

EORNA

European Operating Room Nurses Association



ABSTRACT BOOK

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Content

Priority Sessions.....3

Symposia.....5

Parallel Sessions.....11

Round Table Sessions.....24

Clinical Case Studies.....29

ePosters Guided View31

ePosters43

We are very grateful for the valuable and hard work of all our reviewers in ensuring that abstracts are compliant with EORNA guidelines and themes.

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Priority Sessions

Priority Sessions

152 Skills Management for New Nurses in the OR: When MYORCO Becomes An Essential Tool!

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Background: In Europe, the education of nurses in perioperative care is diverse and, in some countries, not mandatory to work in the OR.

Objectives: I will present MYORCO tool as a possibility to facilitate the integration of new nurses in the staff.

Methods: MYORCO is a European Erasmus Partnership project. The aim of our project was to create a website with online tools for the skills management of new OR nurses and students. It was created, tested and experimented in 5 European countries: Sweden, Finland, Czech Republic, Greece, France and Belgium.

It was developed in English and translated in French, Swedish, Finnish, Czech and Greek languages.

Results: MYORCO was developed around the basic practices in the OR for the new OR nurses and students. It offers a wide range of training videos. These short videos show the correct and safe ergonomics of instrumentation and explain the use of some basic equipment the OR nurses regularly use during surgical procedures. A second part is the instruments library with around 150 pictures of instruments presented with their context of use. The results are visual and educational tools that can be used easily in the field of training and evaluation. This tool is very useful for OR head nurses to plan and manage the competencies of their team, and for new nurses to self-assess their progress in acquiring the required competencies.

Conclusion: I will present a power point on the MYORCO tool with print screens. It will give a visual idea of the benefit of using these tools to facilitate the self-learning of the students and the new nurses in the OR.

258 Is the WHO Surgical Safety Check List effective? A Meta-analysis.

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Background: Every year, millions of individuals die within 30 days following surgical procedures and nearly one-fifth of individuals undergoing surgical procedures experience complications. The WHO Safety Surgery Checklist (SSCL) appears to have the potential to enhance surgical safety and quality across all surgical settings. However, there is still limited understanding of the overall impact of implementing the SSCL on clinical and organizational outcomes.

Objectives: To value the impact of SSCL on clinical and organization outcomes.

Methods: An extensive systematic review and meta-analyses were conducted following the relevant criteria outlined in the 'Cochrane Handbook for Systematic Reviews of Interventions'. In order to ensure a high level of reliability of study results, the literature search, study inclusion, and data extraction processes were independently conducted by two researchers, and any evaluation conflicts were resolved by a third researcher.

Results: A total of 2,776 records were retrieved, and after removing duplicates, 1,571 were assessed for eligibility. Sixty-five manuscripts met the criteria for inclusion, and ultimately, 35 studies were included in the review. Of these, 16 studies were suitable for meta-analysis. The meta-analytic synthesis was feasible for 'mortality within 30 days' as well as sixteen other surgical complications. Findings highlighted the protective role of SSCL in reducing mortality rates, instances of deep vein thrombosis, surgical site infections, and unplanned returns to the operating room. Nevertheless, while these results are promising, further confirmation is required for positive outcomes on other outcomes. An exploration of the reasons for heterogeneity among the included studies was also conducted and presented.

Conclusion: This systematic review has confirmed the importance of the SSCL in ensuring patients' safety and informs healthcare managers about the rationale for implementing organizational review aimed at improving SSCL implementation.

Priority Sessions

255 Determination of Individual Innovation Characteristics of Operating Room Nurses

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Background: Operating rooms appear as service areas where innovative approaches are most needed with the effect of rapidly developing technology. The nurses, who work in operating rooms where many biomedical devices and sensitive instruments are used and are constantly changing with the developments in technology, need to lead in terms of individual innovative features and adapt quickly to change.

Objectives: The study was conducted to determine the individual innovativeness of the operating room nurses and the individual factors affecting them.

Methods: A descriptive and cross-sectional study was conducted between 15 November and 31 December 2021 with the participation of 153 operating room nurses in the province of Istanbul. "Individual Innovation scale (IIS)" and "Descriptive Information Form" were used as data collection tools. The snowball sampling technique, one of the nonprobability sampling methods was used.

Results: The operating room nurses' total IIS score was 68.7 ± 7.7 , while their opinion leadership, resistance to change, and risk-taking subscale scores were 28.4 ± 3.4 , 23.2 ± 5.5 , 17.1 ± 1.8 respectively. It was determined that gender, marital status, education level, years of experience in the operating room, surgical department, and institution characteristics affected individual innovativeness characteristics.

Conclusion: It has been determined that the individual innovativeness of the operating room nurses is mostly in the inquiring category, women are more open to change than men, men and those with more than ten years of experience are perceived as more opinion leaders, and married people are perceived as both more open to change and opinion leaders. It was found that as the level of education and years of experience increased, the innovativeness level was positively affected, while the risk-taking feature decreased. Conducting the research with including different geography and cultures; it can obtain important information about identifying and supporting the innovative characteristics of operating room nurses.

Symposium 1: Education

148 Perioperative nurses' development of professional competence from interprofessional simulation-based learning to meet acute clinical practice situations.

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Background: Perioperative nurses require professional education (1) to ensure high-quality perioperative care and patient safety in acute situations. Interprofessional simulation-based learning exposes perioperative nursing students to acute situations in a safe environment without the risk of harming the patient and can prepare them for clinical practice (2). There is a need for studies about perioperative students' professional development (3) and how interprofessional simulation-based learning influences future practice (4).

Objectives: This study explored recently graduated perioperative nurses' experiences of interprofessional simulation-based learning during their education and their development of professional competence to meet acute situations after graduation.

Methods: We utilised a qualitative and explorative design. Between March 2019 and November 2020, sixteen semi-structured individual interviews were conducted with perioperative nurses three to five months after they graduated from five different educational institutions in Norway. Data analysis applied a phenomenological hermeneutical method (5).

Results: Perioperative nurses reported they experienced the development of competency in handling acute situations (e.g., prioritising, working in stressful situations) and contingency planning. They also expanded their interprofessional communication and collaboration competence as they experienced the value of clear communication, repetitive messages, and conciseness. Being in an interprofessional context created an awareness of their dependence on each other and an understanding of team dynamics. This enabled them to meet acute situations with insight and preparedness as recently graduated. Self-confidence developed through increased competence and mastery resulted in a belief that they would handle (future) acute situations. Professional identity was developed in conjunction with a rise in self-confidence as they became more aware of their professional role and the sense of belonging to their future profession.

Conclusion: Participating in interprofessional simulation-based learning during education developed essential competencies for dealing with acute situations, supported incipient professional identity and strengthened their courage to speak up in interprofessional teams as recent graduates.

178 Undergraduate Student Nurses learning Experiences in the Perioperative setting

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Background: The perioperative setting presents a unique environment that involves varied demands i.e., clinical care undertaken by multidisciplinary teams, use of sophisticated technologies, skills in maintaining safety and minimising risk for the surgical patient. Currently, in Ireland, undergraduate student nurses spend clinical placement time in the perioperative department. Here students get an opportunity to be involved in the preoperative, intraoperative, and immediate postoperative care of the surgical patient. To date, little research has been undertaken to establish students' learning experiences in this area.

Objectives: To explore the evidence on the experiences of undergraduate student nurses within the perioperative learning environment.

