 68,7%, while registered nurses scored 72,2%, and those with a master's degree 76,7%. Motivation follows additional courses and taking refresher courses is associated with a higher score. Moreover, a difference was reported between work regimens, with full-time nurses achieving the highest scores regardless of their sector ($p<0.001$). Finally, the number of years of work experience was negatively associated with general knowledge ($r=-0,353$, $p<0.001$).

Discussion: Work regime, experience and education all have an impact on nurses' knowledge. In other countries, such as the Netherlands, refresher courses are mandatory to be licensed for practice. An important limitation of this study was that the a priori sample size was not reached. This could be due to the length of the questionnaire and the possibility for student nurses to fill out the questionnaire who were excluded for analysis.

Finally, most participants lived in the province of Antwerp (55,5%) reducing generalizability.

Implications and future perspectives: Our findings suggest a variation in knowledge among nurses, potentially impacting care quality and patient safety. Prioritizing lifelong learning could address this variation, positively impacting knowledge and ultimately improve care quality. Furthermore, these findings can contribute to further political discussion regarding skill-mix in care teams and differentiated practice in nursing.

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2.3
GREEK NURSING STUDENTS' ATTITUDE TOWARDS PATIENT SAFETY

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Background: Patient safety represents the foundation of quality health care. Today healthcare organizations face many challenges in maintaining and promoting safe care for patients due to the lack of resources, the increasing demand for care, technological developments and changing population demographics. Despite these challenges, the patient safety should be considered an issue for which the health care systems must commit to it ensure for all their patients [1].

Patient safety according to the WHO deals with the reduction and prevention of all conditions that may appear harmful and painful for patients during their care [2]. Chatzi and Malliarou state that patient safety is the condition in which harm to patients by nursing practice is eliminated or reduced to the extent possible through a continuous process of identifying adverse effects [3]. This proposed definition includes three axes: (1) What is harm for them patients, (2) How can this harm be eliminated or reduced, and (3) What are the areas of nursing practice recognized to provide the opportunity to harm patients

Aim(s): The investigation of Greek nursing students' attitudes towards patient safety.

Methods: To collect the data, a qualitative study was conducted using semi-structured interviews. The sample of the study consisted of five 1st and five 4th year students of the Nursing Department of the University of Thessaly. Recorded, face-to-face, semi-structured interviews were carried out. Each interview lasted an average of 15 minutes. The interview questions were as follows: 1. What does the term "patient safety" mean to you? 2. What factors do you consider affect patient safety? 3. Could you share your experience of learning patient safety and the provision of safe care during duration of your training (in the classroom and clinical area)? 4. How do you think your curriculum can prepare you to deliver safe care in practice? 5. How important do you consider error and adverse events reporting? What factors affect reporting error?

Results: Greek Nursing Students underlined that patient safety is everything that nurses do in order not to do harm and provide healthcare in a safe way. Factors that affect patient safety can be categorized to organizational and human. Most of the 4th year students had experienced themselves doing some errors that had no serious impact on patient but revealed the importance of reporting them. Clinical Instructors had an important role in the provision of safe care during labs and clinical training. 4th year students were able to identify which aspects of the curriculum were preparing them better for safe care provision than 1st year students. Both 1st and 4th year nursing students considered really important error and adverse evet reporting and they considered labeling of incompetence the most important factor for not reporting them. Greek nursing students' attitude towards patient safety is a matter of great importance as they admit their concern of not doing any harm to patients during their clinical training due to their lack of experience.

Discussion: The role of a clinical instructor is central to the learning process of nursing students as they form a role model for nursing students in the time of their clinical practice. Patient Safety issues should be a clear identifiable part of undergraduate nursing curriculum.

Implications and future perspectives: Future perspective of research should be done after the integration and evaluation of patient safety knowledge and competencies in nursing practice.

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2.4

ASSESSING THE EFFECTIVENESS OF DIGITAL LEARNING IN NURSING EDUCATION: A PILOT STUDY AMONG NURSING STUDENTS

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Background: Digital learning has rapidly gained recognition and popularity. It encompasses a wide range of learning technologies and approaches, including distance learning, online learning, and mobile learning [1]. While digital learning offers several advantages, it is important to understand that it is not inherently superior to traditional approaches and should be used with a solid understanding of learners' needs. Digital learning encompasses several types, including synchronous, asynchronous, blended, massive open online, and open schedule online courses.

Aim: This study aimed to measure the digital learning experience among nursing students.

Methods: A nonexperimental, quantitative-descriptive research design was used, employing the E-Learning Experience Evaluation Scale (3E scale) with a Cronbach α of 0.93. A total of 155 nursing students from a Slovenian faculty of health sciences participated in the study. The age of the participants ranged from 19 to 36 years (M = 22.65, SD = 3.433). Data collection was conducted in June 2022 using an online questionnaire distributed via email using the open-source online survey application. The collected data were analyzed using IBM SPSS version 26.0. Due to the non-normal distribution of the data, non-parametric Mann-Whitney U test was performed. A p value ≤ 0.05 was considered statistically significant.

Results: Results obtained using the 3E scale indicated a moderately high digital learning experience among nursing students (M = 3.436, SD = 0.624; 95% confidence interval [3.34, 3.54], $p < 0.01$). Female students reported a more positive experience with digital learning (M = 3.42, SD = 0.672) compared to male students (M = 2.72, SD = 0.617), with statistically significant differences ($p < 0.05$) between the two groups. In addition, significant differences ($p < 0.05$) were observed in subscale 1 - Effectiveness of learning and subscale 3 - Delivery and support, where female students rated their digital learning experience higher (M = 3.19, SD = 0.891 and M = 3.52; SD = 0.675, respectively) than male students. No statistically significant differences were observed between groups for subscale 2 - Teacher's role and subscale 4 - Perceived barriers.

Discussion: It is important to recognize that digital learning is a multifaceted phenomenon influenced by a variety of factors, and that its effectiveness depends on the interplay of these factors [2]. These findings will facilitate the development of effective strategies and interventions to optimize the digital learning experience of nursing students and ultimately improve nursing education.

Implications and future perspectives: While digital platforms provide valuable opportunities for teaching and learning, further research is needed to gain a deeper understanding of the motivational drivers and factors that contribute to successful engagement and outcomes in digital learning environments.

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2.5
SENIOR NURSING STUDENTS' PERCEPTIONS OF INDIVIDUALIZED CARE AND NURSING DIAGNOSES

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Background: The nursing profession in Turkey is based on a minimum of four years of education at the undergraduate level. This education process includes classroom teaching, laboratory, and clinical practice. Reinforcement of nursing knowledge and skills in clinical education is an indispensable factor in getting ready for professional life [1,2]. The main purpose of nursing education is to educate nurses who can provide quality care. In some nursing schools in Turkey, the length of clinical practice has been increased in the last year to boost the quality of nursing care, reinforce nursing skills, and improve decision-making skills [2,3].

Aim(s): The study was planned to determine the perceptions of individualized care and nursing diagnoses of senior intern and non-intern nursing students studying at two different universities.

Methods: A descriptive and correlational design was used in this research. It was carried out with a total of 194 (intern student nurses = 100, non-intern student nurses = 94) senior students studying at two different public universities, considering the impact of the study and not using any sampling method. Data were collected using a Student Information Form, Individualized Care Scale-A-Nurse (ICS-A-Nurse), and the Perceptions of Nursing Diagnosis Scale (PNDS). The significance level was accepted as $p<0.05$. Analyses were performed on the SPSS-28 software package. Ethical approval was obtained from the ethics committee (29/04/2021-2021/117). Data were analyzed on the IBM SPSS V28 software. Conformity to normal distribution was evaluated with the Kolmogorov–Smirnov test. The Pearson correlation coefficient was used to examine the relationship between normally distributed data. Linear regression analysis was used to examine the effect of other scales on the PNDS. Independent samples t-test was used to compare normally distributed data of paired groups.