Methods: Using an integrative systematic review approach studies published between 2012 and 2022 were identified via a comprehensive search of eight databases. The databases included CINAHL, Medline (OVID), Medline (PubMed), Medline (EBSCO), EMBASE, PsycINFO, ISI Web of Science and SCOPUS. This review utilised the Preferred Reporting for Systematic Reviews and Meta-Analysis (PRISMA) to report results. Following the screening process 17 articles were identified that met the inclusion criteria. Papers were appraised using the Critical Appraisal Skills Programme (CASP). Narrative synthesis was utilised to synthesise the results.

Symposia

Results: Three categories were identified: 'Learning opportunities' which included theoretical knowledge, psychomotor skills and values and attitudes. 'Appreciation for perioperative role and intent to return', and 'Factors influencing student learning' included factors promoting and prohibiting acquisition of knowledge, skills, and values.

Conclusion: Numerous opportunities for student learning occurs within the perioperative setting. Students perceived senior nurses as role models to aspire to in this pressurised and varied setting. The complexities and uniqueness of the perioperative setting poses opportunities and challenges for student learning. Students who are not accustomed to this environment require more support to help achieve increased learning opportunities.

Symposium 2: Healthy Workplaces & Leadership

190 Ergonomic risk factors and musculoskeletal system problems in healthcare professionals working in central sterilization unit

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Background: Healthcare professionals face environmental, psychological, chemical, biological, ergonomic, and physical risks arising from their work environment. Central sterilization units, which are usually located on the lower floors of hospitals, are special working areas that host many risks in this context. The lack of appropriate ergonomic structure of the central sterilization unit significantly affects the health of health professionals.

Objectives: This descriptive study was conducted to determine the ergonomic risk factors and musculoskeletal problems of healthcare professionals working in central sterilization units.

Methods: The population and sample of the study consisted of 87 healthcare professionals working in the central sterilization unit of seven hospitals of a private healthcare group in Istanbul. The data were collected using the sociodemographic characteristics form, Ergonomic Risk Factors and Musculoskeletal Disorders Scale (ERFMDS) and Cornell Musculoskeletal Disorders Questionnaire (CMDQ) between February and September 2020. The data were evaluated with SPSS. The significance level was determined as $p < 0.05$ in all analyzes.

Results: According to the findings, the health professionals were between the ages of 18-25 years (34.5%), male (51.7%), undergraduate graduates (52.9%), nurses (74.7%), and their experience in the central sterilization unit was 1-5 years (65.5%). The mean ERFMDS total score was 119.39 and the mean CMDQ score was 77.62. Significant differences were found between ERFMDS physical environment, performance efficiency sub-dimensions and some sociodemographic characteristics, and the sub-dimensions showed a significant positive relationship with each other. Significant differences were determined between CMDQ mean scores according to age, gender, body mass index, educational status, occupation and professional experience.

Conclusion: It is recommended to create a safe and comfortable working environment for healthcare professionals in the Central Sterilization Unit, to take necessary precautions by determining ergonomic risk factors, and to give importance to the ergonomic design of the areas so that healthcare professionals do not experience musculoskeletal disorders.

301 Surgical Smoke Hazards in the Operating Theater. A survey on perioperative nurses perceptions in Northern Greece Hospitals

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Background: Surgical smoke is produced when energy generating devices such as diathermy, lasers and ultrasonic surgical systems are used for cutting and coagulation of tissue during surgical procedures. Surgical smoke plume is considered a serious threat to the health of operating room personnel and patient safety may be compromised if plume is not properly captured and removed. Surgical smoke contains carbon, aerosolized blood and blood borne pathogens,

bacteria and a range of volatile organic compounds and gases. Viruses, including HIV, HPV and Hepatitis B are known to be present in plume and can be transmitted.

Objectives: The aim of this study was to determine the perceptions, attitude and preventive practice among perioperative nurses toward surgical smoke hazards.

Methods: A quantitative survey was conducted at hospitals of Thessaloniki in July 2023. A Questionnaire consisting of Likert Scale Multiple Choice Questions was used to collect data regarding Surgical Smoke. The statistical package SPSS version 27 was implemented for the statistical processing. Frequency tables and bar plots of percentages, one-way analysis of variance (ANOVA) test and independent samples for equality of means test (t-test) were the statistical techniques used. The sample size of this research included 201 perioperative nurses.

Results: From the responses in 5 hospitals, it is concluded that there is 9% - 50% equipment of surgical smoke evacuation in operating theatres. Between 29% and 46% of perioperative nurses do not know about the existence of equipment of surgical smoke evacuation. Only 11% of operating room nurses are aware of a local policy for surgical smoke management being in place within their organization.

Conclusion: Lack of effective management strategies, shortage of evacuation equipment and perioperative nurses unawareness of the existence of surgical smoke evacuation devices are some of the findings that cause barriers to the implementation and use of plume evacuation devices

Symposium 3: Perioperative / Clinical practice

140 Presence in the cold room

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Background: The first imprint with the perioperative nurse is important for the way patients feel in the operating room. The perioperative field is a highly technical and complex environment, where focus is on specialization and productivity. In this special room the patient might feel anxious and alien. The perioperative nurse has a special role keeping the patients' needs in mind while mastering the complexities of the operating room.

Objectives: The purpose of this study was to investigate perioperative nurses' experiences with presence in the patient encounter.

Methods: To explore this, an explorative qualitative investigation comprising individual interviews with 10 perioperative nurses were applied. The philosophy of Merleau-Ponty was used as a theoretical starting point and a hermeneutic methodology as a qualitative frame.

Results: Seven themes' findings illuminated how presence has value, especially when patients experiences anxiety, or during complex and acute procedures. Presence requires nurses to be open towards perception, and to be able to balance between intimacy and distance in order to respect the patients' different ways of managing feelings of loss of control. The themes were: 'Offering touch as a sense of care', 'Opening a conversation', 'Daring to be in the moment', 'Feeling a time pressure', 'Focusing on technical skills', 'Being part of a team' and 'Creating habits'.

Conclusion: The experience of presence is challenged by a task-centered care, which focusses on efficiency, productivity, specialization and technology. Improving practice requires change towards a more patient-centred care, both within the team in the operating room, and on a larger scale in how the healthcare system is organized.

Symposia

225 Set-up of surgical instruments during emergency Cesarean section. Advantages and disadvantages of using a standardized set-up of the Mayo stand from the surgical nurse's perspective.

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Background: Surgical nurses have responsibility for the instruments during surgery. Losing control of the instruments can have negative consequences for the patient and the surgical team. Some hospitals use a standardized set-up of the Mayo stand for surgeries, including Cesarean Section.

Purpose: To examine the surgical nurses' experiences and attitudes regarding using a standardized set-up of the Mayo stand during emergency Cesarean section.

Research question: What are the advantages and disadvantages of using a standardized set-up of the Mayo stand during emergency Cesarean section?

Methods: We collected data through qualitative, semi-structured, in-depth interviews with 12 surgical nurses. Data was analyzed using Malterud's systematic text condensation.

Results: The analysis revealed 4 result categories and 12 subcategories. The most important thing for the participants was to keep control of the instruments. Standardized set-up proved most useful for the inexperienced surgical nurses, in acute situations, in cooperation with gynecologists and during concurrency conflicts. Some disadvantages emerged, such as that the implementation can be challenging, especially for the experienced and a standard does not suit all ergonomic needs and situations. Some disagreed whether individual adaptations to the set-up were an advantage or a disadvantage. They emphasized that a standardized set-up must never replace a counting control.

Conclusion: Ideally, a standardized set-up can ensure the quality of optimal collaboration and make surgical nurses feel safe, regardless of experience. However, using a standard is not necessarily the best in all situations and can be challenging, especially during implementation.