Results: The mean age was 22.60±2.29 years for the intern nursing students and 21.89±1.71 years for the non-intern nursing students. There was no statistically significant difference between the mean perception of individualized care scores of interns and non-interns. The mean score on the total perceptions of nursing diagnosis scale was 2.36±0.76 in intern nursing students and 3.85±0.60 in non-intern students, and the difference between the two was statistically significant ($p<0.001$). A positive low ($r=0.213$) and moderate ($r=0.622$) correlation was found between the mean scores of the intern nursing students on the total ICS-A and PNDS. The linear regression model established between the ICS-A and PNDS scale scores of intern nursing students yielded a statistically significant difference ($F= 4.673$, $p<0.001$). Similarly, a statistically significant difference was found in the same model for non-intern nursing students ($F=57.948$, $p<0.001$).

Discussion: It was determined that there was a significant correlation between students' perceptions of individualized care and nursing diagnoses. This finding is important in determining problems during the perception of individualized care and reflecting how the problems related to the individual will be evaluated. It can be recommended that more studies should be carried out to increase the functionality and effectiveness of the nursing process in solving patients' problems so that the process can have a positive effect on the perception of individualized care and nursing diagnosis [3].

Implications and future perspectives: According to the results of the research, the mean scores of intern and non-intern nursing students on the perception of individualized care were high and there was no difference between the two groups. This result indicates that the concept of individualized care is widely included in the curriculum in Turkey. Intern students' perception of nursing diagnoses was positive and this showed that they were positively affected by their professional experiences and that they experienced the functionality of nursing diagnoses more.

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2.6
THE NURSING MOBILE WORKSTATION: A DESCRIPTIVE OBSERVATIONAL STUDY

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Background: The nursing mobile workstation (NMW) is frequently described as equipment that facilitates direct nursing care and is daily used in the hospital setting. It is generally described as a mobile device that can be found adjacent to the patients room. It houses equipment used in nursing care and ICT devices such as a computer. It could be seen as a vital tool to assist nurses in their daily tasks. However, limited evidence exists on this NMW.

Aim(s): This study aims to explore what it is used for, by whom and what facilitates or hinders the use of the NMW.

Methods: A descriptive observational design was used with observations of an actively used NMW (n=105) on 19 nursing wards in an university hospital in Flanders. An observation tool was developed to guide the observers. Focus group and individual interviews (n=19) were held with nurses. An interview guide was used. The data were thematically analyzed.

Results: Twenty-two functions were identified. The NMW is used by nurses to register/consult information in the electronic medical records (EMR), to dispose of waste, to disinfect hands and to gather nursing equipment. Other nurses, doctors, administrative employees and patients/family members use the NMW as a meeting place, to gather nursing equipment, to pass on documents or to consult or revise the EMR.

Nurses state they need the NMW to work efficiently, to reduce the walking distances between patient and nursing station, to register/consult data at the point of care, to feel professional, to be prepared for unforeseen circumstances, to protect privacy of the patients and to monitor their patients from a distance.

The difficulty in steering and maneuvering due to the weight and size of the NMW, the absence of locks on the medication drawers, the lack of stock of nursing material and being interrupted while working were stated as barriers in the use of the NMW. Discussion

Contradiction between the needs of the patients/family members and the needs of the nurses regarding the NMW became apparent.

Nurses view the NMW as a moving desk that provides them with nursing equipment and seem to lack a clear vision on the future of the NMW. They expressed a wait-and-see attitude when asked about a new design for the NMW. They seemed to assume that they will learn to work with or around the NMW given to them by management, rather than proactively taking the lead of the process.

Implications and future perspectives: This study was conducted in an University hospital where patient allocation is used to organize care. It might be interesting for future research to compare the functions and users of the NMW in an different health care setting. A more proactive attitude of nurses is needed to design the NMW of the future.

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2.7
DEVELOPMENT OF SIMULATION-BASED TRAINING IN NURSING EDUCATION: A DELPHI-STUDY

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Background: Simulation-based training can be an effective method to increase nursing students' competencies. Simulation-based trainings can be used to realistically model clinical situations and by this give nursing students the possibility to gain knew knowledge and skills such as clinical skills, critical thinking, and skills for interdisciplinary collaboration within a safe learning environment [1]. Based on theories of experiential learning [2], and referring to the INACSL Standards for Simulation [3] as well as the 4C/ID Modell [4], we assume simulation-based training as complex learning environments. The development of these learning environments includes choosing learning tasks, information, and practice [5].

Aim(s): The aim of this study was to find out how complex simulation-based learning environments for nursing students can be developed and which criteria have to be considered in this process.

Methods: We conducted a Delphi-study with experts in nursing education. Experts in this study have to have more than five years of experience in the development of simulation-based trainings. In the first round of the Delphi-study, we conducted interviews with 12 experts (N=12) using a semi-structured guideline. Data were analyzed using qualitative content analysis [6]. Based on the results, we developed an online-questionnaire. In the online-questionnaire experts could indicate their agreement to the relevance of the described criteria on a 4-point Likert scale (1=absolutely relevant – 4= not relevant). Furthermore, participants could name possible improvements and missing contents. The questionnaire was filled out by four experts that had already participated in the first round and 21 further experts (N=25). These data were analyzed by using descriptive statistical analysis. Qualitative content analysis was used to analyze suggested improvements and missing contents.

Results: The results indicate that experts differentiate five different phases in the development process of complex simulation-based trainings: analyses, design, testing, implementation, and evaluation. For each phase, experts described relevant criteria. For instance, in the analyzing phase, experts indicated that setting learning goals and integrating skills is important (M=1.30; SD=.47). Furthermore, in the design phase experts emphasize for example it is necessary to gain connectivity between theoretical knowledge and skills that have to be used in the simulation-based training (M=1.43; SD=.59). In the testing phase, the experts indicated that it is most relevant to make sure that the learning environment is complex by using different scenarios and vignettes (M=1.52; SD=.51). For experts, implementation means using high-fidelity simulation methods (M=1.61; SD=.58). In the evaluation processes, experts indicate that using debriefing methods is helpful (M=1.91; SD=.97).

Discussion: Results show that analyses, design, testing, implementation, and evaluation are the important phases in the development of complex simulation-based trainings. In each phase different requirements have to be met. This study provides an overview of phases and relevant criteria for the development of complex simulation-based learning environments.

Implications and future perspectives: These results are important for nursing educator and can be used as a framework in order to make sure to develop high quality complex simulation-based trainings.

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2.8

EXPLORING THE EDUCATIONAL ENGAGEMENT OF HIGHER EDUCATION TEACHERS IN AN ONLINE LEARNING COURSE

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Background: Today, educators recognize that well-designed online environments can facilitate quality education, promote student engagement, and ensure student satisfaction. As digital technologies continue to play a critical role in the educational landscape, educators need to advocate for the intentional design of study environments that incorporate these technologies [1]. By emphasizing the importance of intentionally integrating digital tools, educators can optimize the learning experience and realize the full potential of educational initiatives in the digital age.

Aim: This research aimed to gain a comprehensive understanding of lessons learned in implementing digital learning strategies achieved through the online learning course.

Methods: This nonexperimental quantitative descriptive research study aimed to evaluate online learning course using the Evaluation Toolkit to Appraise eLearning Courses (Cronbach α = 0.94). The sample comprised 33 academics selected from a university in Slovenia, with preference given to educators who exhibited a strong interest in collaborative endeavors and expanding their expertise in designing, implementing, and assessing online learning units. Data were collected in May 2022 through an online questionnaire, and subsequent analysis was performed using IBM SPSS version 26.0. The quantitative data were examined using descriptive statistics and linear regression analysis, with statistical significance determined at a threshold of $p \leq 0.05$.

Results: Participants rated the online course highly ($\bar{x}$ = 4.37, SD = 0.511 [95% CI 4.19, 4.47], $p < 0.001$), indicating a positive learning experience. The domains with the highest ratings were outcomes, structures, and community ($\bar{x}$ = 4.59, 4.47 and 4.32, respectively). Items with high ratings included effective organization of course content ($\bar{x}$ = 4.64), facilitating learning and reflection through discussion forums ($\bar{x}$ = 4.69), and creating engaging learning activities for online delivery ($\bar{x}$ = 4.74). The lowest rated items also received relatively high scores, such as appropriateness of allotted time ($\bar{x}$ = 3.55) and providing useful feedback and opportunities for collaborative learning ($\bar{x}$ = 3.89 and $\bar{x}$ = 4.71, respectively). No significant regression equation ($p > 0.05$) was found between participants' length of service and course evaluations.

Discussion: The shift from a traditional teacher-centered approach to a learner-centered pedagogy is a complex and gradual one. It depends on factors such as educational policy, teaching culture, the willingness of institutions to invest in digital technologies, and the knowledge and willingness of teachers to embrace this new teaching paradigm [2].

Implications and future perspectives: To facilitate the transition from the traditional teacher-centered approach to a learner-centered pedagogy, teacher training is crucial. It is essential to equip educators with a solid understanding of the fundamentals of digital learning so that they can develop and implement strategies that meet the needs of 21st century learners.

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2.9
ONLINE SKILLS TRAINING FOR HEALTHCARE PROVIDERS: DREAM OR REALITY?

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Background: Research shows that combining online and face-to-face learning provides an improvement in effective learning and establishing strong learning outcomes.

The shift from traditional to online and blended learning in lifelong health care education has gained momentum, raising questions about the effectiveness of these methods for training practical skills. [1,2,3,4]

Aim(s): This study aims to create an exemplary e-learning module for healthcare providers, followed a manual and checklist on how to create an online skills training for healthcare providers so that they get the tools to get started.

Methods: To address this, a rapid literature review was conducted to explore the viability of online and blended education for teaching practical skills. Additionally, expert interviews (n=10) were conducted to gather insights into the strengths, concerns, and needs of current education activities, while focus group interviews with healthcare providers (n=13) collected their experiences with existing training and onboarding activities.

Drawing from the findings of the literature review and interviews, a manual, checklist, and e-learning module were developed. The e-learning module focused on ergonomics and was created as a best practice example. To assess its effectiveness, healthcare providers (n=7) tested the module using the Thinking Aloud method.

Results: The results of this study include the development of a comprehensive manual and checklist for creating e-learning, based on the literature review and expert interviews. Furthermore, an ergonomics e-learning module was developed as a practical demonstration. Incorporating feedback from healthcare providers, the e-learning module will be refined and utilized as a preparatory tool for training practical skills in healthcare.

Discussion: The discussion highlights the success of online skills training within a blended learning approach. However, further testing and refinements are required to assess the effectiveness of the developed manual, checklist, and e-learning module.

Implications and future perspectives: This study has important implications for the healthcare field. Implementing the manual and checklist for online skills training and evaluating their effectiveness is a first future perspective to explore. Additionally, the e-learning module on ergonomics can be implemented and assessed using learning analytics to provide insights for future improvements.

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2.10

INTRODUCTION OF NOVEL COMPLEX INTEGRATED CARE MODELS SUPPORTED BY DIGITAL HEALTH INTERVENTIONS IN EUROPEAN PRIMARY SETTINGS: A SCOPING REVIEW

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Introduction: Innovative healthcare models have been researched intensively in the last decade, however, there remains the need to develop more comprehensive organisational care models to manage chronic conditions in primary healthcare1, considering also the opportunities given by the advent of the digital age2, and its implications for healthcare delivery. The objective of the review was to assess and map methods, interventions and outcomes investigated regarding the introduction of novel complex integrated care models supported by digital health interventions in the primary care setting, as well the level of integration achieved.

Methods: we performed a scoping review based on the Joanna Briggs Institute manual and using the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-analyses) Extension for Scoping Reviews for reporting. A systematic and extensive three-step search of PubMed, Web of Science and Scopus was conducted to identify articles that described, in the last 10 years, the introduction of complex integrated care models supported by digital health interventions (DHI) in the primary care settings of the European context. Data extraction and eligibility were performed by two authors independently.

Results: A total of 54 studies was included. The complex integrated care models introduced, along with a DHI, at least one innovation in their structure or in the modality of care delivery: either a new figure (44%), interprofessional collaboration (37%), new functions, such as the introduction of person-centred care (59%) or population stratification (11%). As regarding the main categories of digital support tools, 56% of the included studies implemented monitoring/management platforms and apps for chronic conditions, followed by apps/platforms promoting a healthy lifestyle to reduce the risk of developing a disease (17%), teleconsultation systems (13%), computer-based decision support systems (9%) and electronic healthcare records. In terms of forms of integration3, 50% of the studies focused on horizontal integration, with the development of multi-disciplinary teams and/or care networks that support a specific client group. 19% of the models were based on vertical integration, with integrated care across primary, community, hospital and tertiary care services resulting in care pathways for people with specific diseases and/or care transitions between hospitals to intermediate and community-based care providers.

Discussion: The innovation in the organizational models of care has been often characterized by the introduction of a multidisciplinary perspective, in line with the complex needs of chronic patients. The predominant development of monitoring/management platforms for patients is a further confirmation of this trend. In terms of integration, the models achieved organisational and technological integration, which often occurred at the horizontal, rarely at the vertical or sectoral level.

Implications and future perspectives: the prevalence of complex integrated care models applying forms of horizontal integration across Europe highlights the common challenge of achieving comprehensive integration across primary, community, hospital and tertiary care services, further confirmed by the need to develop common interoperative DHIs and platforms4. Future research efforts should focus on the development of transversal communication and management platforms across services, along with the investigation of the effectiveness of current complex integrated care models.

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2.11

PSYCHOMETRIC VALIDATION AND CULTURAL ADAPTATION OF EVALUATION QUESTIONNAIRES FOR MEASURING NURSING STUDENTS', ANXIETY, PROFESSIONAL SELF-CONFIDENCE AND EXPERIENCES DURING HIGH FIDELITY SIMULATION

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Background: High-fidelity simulation can influence anxiety and professional self-confidence in nursing students [1-3]. These outcomes depend on factors such as a safe learning environment, effective debriefing and sufficient opportunities for skill development [4-5]. To optimize students' learning potential and preparedness for real clinical practice, nursing educators must accurately assess anxiety, professional self-confidence and students' experiences during high-fidelity simulation [6]. Unfortunately, there is a lack of validated Dutch questionnaires specifically measuring these outcomes

Aim(s): This study aims to adapt and validate questionnaires measuring anxiety, professional self-confidence, and students' experiences during high-fidelity simulation in the context of Belgian bachelor of nursing education at the Karel de Grote University Antwerp (KdG).