318 The Effect of Virtual Reality Glasses Used During Colonoscopy on Vital Signs, Pain and Anxiety Level: A Study Protocol for Randomized Controlled Trial

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Background: Colonoscopy is a screening method used for screening, diagnosis, treatment and monitoring of colorectal and anal canal pathologies. Because it is an invasive and painful procedure, it causes psychological and physiological changes in the patient such as tension, irritability, increased blood pressure and pulse. Nurses are responsible for pain management by using pharmacological and non-pharmacological methods before, during and after the intervention in people who are exposed to painful procedures. Although distraction is one of the non-pharmacological methods, virtual reality glasses are a frequently used device in this context.

Objectives: To determine the effect of virtual reality glasses used during colonoscopy on vital signs, pain and anxiety levels.

Methods: The study was planned with 60 patients (experiment group:30, control group:30) in a pretest-posttest, randomized controlled experimental design. The study was carried out in the endoscopy unit of a hospital in Istanbul between September 2020 and September 2021. Data were collected with Descriptive Information Form, State-Trait Anxiety Scale, Visual Comparison Scale-Pain, Vital Signs Follow-up Form, and Satisfaction Form.

Conclusion: As a result, it was found that there was a statistically significant difference between the experimental group and the control group after the procedure in terms of heart rate, anxiety and pain scores during the procedure in terms of vital signs of the virtual reality glasses used during the colonoscopy procedure. The use of virtual reality glasses is an effective non-pharmacological method to distract attention during painful and invasive procedures.

Symposium 4: Patient safety

328 The Retained Surgical Items Risk Assessment Scale: Development and Psychometric Characteristics

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Background: The retained surgical items is a serious patient safety problem, especially for patients undergoing surgery.

Objectives: The aim of this study was to develop the Retained Surgical Items Risk Assessment Scale and examined its psychometric properties.

Methods: Methodological design. The research was carried out with 270 patients who underwent surgery in a university hospital. The data of the study were collected with the Sociodemographic and Clinical Characteristics Form, Operating Room Count Control Form and the Retained Surgical Items Risk Assessment Scale developed. In the analysis of the data, Content Validity Index (CVI), Cronbach α , item-total score correlation, Kuder-Richardson, Cohen Kappa, exploratory and confirmatory factor analysis, and Receiver Operating Characteristic (ROC) curve analysis were performed.

Results: The CVI of the scale was found to be 0.92. Cohen Kappa value was found to be 0.993. The variance explained in the exploratory factor analysis of the scale is 50.03%. After confirmatory factor analysis, two factors were obtained for the final version of 15 items. Factors has been determined as "Count and Surgery" and "Equipment". Among the sub-dimensions of the scale, Cronbach's α values were between 0.742 and 0.760, and 0.722 for the whole scale. When the ROC analysis results were examined, the cut-off point was ≥ 8 points, the specificity was 93.13%, and the sensitivity was 87.50%. The area under the ROC curve (AUC) was calculated as 0.938.

Conclusions: The scale was presented as a valid and reliable measurement tool developed to assess the risk of retained surgical items in operating rooms.

208 Hospital self-evaluation to detect room for improvement in perioperative patient safety, a European multicenter study

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Background: In Europe, 8%-12% of patients admitted to hospitals experience adverse events; perioperative care is one of the most reported fields. Adverse events lead to patient complications and increased costs, highlighting the need for continuous improvement.

Objectives: This study is part of international research 'Improving quality and patient SAFETY through STandardisation and harmonisation of perioperative care in Europe (SAFEST)', funded by the European Union's Horizon Europe research

Symposia

and innovation programme grant agreement No 101057825.

The objectives are to:

- Carry out a self-evaluation and compare compliance with the SAFEST Perioperative Patient Safety Standardized Practices across ten hospitals in five countries: Spain, The Netherlands, Portugal, Estonia and Czech-Republic.
- Gain insight and raise awareness for patient safety in the entire perioperative care.

Methods: First, multi-professional implementation teams were established in each participating hospital. These teams conduct a guided self-evaluation through team review, document review, patient interviews, medical-record review and observation. A total of 154 measurable elements (extracted from 101 recommendations resulting from an extensive Delphi-procedure) are assessed covering a wide range of perioperative safety aspects, e.g. preoperative evaluation and complication prevention. Patient research partners and representatives were actively involved, e.g. in formulating the recommendations and (preparing) the patient interviews. The self-evaluation tool includes an online scoring system, using a 3-point scale ranging from poorly, partially, to fully implemented (0,5,10 points respectively). Finally, the scores between the participating hospitals are compared.

Results: The results from the self-evaluation will be presented, covering the variation between hospitals and improvement areas. Experiences with the feasibility of the tool will also be shared.

Conclusion: The SAFEST self-evaluation tool provides a broad structured insight into the extent of implementation of the defined safety standards for surgical care. Results are widely supported from a multi-professional point of view, including patient representatives, which can be used for benchmarking, learning and knowledge-sharing.

116 Real-time monitoring of fluorescent bioparticles - an alternative to traditional CFU measurements regarding air quality in operating theatres

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Background: Microbiological cleanliness of the air is crucial for infection-sensitive procedures as there is a risk of airborne bacteria-carrying particles contaminating surgical wounds or surgical instruments. The standard method for controlling air cleanliness during surgeries is the measurement of bacterial presence per volume unit of air - Colony Forming Units (CFU/m³). The analysis gives answers no earlier than 5 days after sampling. A new method is real time measurement of fluorescent bioparticles per unit volume of air (FBP/dm³), which could constitute a surrogate measure for the presence of bacteria in the air.

Objectives: To validate the measuring instrument Bio Aerosol Monitoring System (BAMS), by comparing simultaneous measurements of FBP/dm³ with CFU/m³.

Methods: 15 arthroplasty surgeries were performed in two modern operating theatres with mixed ventilation (approx. 49 air changes per hour). A traditional air sampler (Sartorius MD8 Air Sampler) and a BAMS were placed next to each other about 3 meters from the operating table. Six parallel 10 - minute measurements were performed per surgery. Only particles larger than 3 Qm were analysed. The measurement pairs were plotted with FBP/dm³ on the x-axis and CFU/m³ on the y-axis. Simple linear regression was performed and r^2 was calculated as a measure of the ratio of FBP/dm³ to CFU/m³.

Results: The mean value of FBP/dm³ and CFU/m³ during individual 10-minute measurements showed moderate correlation ($r^2=0.36$, ci 0.04-0.67). The mean value of FBP/dm³ per operation and mean of CFU/m³ per operation showed strong correlation ($r^2=0.72$, ci 0.52-0.92).

Conclusion: Analysis of fluorescent bioparticles during surgery is an opportunity to estimate air quality in the operating theatres in real time. The method gives a good estimate of what simultaneous CFU measurement had shown, but has the advantage of being faster, simpler and cheaper to perform. Controlling air cleanliness during infection-sensitive surgeries increases patient safety.

Parallel Sessions

Parallel Session 1:

Evaluation of clinical practices in the context of perioperative nursing

198 Could trauma and orthopaedic surgeons in the East of England region use their SCPs better? An assessment of the utilization of this resource

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Background: Surgical Care Practitioners (SCPs), a now established role within the UK extended surgical team, are considered fundamental to addressing the post pandemic waiting list crisis in the National Health Service (NHS). Anecdotal evidence suggests that there are considerable variations in the utilization of the role. This study describes SCPs in trauma and orthopaedics (T&O) in the East of England.