Methods: Following self-reported, initially validated, questionnaires underwent psychometric validation and cultural adaptation into the Belgian context: "Nursing Anxiety and Self-Confidence with Clinical Decision Making Scale (NASC-CDM)" [7], "Simulation Design Scale (SDS)", "Educational Practices Questionnaire (EQP)" and "Students Satisfaction and Self-confidence in Learning Scale (SCLS) [8]. It involved translation and backtranslation by two qualified, independent interpreter. Discrepancies were resolved through consensus. A native professional interpreter compared the translations with the originals. For cultural adaptation, content validity index based on the average of proportion relevance scores (S-CVI/Ave) across six experts was used. The final Dutch versions were evaluated by 135 undergraduate nursing students.

Results: The modified NASC-CDM (MNASC-CDM) includes 40 questions with a Likert 1 (not at all) – 6 (totally) . The modified SDS (MSDS) contains 12 questions while the modified EPQ (MEPQ) and SCLS (MSCLS) each consists of 7 questions, all using a Likert 1 (completely disagree) – 5 (completely agree). The content validity of the items within the questionnaires based on S-CVI/Ave ranged between 0.82 and 0.96, with an S-CVI/Ave ≥ 0.90 considered excellent content validity [9]. The internal consistency of the questionnaires according to Cronbach's alpha was: MNASC-CDM = 0.969, MSDS = 0.856, MEQP = 0.831, MSCLS = 0.824.

Discussion/limitations: Psychometric validation is crucial for ensuring the validity and accuracy of questionnaires in capturing the intended variables [9]. However, this validation process of existing validated English-language questionnaires has certain limitations. Cultural adaptation ensures the suitability of questionnaires for the Belgian context, considering variations in language, norms, and beliefs in Belgian culture. Limitations include monocentric validation, where experts from KdG were involved in determining the S-CVI/Ave. Self-reported questionnaires carry inherent risks of response bias and misinterpretation, potentially skewing the results [10]. The use of a midpoint in some Likert scales may lead to non-committal response bias among participants [11].

Implications/future perspectives: By validating and culturally adapting questionnaires for measuring nursing students', anxiety, professional self-confidence and experiences during high fidelity simulation to the Belgian context, researchers can confidently assess nursing students' psychological states and experiences. This allows for better objectification of students' performances and identifying areas for improvement. Ultimately, this enhances the quality and effectiveness of nursing education and simulation training programs, facilitating better preparation of students for real-world healthcare challenges.

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2.12

KADET: AN INTERGENERATIONAL SUPPORT TOOL FOR GRANDPARENTS WITH A SICK GRANDCHILD IN THEIR ROLE TOWARDS SIBLINGS

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Background: When a child is diagnosed with a serious or long-term illness, a difficult period begins for families and relatives. Parents' attention is mostly focused on the sick child[1]. Therefore, grandparents often have a supportive role regarding siblings and provide practical and emotional help[2][3]. However, research on grandparents' needs is rather limited. Therefore, the KADET-project investigated their needs and developed an intergenerational tool, the KADET-book, to support grandparents. This tool was tested and evaluated among grandparents in a pilot-study.

Aim: Support grandparents in their role regarding the siblings of a sick grandchild.

Methods: Participants were recruited through convenience and snowball sampling in order to evaluate the intergenerational tool. Qualitative research was used by conducting semi-structured interviews. These were recorded and transcribed, followed by thematic analyses. In addition, a questionnaire was developed in case an interview could not take place, using a 5-point Likert scale. Data were analyzed using descriptive statistics.

Results: Recruitment and testing phase is running until the end of August. Currently, 18 participants are testing the KADET-book. Five interviews have been conducted, showing that the KADET-book is a valuable tool, bringing grandparent and sibling closer to each other. In addition, the KADET-book also provides an opportunity to talk about topics that are often not discussed. Both the grandparents and the grandchild experience the activities in the KADET-book as nice to do together. In addition, it was interesting for the grandparents to know what the grandchildren are thinking about the themes. It was a way to have extra attention for them. Grandparents suggested to make the drawings more playful.

Discussion: The KADET research showed that it is important to pay attention to the needs and support of grandparents with a sick grandchild, particularly in their role towards siblings. These needs were addressed by the KADET-book, supporting grandparents to talk with siblings about their emotions in combination with activities.

Implications and future perspectives: The KADET-book will be reworked with feedback from grandparents with the goal of implementing it in Flanders and reaching grandparents of sick grandchildren.

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2.13

BREAKING BARRIERS IN NURSING EDUCATION: CAN DIGITAL PLATFORMS FOSTER CULTURAL COMPETENCE?

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Background: In a changing healthcare environment, nurses are increasingly confronted with diverse patient populations, necessitating an expanded understanding of cultural competence. E-learning, with its capacity for immersive and adaptive content delivery, is proving to be a transformative tool to meet this need. Using digital platforms, nursing education can provide comprehensive, context-rich training modules that promote a deep understanding of different cultural nuances [1–2]. Such platforms not only provide the flexibility and accessibility that modern education requires, but also ensure that nurses are equipped with the skills to deliver holistic, culturally sensitive care to all patients.

Aim: The aim of this pilot study was to assess the cultural competence of nursing students after the first introduction of cultural eContent in their nursing curriculum.

Methods: A descriptive cross-sectional study with 145 second- and third-year nursing students as a convenience sample was used in May 2023. Their cultural competence was assessed using the Cultural Competence Assessment Tool (CCATool) administered via an online survey. Data analysis was conducted in IBM SPSS and included descriptive statistics, the chi-square test and, due to a non-normal distribution (confirmed by the Kolmogorov-Smirnov test, $p < 0.05$), non-parametric tests such as Mann Whitney U, Kruskal-Wallis H and Wilcoxon signed-rank. The significance threshold was set at $p \leq 0.05$.

Results: The results show that students have a relatively high level of cultural competence as indicated by $M = 28.37$ ($SD = 8.145$; 95% confidence interval [26.94, 29.80], $p < 0.001$). There was a remarkable discrepancy between subjective perceptions of cultural awareness, knowledge and skills and their objective measurement. Participants scored lower on the rated statements than on the self-rated statements ($p < 0.001$). Conversely, the scores for the cultural sensitivity subscale were significantly higher for the rated statements than for the self-rated scores on the Visual Analogue Scale (VAS) ($p = 0.004$). In addition, a significant difference in cultural competence was found between students who had lived abroad for more than 6 months ($M = 27.23$) and those who had not, with the latter group scoring higher on the CCATool ($M = 28.61$). Full-time students also scored higher than part-time students ($M = 29.33$ compared to $M = 26.21$), with the difference being statistically significant ($p = 0.046$).

Discussion: The use of e-learning to promote cultural competence in nursing students has shown promising results. The apparent discrepancies between subjective and objective measurements highlight the importance of structured assessments. Experiences, such as study abroad, and type of study also have a significant impact on cultural competence, suggesting that diverse experiences enhance cultural understanding in nursing education.

Implications and future perspectives: E-learning can improve cultural competence in nursing and have a broader impact on the quality of care, as it is accessible to a larger number of students. Diverse experiences and structured assessments are crucial. Future research should include pre- and post-testing, a mixed-method approach, and an exploration of digital curriculum design and its influence on students' practical skills.

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2.14
NURSING STUDENTS' DIGITAL GAME ADDICTION AND EXAMINATION OF RELATED VARIABLES

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Background: The fact that individuals choose digital games and spend most of their daily lives playing digital games, especially in order to spend time with their friends in the virtual environment in universities, where interpersonal interaction and communication are more common, shows how important digital games are today [1-3].

Aim(s): This study was carried out with the aim of examining nursing students' addiction to digital gaming and related variables.

Methods: The universe of the research consisted of 1665 nursing students in total, studying in the nursing faculties and nursing departments of three universities, two states, and one foundation in Istanbul in the 2020-2021 academic year and the sample was 774 students determined by power analysis. The sample selection criteria included being a nursing student, continuing education and training actively, playing computer/video games, and not having communication problems. Data were collected through the Student Information Form, the Digital Game Addiction Scale [4], and the Digital Game Play Motivation Scale [5]. Ethics committee approval (Approval Code:70800) was obtained for the study. Data analysis was performed using SPSS 24 (IBM SPSS Statistics) package program. Data analysis was performed using the Mann-Whitney U test, Kruskal-Wallis H test, Spearman correlation, and Bonferroni post hoc test.

Results: It was observed that 83.7% of the students were female, the mean age was 20.03±1.72 years, and the mean BMI was 21.98±2.90 kg/m. The Digital Game Addiction Scale score of 12.65±4.29 and The mean scores of the Digital Game Playing Motivation sub-dimensions were 12.60±4.51 in Success and Revitalization, 23.63±9.34 in Curiosity and Social Acceptance. It was determined that the uncertainty in game desire was 15.25±6.08. A statistically significant positive correlation was found between the students' Digital Game Addiction Scale and Digital Game Motivation Scale Achievement and Energizing, Curiosity, Social Acceptance, and Uncertainty in Game Desire sub-dimension mean scores ($p<0.05$).

Discussion: It was determined that there is a relationship between the digital addiction of nursing students and their motivation to play digital games, and some individual characteristics are effective in playing digital games.

Implications and future perspectives: With this study, it can be suggested to reduce the time students spend in digital games, to determine their psychosocial situations specific to the preferred digital game genres, and direct them to guidance counseling units. Therefore, further studies should evaluate game addiction among parents, especially as an important stakeholder in the university education process.

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4.1
DIGITAL HEALTH INTERVENTIONS TO IMPROVE THE JOURNEY FROM PREGNANCY TO PARENTHOOD: A SCOPING REVIEW

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Background: Most children in Germany are born in maternity hospitals. These hospitals offer parents a low-threshold and uncomplicated way to be reached without feeling stigmatized [1]. In maternity hospitals, health professionals can recognize early on the parents' stress situations, educational needs or resources. Together they can provide appropriate support services. Therefore, health professionals play a guiding role by accompanying parents from the maternity hospital to further social and health networks. In this context the integration of digital health technologies can be an effective intervention to support parents with regard to pregnancy, childbirth and parenthood [2].

Aim(s): The aim of this study is to present preliminary findings from a scoping review that aims to map and assess published studies on digital health interventions aimed at improving support for parents in the areas of pregnancy, childbirth, and parenthood.

Methods: A scoping review will be conducted, including scientific publications in English and German language published from 2008. A systematic database search will performed in MEDLINE via PubMed, CINAHL, Cochrane Library, IEEE Xplore Digital Library, ScienceDirect and PsycINFO. Title/Abstract and the full-text of results from the database search will screened independently by two authors to finally select the studies. Peer-reviewed qualitative, quantitative, and mixed methods studies that evaluated digital health interventions to improve pregnancy, childbirth and parenthood were included.

Results: A first oriented search identified studies of digital health interventions, for example smartphone self-care applications, to help pregnant women during the corona pandemic [3]. Other studies describe counseling interventions via telehealth for health promotion, health tracking and education [2,3]. Furthermore, digital health technologies can support for example mental and physical wellness of pregnant women, health education and parenting support [2].

Discussion: Digital health technologies (e.g. mobile apps, wearable devices, or platforms) allow pregnant women and their families to access health informations, educational parenting trainings or receive personalized recommendations [3]. This can contribute to increased self-care and a sense of control over the pregnancy journey. The timely detection and intervention of risks through real-time monitoring of maternal health can lead to a reduction in adverse maternal and birth outcomes. Challenges regarding privacy, accessibility, equity, implementation strategies and digital literacy are also discussed [2,3].

Implications and future perspectives: When health professionals play a guiding role by accompanying parents from the maternity hospital to wider social and health networks, they can integrate digital health technologies into the care process. Digital health technologies have potential for supporting pregnancy health care. There is also a need for research to understand the effectiveness and feasibility of implementing digital health interventions

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4.2
TOWARDS SHARED DECISION MAKING IN OBSTETRICS

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Background: In Belgium, birth care increasingly medicalized over the years. Despite its positive effects, medicalization has also led women to experience less autonomy and less involvement during pregnancy, labor, birth and the postpartum. Research shows that this has profound effects on, among others, women's birth experience and their level of satisfaction with birth care. The necessity of implementing shared decision making (SDM) into practice is put forward as a strategy to strengthen women's participation during the perinatal period [1,2,3].

Aim(s): The aim of this project was fourfold. First, we wanted to enhance understanding in the criteria that women, their partners, midwives and obstetricians use to define SDM. Second, dialogue and reflection concerning the implementation of SDM in daily practice of two midwifery teams was facilitated via action learning teams. Third, the action learning teams ideated, tested and evaluated targeted actions to strengthen SDM in their own practice. Finally, we aimed to translate the insights and experiences into accessible, ready to use tools for care takers involved in birth care.

Methods: In the first research phase (June 2022 – August 2022), we conducted semi-structured group interviews and individual interviews with woman who gave birth less than one year ago, partners who became a parent less than one year ago, midwives and gynecologists who are employed in a hospital (N=18). The data were transcribed and analyzed with NVIVO 1.7.1, following the Grounded Theory approach. This enabled us to get grip on the criteria used to define SDM.

In the second research phase (September 2022 – August 2023), two obstetric teams of two general hospitals were selected to participate in an action learning program to optimize SDM in their daily practice. Field notes were made and refer to reconstructions of the conversations, observations of behavior, and the participants' and researchers' reflections, thoughts and feelings. The study has been approved by the ethical commission of KU Leuven.

Results: Overall, an important overlap is observed in the vision on SDM across the respondents and the obstetric teams. The results can be summarized in ten criteria: SDM requires (1) acknowledging each other's role and expertise, (2) choice consciousness, (3) dialogue, (4) building trust, (5) patient-centered care, (6) time, (7) being informed, (8) taking responsibility as a team, (9) transparency on hospital policy, and (10) strong collaboration with primary care providers. The trajectory with both obstetric teams however showed that translation from theory and reflection into practice remains challenging (e.g., there is no one-size-fits-all approach and each program should start from a team's needs; particular attention is requested for the reflection phase as care providers tend to be rather action minded…). Interestingly, the principles of Appreciative Inquiry that underly action learning proved fruitful to overcome these challenges and to create creative, sustainable solutions.

Output: The results and insights of both research phases are gathered into four freely accessible tools: (1) an implementation guide for care providers with concise information about the "what" and "why", templates and tools, recommendations, and reflection questions for each criterium, (2) a workshop for care providers to familiarize themselves with SDM and action learning, (3) guidelines and recommendations for those wanting to facilitate an action learning process in a care context, and (4) a video for women and their partners to create awareness regarding SDM to be used on social media, in waiting rooms ...