Objectives: To investigate the job plans and clinical utilization of SCPs working in Trauma and Orthopaedics in the region.

Methods: A quantitative descriptive cross-sectional survey was undertaken. Respondents were recruited through non-probability purposive sampling. Online self-completion questionnaires were administered, through gatekeepers, over a four-week period. Descriptive statistics was used to analyse the data. Ethical approval was granted by the Faculty Research Ethics Panel of Anglia Ruskin University.

Results: A response rate of 87% was achieved. The survey assessed the job plans of T&O SCPs based on the different aspects of the surgical pathway. It revealed considerable variation in practice with some practitioners working in a more advanced capacity while others remain limited in their scope.

Of the SCPs involved in supporting outpatient clinics, a majority perform clinical examination (82.4%), patient history taking (70.6%), and request investigations (70.6%). Whereas the more advanced roles of independently formulating diagnoses then instigating treatment and performing minor therapeutic procedures in clinic were limited to a smaller number, 58.8% and 47.1% respectively.

Similarly, in theatres, SCPs are primarily utilized as first assistants providing interventional surgical assistance, however, an elite group (10%) undertake minor operations without direct consultant supervision.

Conclusion: This research demonstrates the variation in SCP practice. A significant number of practitioners appear to be underutilized. It is hoped that the dissemination of these findings will encourage much greater use of this valuable resource in NHS trusts thus capitalizing on the full benefits of the role.

220 Enhancing Learning Opportunities within the Operating Room with the use of the Scrub Practitioner's List of Intraoperative Non-Technical Skills

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Background: The operating room (OR) is a fast-paced environment that many healthcare workers feel privileged to work in. However, this environment can become overwhelming to novice nurses who have not had the opportunity to immerse themselves in the OR prior to beginning to work in one. As a result of attempting to keep up with the OR pace while absorbing various new skills, novice nurses sometimes find it difficult to determine what skills to focus on. In fact, it is not uncommon for novice nurses to devote more attention to technical skills, such as instrument passing, and forget about the equally important non-technical skills, such as communication.

Objectives: After identifying this learning gap, we decided to trial the use of a tool developed by nurses, surgeons, anesthesiologists, and psychologists called the Scrub Practitioners List of Non-Technical Skills (SPLINTS), to help novice nurses identify how to improve non-technical skills within the OR. We trialed this tool on preceptees and their preceptors to assess whether it would be useful for preceptees to improve their learning and subsequent practice. We combined this with trialing debrief time outside of the OR between preceptors and preceptees. We provided preceptees and their preceptors with entry and exit surveys to assess the efficacy of the SPLINTS tool and debrief time.

Main Findings: Our results demonstrated that preceptees and preceptors found this tool and debrief time useful in improving their non-technical skills within the OR. Furthermore, preceptors found this tool and debrief time enhanced

Parallel Sessions

their ability to provide meaningful feedback within the OR.

Conclusion: The use of the SPLINTS tool within the OR should be considered as a valuable tool while training novice nurses to improve their non-technical skills and overall learning. Additionally, this tool would be a valuable teaching resource for preceptors to use within the OR.

237 Evaluation of the effect of wearable educational materials on anxiety, adjustment and self-efficacy levels on individuals with stoma care

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Background: Patients need to acquire the necessary knowledge and skills to ensure their stoma adaptation and self-efficacy. This learning process is based on the nurse's practical experience and teaching methods.

Objectives: The study was conducted to determine the effect of wearable educational materials in stoma care training in patients with colostomy/ileostomy on patients' anxiety at the time of stoma care, postoperative stoma adjustment and self-efficacy level.

Methods: The study was conducted in a randomized controlled design. The study was conducted in two hospitals in Istanbul between 2021 and 2023. A total of 78 patients were included in the study, 33 in the experimental group (wearable educational materials) and 37 in the control group (routine training model). Data were collected with the 'Stoma Self-Efficacy Scale', 'Ostomy Adjustment Inventory' and 'State Anxiety Inventory'. Patients' self-efficacy and adjustment levels were assessed at discharge and at the third and sixth weeks after discharge.

Results: The mean age of the patients was 53.51±16.03 years, 50% were male, 64.3% were diagnosed with colorectal cancer, and 82.9% had a temporary stoma. The group trained with the wearable educational materials had statistically lower state anxiety levels ($p<0.001$) during the first postoperative stoma care, statistically higher stoma adjustment ($p<0.001$ at the time of discharge; $p<0.001$ at the third week; $p<0.001$ at the sixth week) and higher self-efficacy levels ($p<0.001$ at the time of discharge; $p<0.001$ at the third week; $p<0.001$ at the sixth week).

Conclusion: It was determined that stoma education given with the wearable educational materials increased patients' stoma adjustment and self-efficacy level and decreased the level of anxiety during the first stoma care. It is thought that the use of interactive education methods that support the participation of patients in stoma care will increase the quality of care and improve patient outcomes.

Parallel Session 2: Patient Safety

175 Evaluation of the effect of compassion fatigue on medical error tendency in intensive care nurses

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Background: Compassion fatigue adversely impacts both the physical and mental psychological of nurses. In addition, compassion fatigue leads to negative patient experiences, poor concentration, decreased efficiency, reduced quality of care, disruptions in patient care, and increased work errors, and therefore is negatively associated with patient safety.

Objectives: This study was conducted to evaluate the relationship between compassion fatigue and tendency to medical errors in critical care nurses.

Methods: This descriptive study was conducted in the intensive care units of 16 hospitals (N=420) belonging to a private health group in Turkey between December 2021 and March 2022. Data were collected using the Compassion Fatigue-Short Scale and the Tendency to Medical Error in Nursing Scale. Ethics committee permission was obtained for the research.

Parallel Sessions

Results: In research, 74.8% (n=314) of the nurses were female and the mean age was 26.15±5.47 years. It was determined that 30% (n=126) of the nurses had 3-5 years of nursing experience, 28% (n=118) had worked in ICUs for 1-3 years, and 73.3% (n=308) worked in general intensive critical units. The nurses' mean score on the Compassion Fatigue-Short Scale was 56.20±26.77 and their mean score on the Tendency to Medical Error in Nursing Scale was 4.82±0.28. There was a statistically significant negative correlation between total scale scores ($r=-0.252$).

Conclusion: The results suggest that the nurses in this study had moderate compassion fatigue and low tendency to medical errors. A weak relationship was observed between higher compassion fatigue and greater tendency to medical errors. Determining the factors that cause nurses to make medical errors is crucial to enable the necessary precautions to be taken. We recommend conducting multidimensional studies to evaluate the effects of compassion fatigue on patient safety and nursing outcomes.

163 Electronic counting of used swabs in the operating room

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Electronic Counting of Used Swabs in the Operating Room – Trial Use of the „SC Smart Cart“ Device in General Hospital Novo Mesto

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Background: Leftover surgical materials in the body after surgery, including the surgical swab as the most commonly forgotten item, remain a considerable problem despite advances in surgical techniques. Alongside manual counting, in recent years electronic counting has also been introduced.

Objectives: Objective of study was to evaluate advantages and disadvantages of electronic swab counting as opposed to traditional swab counting.

Methods: Electronic counting was experimentally introduced in cooperation with the company Smart-OR d.o.o. from Trbovlje, Slovenia. A „SC Smart cart“, a special device for electronic counting, was used in 90 major procedures in various surgical specialities while traditional counting was simultaneously performed. We recorded the surgical team's workflow, the net time needed to count swabs, and errors with and without the device.

Results: No errors were made with either electronic or traditional counting method, time analysis showed faster work with the device with team members reporting reduced workloads. Counting with the device offered greater transparency in the operating room. The trial did not record any negative consequences of electronic counting

Conclusion: Electronic counting using the SC smart cart proved to be a safe and efficient alternative to the traditional manual counting of items with several other advantages – lower team workload, a faster workflow, greater patient safety, and more efficient organisation of the operating room.

226 Medication safety in the sterile field: one label away

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Background: Every area where medication is present and every procedure with medication-related problems are included in the scope of medication safety. Medication errors occurring in the intraoperative process are recognized as a serious potential threat to patient safety.

Objectives: In this study, it is aimed to determine the practices and opinions of nurses regarding the labeling of medications within the scope of medication safety in the sterile field.

Parallel Sessions

Methods: The research is a phenomenological, qualitative research. The study was conducted with 9 nurses who working in the operating room. The data were collected using in-depth, face-to-face interview technique with a semi-structured interview form and a personal information form. The data obtained were analyzed using document and content analysis and thematic analysis.

Results: As a result of the participants sharing their experiences, the findings consisted of 5 themes. Nurses defined medication labeling in the sterile field as distinguishing medications and identifying who opened/prepared them. Nurses identified antiseptic and irrigation solutions, local anesthetics, antibiotics, steroids, anticoagulants and antifibrinolytics as the drugs/solutions that should be labeled in the sterile field. For this process, practices such as dipping the syringe plunger in antiseptic solution, writing on the syringe with a sterile marker pen, using different sized syringes and needle tips, and localizing the medications in different areas on the table were identified. To use medication labeling in the sterile field as an effective method, it was said that there should be a certain standard and control mechanism in institutions.

Conclusion: With the themes obtained, important information regarding the labeling of drugs in the sterile field was provided and it was recommended that nurses providing care in this field should receive the necessary training within the scope of this process and that current practices should be used in hospitals.

286 Local unidirectional airflow above the surgical instruments reduce bacterial contamination of the instrument area during orthopedic implant surgery in an operating room with conventional ventilation

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Background: Surgical site infection (SSI) is a dreaded complication after implant surgery, often leading to resource demanding treatment and implant replacement. Airborne bacterial contamination of the wound, either directly, or indirectly through air-contaminated instruments or implants, has been described as an important risk factor for SSI in orthopedic implant surgery.

Objectives: The aim of this study was to evaluate if instrument and assistant tables equipped with local unidirectional airflow reduce bacterial contamination of the instrument area to ultra clean levels, during orthopedic implant surgery in an operating room (OR) with conventional displacement ventilation.

Methods: Local airflow units of instrument and assistant tables were either active or inactive. Colony forming units were sampled intraoperatively from the air above the instruments and from instrument dummies. Three air filtration samples and two-three surface samples from instrument dummies were taken during each surgery. Air filters and surface imprints were incubated on agar for total aerobic bacterial count. The mean air and instrument contamination during each surgery was calculated and used to analyze the difference in contamination depending on use of local airflow or not. All procedures were performed in the same OR.

Results: 188 air and 124 instrument samples were collected during 48 orthopedic implant procedures. Analysis showed that local unidirectional airflow above the surgical instruments significantly reduced the bacterial count in the air above the assistant table ($p < 0.001$) and instrument table ($p = 0.002$), as well as on the instrument dummies from the assistant table ($p = 0.001$).

Conclusion: Instrumentation tables equipped with local unidirectional airflow protect the surgical instruments from bacterial contamination during orthopedic implant surgery and may therefore reduce the risk of indirect wound contamination.

Parallel Sessions

Parallel Session 3: Education

280 Education of operating room nurses- a systematic literature review

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Background: Operating room nurses have worked in a very complex environment. Activities in daily work in the operating rooms requires very high level of theoretical knowledges and practiced skills. The knowledges and skills for work in the operating rooms are specific, and according to that operating room nurses have to have very high level of education.

Objectives: Aim of this systematic literature review is determine which specific knowledge operating room nurses must have to work in operating rooms. As well, aim is to determine which techniques and learning methods are used in education process of operating room nurses.

Methods: This systematic literature review has been done according to the rules of the PRISMA methodology. Two databases CINAHL and SCIENCEDIRECT were searched by four authors. Keywords used in searching of the literature were: operating room nurses, education and methods. Including criteria for selection of articles were: all keywords, articles not older than 5 years, English language and the strength of impact factor. Excluding criteria were: articles older than 5 years, not containing all keywords, articles without impact factor.

Results: On CINAHL database had been found 24.869 articles, and on SCIENCEDIRECT database 16.284 articles. After application of including and excluding criteria, analysis was done on 43 articles. 30 articles from CINAHL database and 13 articles from SCIENCEDIRECT database. Resurchify application had been used for checking of impact factors.

Conclusion: For the successful and efficient implementation of work processes in operating rooms it is very important to have knowledge about legal, ethical and professional principles of perioperative nursing care. Interpersonal relations, communication, organizational and managers skills is a base for implementation of good practice in operating rooms. It is important to mention knowledges about clinical and operative surgery, leadership, education process, learning methods and obligation of professional development.

202 Designing a flipped classroom model to prepare perioperative nurses to be workforce ready

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Background: Online technologies have challenged curriculum design to move from a traditional lecture-based learning model towards a curriculum delivery method that maximises student learning and increases student engagement. These changes prompted the development of student-centred learning, seeking to actively engage students in higher-order thinking. The flipped classroom is an innovative teaching approach that reverses the traditional order of content delivery. Students engage with instructional material independently outside of the class, through pre-recorded videos or readings, and then use class time for active learning activities, such as discussions, group work, and problem-solving exercises.

Objective: The objectives of this project were to explore the level of student engagement with course materials, both online and during face-to-face seminars, and to develop active and authentic learning that mirrored real-life contexts, preparing them for the world around them.

Methods: Guided by constructivism, the need for developing and delivering a curriculum that facilitated active learning was deliberated, with the flipped classroom model adopted to facilitate deeper learning and improved student engagement. Four core units nested in the Master of Nursing program were enhanced, based on the blended learning principles and guided by learning and teaching goals in creating an engaging learning experience for all students.

Results: The blended learning approach led to contextualising the course to the needs of the healthcare industry, ensuring the sustainability of the course, while intellectually challenging and engaging students. This presentation will include an overview of the learning modalities designed to guide students in constructing their own learning in preparation for in-class active learning, checking their understanding of the learning material and keeping them engaged with course material.

Conclusion: The flipped classroom model promotes active learning, collaboration, and student-centered instruction. It maximises the effective use of class time, facilitates deeper understanding of concepts, and supports the development of critical thinking skills.

Parallel Sessions

240 Spotlighting safety: enhancing safety education programs for long-term retention of competencies

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Background: Workplace safety education has a reputation for being disengaging, ineffective, and repetitive. Mandatory workplace safety education in hospitals is often considered as a “tick-boxing” exercise by facilities. This attitude has contributed to continuously high rates of avoidable occupational injuries in hospitals.

Sharps injuries continue to be common in ORs, and risk the transmitting blood-borne infections. Conducting sharps safety education is mandated under the EU Directive 2010/32/EU and is also essential to ensuring that perioperative nurses avoid preventable injuries in this high-hazard industry.

With busy nursing caseloads and the current staff shortages in hospitals, time is a premium. It is therefore crucial that sharps safety education be efficient and effective.

Objectives: Advancements in adult learning, such as using participatory techniques and interactive technologies, have shown to increase long-term retention of learning.