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4.3
CURRENT PRACTICE OF PRECONCEPTION CARE IN THE NETHERLANDS

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Background: Guidelines for preconception care (PCC) are available in the Netherlands. However, uptake of PCC is still low. Moreover, practice of PCC greatly varies between professionals.

Aim(s): To evaluate the current practice and perceptions of PCC.

Methods: A questionnaire was developed and sent to 90 primary care midwifery practices and 12 obstetric departments in the Southwest-region of the Netherlands.

Results: Eighty three respondents (81.4%); 76 independent primary-care midwives and 9 obstetricians, completed the questionnaire. PCC mostly consisted of an individual consultation with personalized health-and-lifestyle advice. A PCC protocol was available in 44.4% of the respondents' organization. How the consultation was conducted differed greatly between professionals. Regardless of these differences, respondents acknowledged the need for PCC for all couples. However, requests for PCC consultations was low.

Discussion: It is likely that PCC provided by independent primary care midwives differs from PCC provided by obstetricians or clinical midwives in a hospital. And PCC provided by younger and older birth care professionals might also differ. Unfortunately, the number of respondents was too small to further investigate this topic.

Implications and future perspectives: Midwives and obstetricians acknowledge the need for PCC, but practice still varies. Results of this survey can be used to find bottlenecks in standardization of PCC, which may help increase awareness and subsequently the uptake of PCC.

4.4
UNVEILING THE SHADOWS: UNDERSTANDING INTIMATE PARTNER VIOLENCE IN PREGNANCY

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Background: Intimate partner violence (IPV) during pregnancy poses a significant threat to the well-being of both the mother and the unborn child. This form of violence includes various forms of physical, emotional, sexual, and psychological abuse perpetrated by an intimate partner. Pregnancy is often the trigger for the onset or escalation of violence in a relationship [1]. International studies show that the prevalence of IPV during pregnancy ranges from 1% to 28%, with the majority falling within the 4% to 12% range [2].

Aim: The aim of this study was to determine the prevalence of IPV during pregnancy and its association with sociodemographic data.

Methods: The cross-sectional design was applied. A convenience sample included 189 pregnant women. The age range of the respondents was between 22 and 46 years (mean = 31.35; SD = 4.897). Sixty percent of the women were primiparous. The data was collected using a modified HITS (HURT, INSULT, THREATEN, and SCREAM) questionnaire consisting of five items that assess the occurrence of IPV [3]. Respondents rated their experiences on a scale of 1 (never) to 5 (always) for each item in the questionnaire. The scoring system for the HITS questionnaire ranges from 4 to a maximum of 20. A total score above 10 indicates the presence of intimate partner violence. Higher scores indicate a greater likelihood of experiencing psychological violence and physical aggression in an intimate relationship. The questionnaire was translated into the Slovenian language and distributed as an online survey across clinical settings frequently visited by pregnant women. The data were analyzed using the statistical software SPSS ver. 26.

Results: Overall scores on the HITS questionnaire indicated a moderate level of intimate partner violence among female respondents (mean = 8.53; SD = 4.874; 95% confidence interval [7.81; 9.25], $p < 0.001$). Respondents who completed elementary school or less (mean = 14.89; SD = 6.194) and those who are currently divorced (mean = 14.40; SD = 5.661) scored highest on the HITS questionnaire. The observed differences between these groups proved to be statistically significant ($p < 0.05$). On the other hand, there were no statistically significant differences ($p > 0.05$) between the groups when factors such as social status, number of pregnancies, and mode of delivery were taken into account.

Discussion: The findings of the study are not reassuring, as the consequences of IPV in pregnancy not only impact the quality of life but also the health outcomes for both the mother and the unborn child. Pregnancy presents a unique opportunity for healthcare professionals to identify IPV and intervene appropriately. In this context, midwives play a pivotal role in addressing IPV during pregnancy by recognizing signs, providing support, advocating for the women, and empowering them to report IPV and make informed decisions.

Implications and future perspectives: More research is needed from the perspective of lived experiences of IPV victims. IPV screening needs to be implemented systematically and as a routine practice in every clinical setting.

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4.5

THE EFFECT OF HYDROTHERAPY ON THE MOTHER-NEWBORN OUTCOMES AND BIRTH SATISFACTION IN VAGINAL DELIVERIES

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Background: In hydrotherapy, which is one of the non-pharmacological methods used to reduce labor pain and provide relaxation and comfort, the pregnant woman is in warm water deep enough. Warm water and the buoyancy of the water provide relaxation, reduce labor pain, relieves stress, and improve the process [1,2].

Aim(s): This study was carried out in two stages, retrospective and prospective case-control type, to examine the effect of hydrotherapy applied at birth on mother-newborn outcomes and birth satisfaction.

Methods: The population of the study consisted of individuals who underwent hydrotherapy in labor (N=44) and gave vaginal birth (N=2471) between July 2018 and March 2020 in a gynecology and pediatrics hospital in Istanbul. The sample of the study consisted of 42 individuals who underwent hydrotherapy in labor (case group), and 60 women (control group) selected by systematic sampling method who had similar obstetric characteristics to the individuals in the hydrotherapy group and who had a vaginal delivery in labor without the hydrotherapy. Mother-Newborn Information Form, Mother Identification Form, and Birth Satisfaction Scale were used to collect data. In the first stage of the study, the records of the individuals in the hydrotherapy and control groups were examined and the results of the mother and newborn at the time of birth were obtained retrospectively. In the second stage, women were interviewed between May-October 2021 and their satisfaction with the birth was determined. Scientific research permission was obtained from Istanbul Provincial Health Directorate and ethical approval was obtained from the ethics committee. Data analysis was performed using the Pearson chi-square test, Mann-Whitney U test, and independent t-test. In the analysis of the results, $p<0.05$ was considered significant.

Results: It was determined that there was no statistically significant difference between the individuals in the hydrotherapy and control groups in terms of sociodemographic and obstetric characteristics, and birth and newborn outcomes ($p>0.05$). There was a statistically significant difference in favor of the hydrotherapy group in terms of the Birth Satisfaction Scale scores and the findings of preferring normal delivery in the next delivery between the two groups ($p<0.001$).

Discussion: The data obtained showed that hydrotherapy applied in labor had a positive effect on women's birth satisfaction and preference for normal birth in their next birth, without a negative effect on mother-newborn outcomes. In the literature, it is stated that hydrotherapy applied during childbirth increases birth satisfaction, contributes to women's freedom of movement, and reduces labor pains [3].

Implications and future perspectives: Dissemination of hydrotherapy practices in maternity units will contribute to women having a positive birth experience and to prefer normal delivery in their future deliveries.

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4.6
STRESS MONITORING OF MIDWIVES USING WEARABLE TECHNOLOGY DURING OBSTETRIC AND NEONATAL RESUSCITATION SIMULATION TRAINING

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Background: High-fidelity simulation training improves the skills needed to manage complex, high-risk, and low-incidence obstetric and neonatal emergencies [1]. However, the stress experienced during simulation can impact learning experiences and satisfaction levels [2,3]. By incorporating a stress monitoring technique based on wearable technology, this study seeks to develop a system that can accurately assess and analyze the stress levels of midwives in real-time during simulations.

Aim(s): The primary aim of this study was to monitor the stress levels of midwives during obstetric and neonatal resuscitation simulation training using an wearable technology [4], with a focus on assessing the impact of a brief debriefing interventions on the process. Additionally, this study aims to assess midwives' satisfaction with the training, providing valuable insights into their perceptions and experiences related to the simulationbased training and debriefing intervention.