From 2018–2023, we worked with Australian nursing educators to translate these advancements into practice, and enhance sharps safety education programs. The enhanced sharps education program was designed under a blended-learning approach, which would build on perioperative nurses’ current knowledge to achieve higher competencies. Modules were developed to raise awareness of the consequences of sharps injuries and mandated sharps safety practices. Interactive training modules were also provided for complying with these mandates through using safety-engineered devices.

Our objective during this study was to increase perioperative nurses’ engagement with the educational program, and in turn increase compliance with mandated sharps safety practices.

Conclusion: The utilisation of evidence-based andragogical advances in the designed modules was successful in Australian hospitals. We found increased engagement with the education program from participants, and hospitals reported greater sharps safety compliance in ORs.

Nursing education programs in European hospitals can be enhanced by these strategies, to achieve long-term retention of nursing competencies.

Quality safety education can maintain compliance, and also protect staff and patients in ORs.

216 Title: Red Code: Emergency Algorithm for Conversion in Robotic Surgery

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INTRODUCTION: Robotic surgery has become increasingly common in recent years due to the significant benefits it offers to patients, such as increased safety, a lower number of postoperative complications, and a shorter hospital stay. However, like any surgery, it is not without risks. One of the most concerning risks is bleeding. Despite having a low incidence rate, bleeding can pose a life-threatening emergency for the patient due to the difficulty of controlling it with the robot. It requires a quick and coordinated response from the entire surgical team to convert a minimally invasive surgery into an open surgery, considering the amount of equipment and the limited space available

OBJECTIVE: Ensuring a coordinated and effective approach of the entire surgical team with a common goal: the resolution of bleeding and the stabilization of the patient in the shortest time and maximum efficiency possible.

METHODOLOGY: A retrospective study was conducted at Hospital Universitario de Canarias, analyzing surgical cases from January 2019 to September 2022, which resulted in the following numbers: 667 robotic surgeries. A structural and operational analysis of the surgical team was also carried out in the same time period.

RESULTS: Emergencies due to bleeding from major vessels:

- 1 urology case involving the vena cava
- 3 thoracic cases, one involving the aorta and two involving the pulmonary artery
- 1 general surgery case involving the vena cava

Parallel Sessions

CONCLUSION: The low frequency and severity of these complications require the development of a systematic algorithm for the equipment removal and for the actions to be taken during a real emergency. The development and systematic practice of this algorithm will enable an effective resolution of such emergencies through its learning process by the entire surgical team, ensuring the patients safety and viability.

295 Strategies to deal with the future challenges of retaining expertise and recruiting new surgical nurses.

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Background: Specialized nursing skills are essential to be able to carry out highly specialized surgical activity and to ensure qualified functioning of the emergency response. If the necessary skills are not present, it has consequences for patient safety and long waiting lists arise.

Increasing challenges in recruiting qualified nurses and in retaining the specialized trained experienced surgical nurse staff in the Capital region of Denmark, resulted in a need for HR & Education to find a sustainable solution.

Objectives: The task of preparing a strategy for retention and recruitment involved an even wider collaboration with the experienced and highly specialized nurses with postgraduate supervisor education.

The strategy was to triangulate the collaborative effort between creating the effect of theoretical education offered by the University College, combined with multi-faceted learning activities to ensure transfer and consistency in theory and practice coordinated by the highly specialized nurses with supervisor skills.

The close collaboration structure between HR, University college and the experienced surgical nurses with postgraduate education have strengthened and developed the specialized competences that are desired to be maintained.

The three responsible units are mutually dependent on each other, and the effort with retention and recruitment cannot be separated.

Conclusion: The need to retain and recruit nurses in the future healthcare system is a future challenge around the world. Attention must be drawn to ensuring a monitoring of the effort, an evaluation of the effect of the education and to ensure that the expert nurse's competences are sufficiently updated.

Collaboration with experienced highly specialized nurses with postgraduate supervisor skills are essential for succeeding in retaining specialist nurses and collaborative knowledge sharing is necessary.

Parallel Session 4: Education

188 The Non-Technical Skills for Operating Room Nurses (NOTSORN) tool

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Background: Research has shown that non-technical skills (NTS), defined as the cognitive, social, and personal resource skills that complement technical skills, are essential to patient safety in the operating room (OR). Behavioral marker systems operationalize NTS training and assessment and are valuable for the development of OR nurses' NTS. Previous systems either apply to the entire surgical team, or only one of the OR nursing roles. Thus, they do not capture the NTS of instrument and circulating OR nurses.

Objectives: The objective of this study was to develop a behavioral marker system specific to OR nurses' NTS.

Methods: The first step of the development of the Non-Technical Skills for Operating Room Nurses (NOTSORN) included a modified Delphi technique to identify NTS used by OR nurses. The expert panel was OR nurses with experience in the instrument and circulating nurse roles (N=106). A bilingual draft of NOTSORN was developed through an iterative process. In two rounds, expert panels (N=25) representing 9 countries assessed the relevance of the tool in English and Norwegian. Content validity was assessed using the Content Validity Index.

Parallel Sessions

Results: Content- and face validity were established for both languages. Furthermore, due to the diversity of the expert panel, validity was established over different operating room contexts. We had representation from countries with different educational models for OR nurses, ranging from in-hospital post-graduate training to master's degrees in OR nursing. The nuanced tool comprises four categories: Professionalism, Situational awareness and decision making, Teamwork and communication, and Leadership and task management, each with two to four elements.

Conclusion: The NOTSORN is specific to OR nursing and is transferable across various perioperative contexts. The NOTSORN may be used by OR nursing educators for formative assessment of students' NTS by identifying areas of strengths and areas needing improvement.

228 Use of Rubrics as a Methodology for Assessing Clinical Competencies

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INTRODUCTION: In Spain, there is no officially recognized specialization for Operating Room Nurses, which can result in hiring nurses who have not yet acquired the specific competencies necessary to carry out their professional duties. Therefore, it is essential to provide "on-the-job" learning opportunities that enable them to perform their roles with full proficiency. Additionally, it is crucial to assess the degree of learning and its application objectively, requiring an assessment tool that allows for tracking the progression of competencies among novice professionals. Rubrics, commonly used in the academic setting, provide an objective instrument for continuous monitoring of learning, emphasizing meaningful student learning and serving as a suitable tool for establishing minimum levels of achievement. In this context, specific Rubrics were developed and implemented for newly hired nurses in the operating room of the University Hospital of the Canary Islands (HUC).

METHODOLOGY: Initially, a literature review was conducted on the use of Rubrics as an assessment methodology in Health Sciences. Drawing from the competencies outlined in the EORNA's "common core program," expert nurses and professors developed a specific Rubric for the operating room. This rubric is provided to the nurses upon their arrival in the area, enabling them to be aware in advance of the expected competencies to be developed. The nurses are then mentored by an experienced nurse throughout the process.

RESULTS: Currently, the Rubric is being implemented at HUC, where 16% of the nurses have neither formal training nor experience in the operating room. An initial evaluation was conducted, which reflected the current situation regarding the required knowledge, with 80% of the nurses not reaching the minimum required score.

CONCLUSION: The continuity of this program is necessary to ensure the quality of nursing care in the surgical area

211 Conceptualising and designing an educational application (app) to support novice perioperative nurses in the perioperative environment.

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Background: Novice nurses have specific educational needs to successfully transition into perioperative nursing and provide safe care to surgical patients. These needs encompass a broad range of concepts, technical skills and patient safety awareness. Technological advancements offer innovative education delivery methods, such as portable digital resources, that provide immediate access to educational content, flexibility, and repeatable learning experiences.