Methods: A prospective quasi-experimental study was conducted with 12 midwives who participated in a simulation training at the Erasmus Brussels University of Applied Sciences and Arts (EhB) in March 2023. The midwives were given instructions to stay seated and at rest for a period of 30 minutes (T0) before the simulation began. Prior to the start of the scenario, they were briefed about the specific scenario and the role they would be playing (T1). During the debriefing phase, the midwives received a brief stress and satisfaction debriefing session in which stress was discussed (T2). After the debriefing phase, participants were also asked to rest for 30 minutes (T3). Midwives' physiological stress parameters [heart rate (HR), blood volume pulse (BVP), electrodermal activity (EDA), and skin temperature (Temp)] were assessed using an Empatica E4 wristband© continuously [4,5], but divided into time periods T0, T1, T2, and T3. Their psychological stress levels were assessed using the Short Stress State Questionnaire [6] at T0 and T3 time periods and, satisfaction was assessed using the Satisfaction with Simulation Experience Scale [2] at T3 time period. Quantitative data were analysed using IBM SPSS 28.0 SPSS. Empatica E4 wristband data were processed using Python program©.

Results: This study found that the mean post-test score of the level of psychological stress was lower than that of the pre-test; however, there was no statistically significant difference between pre-test and post-test psychological stress scores ($p>0.05$). When comparing time periods, we observed that the median values of HR increased from T0 to T1 and decreased from T1 to T2 ($p<0.05$), while EDA increased from T0 to T1 and decreased from T1 to T2 ($p>0.05$). Concurrently with HR, BVP initially decreased and then increased. Temp first increased during simulation and then remained stable. Additionally, midwives were highly satisfied with the simulation-based training, including brief stress and satisfaction debriefing.

Discussion: Despite the lower post-test psychological stress scores, the lack of statistical significance suggests that the brief debriefing interventions may have contributed to stress reduction. The observed patterns in EDA, HR, and BVP parameters during different time periods provide valuable insights into the midwives' physiological responses to the simulation training. Furthermore, the high satisfaction reported by midwives indicates the value of a brief stress and satisfaction debriefing and the simulation-based training approach.

Implications and future perspectives: By incorporating a stress monitoring technique based on wearable technology during maternal and neonatal resuscitation simulation training holds promising implications for the field of midwifery. Further research in larger samples and diverse settings can explore the potential of real-time stress assessment to provide personalized feedback and tailored interventions, ultimately improving the overall well-being and effectiveness of midwives in high-stress obstetric health-care.

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4.7
ARE COUPLES MAKING INFORMED CHOICES WHEN OPTING FOR PRECONCEPTION REPRODUCTIVE GENETIC CARRIER SCREENING?

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Background: Reproductive genetic carrier screening (RGCS) allows to identify couples who have an increased risk of conceiving a child with a genetic condition. Professional organizations have emphasized that the success of RGCS should not solely be measured by the uptake of screening. An assessment of whether or not individuals are making informed choices with regard to RGCS is considered to be as important [1].

Aim(s): The aim of this study was to assess informed choice among couples who were offered RGCS for a large test panel including more than 1000 genes associated with autosomal recessive and X-linked conditions.

Methods: Women visiting a gynaecologist practice were asked to consider participation in a research study where preconception RGCS was offered for free to them and their male partner. Participants were asked to complete an individual self-administered questionnaire at the end of a pre-test counseling session. A modified Multidimensional Measure of Informed Choice was used to determine whether couples who opted for RGCS made an informed choice [2, 3].

Results: In total, 82% of participants (n=77) made an informed choice with regard to RGCS according to the modified MMIC. Thirteen participants (17%) made an uninformed choice due to insufficient knowledge and one participant (1%) due to insufficient knowledge and value-inconsistency [4].

Discussion: In practice, limited resources may restrict the availability of face-to-face pre-test counselling or a follow-up visit which could impact knowledge and therefore informed choice [2].

Implications and future perspectives: Our study results show high rates of informed choice among couples who were offered RGCS in a highly controlled research context where participants received up to 30 minutes of pre-test counseling. Future research should assess if high levels of informed choice could also be achieved outside a controlled research context.

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4.8
BARRIERS AND FACILITATORS OF PATIENTS' ADHERENCE TO REMOTE MONITORING FOR GESTATIONAL HYPERTENSIVE DISORDERS

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Background: In Flanders, 4.1% of pregnant women suffer from gestational hypertensive disorders (GHD) [1]. In the Pregnancy REmote MOnitoring (PREMOM) II study, the added value of an midwife led, remote monitoring (RM) prenatal follow-up program for women with GHD is investigated in a multicentric, randomized controlled trial (RCT) [2]. The first clinical, gestational, and economic results are expected at the beginning of 2024. Adherence to RM is necessary to succeed in the RM follow-up. We hypothesize that the exploration of the influencing factors for adherence can contribute to a better understanding of the behavior of pregnant women.

Aim(s): The purpose of this study is to identify the barriers and facilitators for having a high (> 80 %) adherence rate.

Methods: Semi-structured in-depth interviews were conducted with twenty participants of the RM arm of the PREMOM II study, evaluating the barriers and facilitators regarding adherence to RM. Strata were used to become a heterogeneous sample in adherence rate (stratum 1: < 30%, stratum 2: 30% - 80%, stratum 3: 80% -100%, stratum 4: > 100%). The qualitative interviews were guided and analyzed using the Capability, Opportunity, Motivation, and Behaviour model, combined with the Theoretical Domains Framework.

Results: There was an equal representation of participants based on adherence data from the PREMOM II study (stratum 1: n = 3, group 2: n = 10, group 3: n = 6, group 4: n = 1). Participants provided more information about facilitators compared to barriers. Analysis revealed key themes to improve adherence to RM including, knowledge, participants' skills, goals, intentions, motivation, and belief about their capabilities. Participants describe the user-friendly system, the sense of security, and the stress-reducing effect as facilitators. Findings revealed that participants perceived forgetfulness, fatigue or pain, a lack of psychological counseling when blood pressures were high for a long time, technological issues, and inadequate social and environmental support as the main barriers for adherence to RM.

Discussion: The findings of this study show that participants of the PREMOM II study had mostly positive experiences with RM. A limited number of barriers may affect adherence. Further development of RM interventions in GHD based on the obtained facilitators, barriers and tips could lead to higher adherence to RM. This is with the goal of improving health outcomes.

Implications and future perspectives: The information obtained from this study could help with targeting the identified areas for improvement. The midwife has the potential to promote better patient adherence to RM. Higher adherence leads to better health outcomes for mothers and neonates.

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4.9
BORN IN BELGIUM PROFESSIONALS, A SHARED PLATFORM FOR INTEGRATED CARE

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Pregnancy is a vulnerable period where attention to psychosocial well-being is of great importance and a window of opportunity to target those vulnerabilities. Born in Belgium Professionals is a project of the National Institute for Health and Disability Insurance (NIHDI) that aims to tackle down these issues. With more than 100 organisations a shared digital platform was developed that maps the psychosocial needs by means of anpsychosocial assessment questionnaire. It proposes customized care offers and offers an overview of the care providers involved. Moreover, the platform facilitates referrals through integration with databases of the NIHDI, Social Brussels, Social map Flanders.

The psychosocial assessment consists of 22 items that focus on 13 indicators: communication, place of birth, residence status, education, occupational status, partner's occupation, financial situation, housing situation, social support, depression, anxiety, substance use and domestic violence.