Objectives: The objective was to understand the educational needs of novice nurses when entering the perioperative environment to inform the development of an educational application that effectively supports their learning and clinical practice.

Methods: An exploratory qualitative design explored the views and experiences of novice perioperative nurses. Novice

Parallel Sessions

nurses with less than 3 years' experience in perioperative practice were invited to participate in a focus group. The information that participants perceived to be helpful when they commenced as a novice perioperative nurse was explored, in addition to their perceptions about the design elements of an educational app that would support their clinical learning.

Results: Transcribed data were thematically analysed according to the six steps detailed by Braun and Clarke (2012). Four common themes were identified from the data: Access to 'bite sized information' supported with visual elements; easy to navigate content pages; content specific to specialty areas of perioperative nursing; and a user-friendly responsive interface.

Conclusion: Developing an educational application for novice perioperative nurses will enable them to enhance their nursing skills and knowledge in a safe learning environment, with the freedom to make mistakes. The accessible, repeatable and measurable nature of the app will increase learning opportunities for novice perioperative nurses and create opportunities for them to reflect on their learning and to think about strategies that contribute to promoting safe and high-quality care in the perioperative environment.

271 «Lou se fait opérer» étude VERAPOP - «Lou has surgery» VERAPOP study

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Background: The purpose of this study is to test the efficiency of an informative film « Lou se fait opérer » for the preparation of parents and children undergoing surgery.

Objectives: To evaluate the impact of an animated film on the level of anxiety of children at the induction in the operating room and the level of parental anxiety. The outcome measures were children anxiety (m-Ypass) and parental anxiety (EVA-A).

Methods: This pilot study enrolled 80 children 3 to 7 years of age undergoing surgery and their parents.

We choose a non-randomized comparative clinical trial, without blinding, bicentric in 2 parallel groups. The Bordeaux University Hospital and Libourne Hospital are involved in the study. The 1st group will benefit from the animated film, the second from a standard preparation.

Results: There is no significant difference between the two groups. Anxiety levels at the induction in Bordeaux were 35,4 (27,1 - 50,0) versus in Libourne 36,5 (22,9 - 64,6). Parents in the 1st group experienced less anxiety compared to parents in the control group, 5 (2 - 7) vs 7 (5 - 8), (P = 0.04).

Conclusion: We wanted to compare the results of our study with those of Fortier and Kain in 2015 to assess the effectiveness of our tool. Our results are similar, in fact they found an average anxiety score of 43.5 for the group who received an online intervention preparation program compared to 57 for their control group.

We will need to refine the profiles of the 2 groups in order to explore the results further. However, the families felt considered and happy of the operating theater professionals with the implementation of this study. The availability of the film on You-tube shows a certain enthusiasm and seems to meet a need that we had identified.

Parallel Session 5: Perioperative / clinical practice

267 THE EFFECT OF INFECTION PREVENTION BUNDLE ON SURGICAL SITE INFECTIONS IN BRAIN TUMOR SURGERY

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Background: Surgical site infections (SSI) in brain tumor surgery pose significant risks, yet preventive measures remain understudied.

Objective: This study aimed to evaluate the effectiveness of an infection prevention bundle (IPB) in reducing SSI

Parallel Sessions

occurrence during brain tumor surgery.

Methods: A randomized controlled experiment was conducted with 228 patients who underwent craniotomy for brain tumor surgery. The experimental group (n=114) received a comprehensive seven-step IPB, while the control group (n=114) did not. Patients were monitored for SSI based on established diagnostic criteria, and follow-up assessments were conducted at specific intervals.

Results: The IPB group showed no instances of SSI, whereas the control group exhibited a 10.8% infection rate. SSI incidences in the control group included superficial incisions (2.3%), deep incisions (0.4%), organ cavities/intracerebral sites (2.3%), and secondary superficial incisions (0.4%). Coagulase-negative staphylococcus (CoNS) was the most prevalent pathogen identified in SSI cases. Logistic regression analysis showed that IPB utilization and suture removal duration were significantly associated with SSI.

Conclusion: This study demonstrates the effectiveness of an IPB in reducing SSI occurrence in brain tumor surgery. Implementing this safe and cost-effective care bundle is recommended in healthcare facilities conducting such surgeries, with potential for broader application and larger sample sizes to enhance generalizability.

274 THE EFFECTS OF MAINTENANCE OF NORMOTHERMIA WITH ACTIVE WARMING ON SURGICAL SITE INFECTIONS IN PATIENTS UNDERGOING ABDOMINAL SURGERY

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Background: Unintended hypothermia is discussed as a risk for surgical site infections (SSI). Guidelines recommend the maintenance of normothermia during surgery to prevent SSI.

Objectives: This randomized controlled trial was conducted to determine the effect of active warming on SSI in maintaining normothermia in patients undergoing abdominal surgery.

Methods: The study included 48 patients who were scheduled for incisional hernia surgery between November 2019 and July 2022 and met the inclusion criteria. Patients were randomized two interventions, one control group. The first intervention group received an under-body blanket and the second group received a surgical access blanket. Patients in the intervention group began to warm up 30 minutes preoperative and continued to warm up for two hours both intraoperative and postoperative. Patients in the control group underwent routine procedures. In all groups, vital signs were evaluated every 15 minutes intraoperatively and postoperatively. A tympanic-thermometer was used to measure body temperature.

Results: Surgical site infection was diagnosed in accordance with the criteria defined by the Centers for Disease Control and Prevention. The SSI rate was 6.3% the surgical access blanket group and 31.3% the control group, compared with no infections for the under-body blanket group. Intraoperative hypothermia was observed in control group patients. In 91.7% of the patients, drains were inserted, and in 68.8%, prolene sutures were employed. Patients having suture removal times of 12 days or longer and drain removal times of 7 days or longer were found to have SSI. Surgery site infections occurred in 37.5% of individuals who had a diabetes diagnosis.

Conclusion: Both under-body and surgical access blankets were effective in maintaining normothermia, hypothermia was an independent risk factor for SSI and increased the risk of SSI 17.1-fold.

Parallel Sessions

150 Intraoperative aseptic practices in orthopaedic operations - a Master's thesis study

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Background: According to previous study findings, aseptic and sterile techniques are always not fully adhered to in intraoperative settings and there are improvement areas in the aseptic practices of OR staff during surgery.

Objectives: This study evaluated the actualized aseptic practices during sterile field establishment and maintenance phases compared to existing international and national guidelines and evidence-based recommendations during 49 orthopaedic surgeries in Finland.

Methods: The study was implemented as a local small-scale observational clinical aseptic practice quality improvement study with statistical data analysis. Data collection was done with the constructed tool in which foci of observation were divided to seven main themes: Availability of hand hygiene products, hand hygiene realisation, preparations of the patient, establishment of sterile field, preparations of sterile personnel, aseptic behaviour and maintenance of sterile field.

Results: Results show high adherence to most evaluated categories, but also that there are areas of improvement in sterile field establishment and maintenance, and aseptic behaviour during surgery. Timely antibiotic prophylaxis of 60 minutes before incision or tourniquet inflation was adherent in 97.7%. Preparations of the sterile team members were highly adhered (96.4%), double gloving and protective eyewear were used accordingly in 95.5%. Aseptic behaviour during surgery was adherent in most operations (90.7%), but it appeared that doors were often opened during surgery. The duration of the surgery was noticed to have an association with the number of door openings. Maintenance of sterile areas was adherent in 76.9%, where unscrubbed person did not move between two sterile areas in 81.6%. Eye contact and visible distance to sterile fields were kept in 79.6% when moving near sterile fields.