More than 1,600 files (n=1634) were created in the Born in Belgium Professionals platform in September 2022. 99.7% (n=1629) of pregnant women gave their consent to start a file. 95.5% (n=1490) of the files went all the way through the questionnaire. In most cases (98.5%, n=1605), a file was opened based on the woman's national register number. Of the 1601 women, 49.3% (n=790) were from the Brussels Capital Region, 49.2% (n=788) from Flanders, 1.3% (n=21) from Wallonia. The screening results of 1300 cases showed that 21.9% of women scored positive on at least one indicator, 18.1% on three indicators, 6.4% on five indicators.

Further results will be reported in the future as well as thorough implementation analysis of the use of the platform along with barriers and facilitators to its use in practice. This will allow us to develop appropriate implementation strategies.

4.10
KNOWLEDGE, ATTITUDE AND PRACTICE OF CAREGIVERS REGARDING REUSABLE DIAPERS AND INCONTINENCE MATERIALS

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Background: The healthcare sector's contribution to environmental problems represents a significant challenge1,2. Healthcare is responsible for 2% of industrial waste in Flanders2. Therefore, the Green Deal Sustainable Care has been launched to stimulate sustainability in healthcare with waste and circularity of materials as one of the pillars4. It is important to focus on sustainable alternatives such as reusable materials, since 43% of the residual waste consists of diapers and incontinence materials3. However, studies on knowledge and attitudes of professionals towards reusable materials in healthcare are rather limited and not available in Flanders.

Aim(s): The aim of this study was to investigate knowledge, attitude and practice of healthcare providers in Flanders regarding sustainability in personal and professional life, and reusable diapers and incontinence materials.

Methods: A quantitative study with an online survey was conducted among Flemish healthcare providers (n= 281) in child and elderly care (resp. n=185 and n=96), including midwives, nurses, paramedics, doctors, managers, etc. Descriptive statistics and $\chi 2$ tests were applied for data-analysis using SPSS. A P-value of <0.05 was considered as significant.

Results: Knowledge, attitude and practice regarding reusable materials was significantly related to the work setting, but not to age or job function. Respondents in childcare were better informed about reusable diapers than those in elderly care (73 vs. 12,5%; $p<0.001$) and had a higher willingness to use (77 vs. 24%; $p<0.001$). Disposable diapers were mostly used (62% childcare, 100% elderly care). Only 8% used reusable diapers exclusively in childcare. Impact on the environment was the most mentioned stimulator for reusable materials (70% childcare; 52% elderly care). Lack of usability (46% childcare) and knowledge (58% elderly care) were the most important barriers. The majority considered sustainability important in their personal (84%) and professional lives (78%). They were less convinced that their organization (49%) and the government (26%) consider sustainable care as important.

Discussion: This study highlights the need to increase knowledge and awareness of sustainable healthcare and reusable diapers and incontinence materials. A proper translation of sustainability policies into practice is required.

Implications and future perspectives: It is recommended to provide relevant information to healthcare providers and implementing policies at the workplace. Also further research is needed on ease of use, time and cost efficiency, including an environmental impact analysis of disposable and reusable diapers and incontinence materials.

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4.11

VRNURSE4KIDS: PREPARING NURSING STUDENTS FOR FUTURE HEALTHCARE: VIRTUAL REALITY IN PAEDIATRIC SETTINGS

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Background: Virtual Reality (VR) allows users to be fully immersed in a virtual world through a multisensory experience1. It has been demonstrated that VR decreases pain and anxiety in children during Nursing procedures2. Therefore, VR has become increasingly applied in hospitals. However, few studies assessed nurses' health technology perceptions and acceptance and it is largely unknown to what extent VR is part of the nursing education. Therefore, the VRNurse4KIDS project started, focusing on the use of VR in pediatric settings.

Aim(s): The VRNurse4KIDS project intends (1) to increase awareness and attention for VR among students, teachers and healthcare professionals, (2) optimize their knowledge, competences and skills and (3) to improve quality of nursing education by integrating digital competences and VR in the nursing program.

Methods: The project consists of the following activities: (1) identification and understanding of barriers and facilitators towards implementation of VR in hospitals through focus group discussions, (2) development of a digital competence framework for nursing education, focusing on VR, (3) designing and development of an open-source e-learning training course on VR, including evaluation with a pre- and posttest design, (4) development of an instruction film including implementation of VR during nursing procedures, (5) skills lab training on VR, followed by implementation in clinical practice.

Results: Barriers and facilitators towards VR were identified among different stakeholders (e.g. health care professionals, nursing students, lectures) using the Technology Acceptance Model. Digital competences for nursing education with focus on VR were elaborated, using the European DigComp tool. An interactive, open source eLearning on VR is currently designed, consisting of six modules. The eLearning will be tested among nursing students (fall 2023). An instruction film is developed on how to integrate VR during venipuncture and will be followed by a skillslab training for nursing students (spring 2024).

Discussion: The stepwise and total approach of this project contributes to the innovation of nursing education. The VRNurse4KIDS project triggers nursing students for new technology, making them pioneers for implementing digital innovations into practice, thereby optimizing pediatric care.

Implications and future perspectives: As the use of VR is becoming more widespread in health care, it is important that nursing educators take the lead to integrate innovative health care technologies into nursing curricula.

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4.12

A DIALOGUE TOOL SUPPORTING HEALTH PROFESSIONALS TO COMMUNICATE ABOUT LOSS AND GRIEF WITH CHILDREN.

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Background: The diagnosis of a serious illness or death of a family member/relative has a deep impact on children and is often accompanied by feelings of anxiety, uncertainty, loneliness and guilt1. When a baby is admitted on neonatology, it is important to support and involve siblings during the hospitalization of their brother/sister2. Being able to express emotions and doubts provide comfort and connectedness, which is essential in a child's grieving process. However, adults tend to protect children and experience difficulties to communicate about loss and grief3. Therefore, a dialogue tool was developed to support adults in their communication with children about existential themes.

Aim(s): The objective of this study was to test and evaluate the dialogue tool among parents, teachers and healthcare professionals.

Methods: A descriptive, qualitative design was conducted, using convenience and snowball sampling to evaluate the tool among professionals, parents and teachers. Semi-structured interviews, using an interview guide, were performed online or by telephone and recorded. After transcribing, content analysis was performed. Reflexivity, researcher triangulation, peer review and member check were used to ensure validity and reliability of the research.

Results: In total 12 female adults participated in the study: one professional, four parents and seven teachers. The dialogue tool was positively evaluated. The manual and conversation cards were experienced as a safe, necessary handhold and guidance for adults. Siblings reacted positive and curious. The tool triggered spontaneous conversations, enabling children to share their experiences. Participants mentioned that the tool was best applied to children between 4-8 years. The toolbox was introduced differently by playing, before bedtime, after dinner or talking circles at school. Participants mentioned that children needed some action afterwards and made suggestions to optimize the tool.

Discussion: The dialogue tool has an added value by lowering the threshold to communicate with children about loss and grief, thereby breaking the existing taboo. Further research is needed to explore perceptions of male adults and caregivers towards the dialogue tool as well as the experience and input of children.

Implications and future perspectives: Further attention is needed to dissemination and implementation of the dialogue tool in schools and healthcare (e.g. in existing mourning boxes). It is recommend to train adults in the use of the dialogue tool in order to increase their emotional skills and self-confidence in having conversations about existential themes with children.

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