Conclusion: To enable adequate IPC in intraoperative settings, implementation of regular multidisciplinary education, policy development and monitoring of aseptic practices were recommended.

223 Risk factors for position-related injuries in adult surgical patients: a systematic review and meta-analysis

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Background: Pressure- and nerve injuries are well-known complications due to positioning on the operating bed. Depending on the patient's surgical position, anatomical prerequisites, intrinsic- and extrinsic risk factors, some patients can be more exposed to injuries than others. The length of the surgical procedure, high/low Body Mass Index, and comorbidities are examples of risk factors that affect the development of position-related injuries, but previous studies show varying and sometimes contrary results. The perioperative nurse ensures the patient safety in the operating room and has an important role in positioning the surgical patient.

Objectives: To summarize the evidence on risk factors for the development of position-related pressure- or nerve injuries in connection with surgery.

Methods: A systematic review and meta-analysis. Studies were identified through PubMed, Web of Science, CINAHL, Embase and Cochrane Library databases. Original articles, published between 1990 and 2022, were screened with the following inclusion criteria; adult patients undergoing surgery, all types of anesthesia, all types of surgical positions and identified risk factors for pressure- or peripheral nerve injuries. The PRISMA guidelines were followed throughout the review process.

Results: The database searches resulted in 13 018 publications, whereof 40 studies were included in the review; 26 on pressure injuries and 14 on peripheral nerve injuries. Results from the systematic review and meta-analysis of risk factors will be presented during the conference.

Conclusion: Summarized evidence on risk factors for position-related pressure- or nerve injuries in connection with surgery can increase the surgical teams' awareness of risk for injuries and use of preventive measures during surgical positioning. The results can be used to construct a risk assessment instrument to predict position-related injuries in the surgical context.

Parallel Sessions

Parallel Session 6: Perioperative / clinical practice

192 Nurses' experiences of patient care after bariatric surgery: a qualitative study

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Background: After bariatric surgery, nurses should accurately and completely identify patients for safe and accurate nursing care practices. It is very important that the nursing care services provided to patients during the bariatric surgery process are specific to obese patients.

Objectives: In this study, it was aimed to determine the experiences of nurses working in bariatric surgery clinics regarding postoperative patient care.

Methods: The research is a phenomenological, qualitative research. The study was conducted with 8 nurses who care for patients after bariatric surgery in a private hospital. The data were collected using in-depth, face-to-face interview technique with a semi-structured interview form and a personal information form. The data obtained were analyzed using document and content analysis, thematic analysis, and metaphor method.

Results: As a result of the participants sharing their experiences, the findings consisted of 3 themes, 9 sub-themes and 32 codes as views on obesity, views on bariatric surgery and views on caring for bariatric patients. Most of the nurses mentioned morbid obesity as a complex, challenging and time-consuming condition. Nurses' descriptions of their bariatric surgical practice included their own personal experiences with weight, differences in their approaches to weight, and several specific components of care. Facilitators that helped nurses were identified as a patient's motivation as well as access to and utilization of resources for the provision of care. Several conditions that hinder the delivery of care by nurses were identified, including patients' adaptation to and maintenance of positive lifestyle changes, traumatic events, comorbidities, social and physical determinants of health.

Conclusion: With the themes obtained, important information about post-bariatric surgery care was provided and it was recommended that nurses providing care in this field should receive specific in-service training and that courses related to this purpose should be included in the nursing undergraduate program.

187 The effect of the "knee prosthesis school" training program on patient expectations, anxiety, pain, functional status, quality of life and satisfaction

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Background: Patients who decide to have knee replacement surgery should be supported with perioperative training. Patient schools are one of the most effective methods in patient education. The effect of knee prosthesis school on patient outcomes is quite limited in the literature.

Objectives: The aim of the study is that the evaluation the effect of the "Knee Prosthesis School" training program developed for knee arthroplasty patients on patient outcomes.

Methods: The study was carried out as a quasi-experimental study. The research was conducted at Burdur Bucak State Hospital between April-2021 and September-2022 by including 82 patients (40-control, 42-experimental). The data of the study were collected using patient information form, patient expectations assessment form, hospital anxiety scale (HAD-A), brief pain inventory (BPI), functional assessment form, SF-36 quality-of-life scale, Newcastle nursing satisfaction scale, and complication assessment form in the both groups. Patients in the experimental group were included in the Knee Prosthesis School training program (one day before surgery, the postoperative first day, and 24 hours before discharge), and were followed at the same time as the control group.

Results: This study showed significant differences between groups in terms of patients' expectations, anxiety, pain, quality of life and complication rates ($p < 0,05$). The preoperative expectations of the patients in the control and intervention groups were quite high, and there was a significant improvement in their anxiety, pain, quality of life and satisfaction levels, and functional status over time ($p < 0,05$). The rate of meeting the control group's expectations in the third month

Parallel Sessions

postoperatively was higher than the experimental group does ($p < 0.05$). No significant difference was determined in the third week in the evaluation of quality of life scores ($p > 0.05$).

Conclusion: The Knee Prosthesis School was effective in making patients have more realistic expectations, reducing their anxiety and pain, increasing their functional status, and satisfaction.

142 Behind closed doors - the lived experience of caring for patients in the perioperative setting

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Background: There is a large research base guiding practitioners on technical aspects in the perioperative setting. However, this focus can risk overshadowing the value of more subjective, human ideas around care.

Objectives: (1) to describe what it is like to care for patients in the perioperative setting.

(2) recommend future research and practice development to support humanising perioperative care.

Methods: Giorgi's descriptive phenomenological method was used to understand the lived experience of those caring for patients. As planned, seven healthcare workers were interviewed, and their verbatim transcripts were analysed using Giorgi's method of analysis.

Results: The findings include a description that is made up of a general structure and its constituent parts: General Structure - perioperative care means accepting patients into an unfamiliar, alien environment as fictive kin. Within this sense of caring and being cared for, the usual human freedoms are silently handed over; with unconsciousness severing any final freedoms. In response, staff become custodians of their kin and their body. This custodial care places the highest level of responsibility on staff who know how to care with skill, morals, and ownership to protect the person, who has lost freedoms, with dignified care. Custodianship is transient. Some staff may transfer custodianship to others but ultimately there is an aim to return the body back to the patient. Constituent Parts include: (1) your patient and you: fictive kinship, (2) custodian of the body and the person, (3) knowing what to do, (4) decision making.

Conclusion: The novel description of custodial care for healthcare practice can focus further research, contribute to education design, guide perioperative practitioners, informing new standards/best practice and unveil secrecy for patients. This study made the implicit into something explicit, so that the human aspects of caring can be recognized and celebrated.

Round Table Sessions

Round Table 1: Sterilisation

254 Can a strand of hair contaminate a surgical instrument set? A controlled experimental study

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Background: It is an important problem for operating room nurses that a hair comes out of the surgical set. Hair coming out of the surgical set increases the biological load. For this reason, sets are returned to the sterilization unit. Lack of backup of surgical sets leads to delay of the surgery. They practice can lead further to problems in the scheduling of operating rooms and the time management, aside from increased costs.

Objectives: The present study evaluates whether a strand of hair falling into a surgical instrument set prior to sterilization and during packaging can be considered an adverse event and have any effect on the sterilization process in terms of contamination and analyzes also whether bacterial contamination occurs in a strand of hair found in a surgical set.

Methods: The present controlled experimental study, conducted between 15.01.2023-15.02.2023 made use of the pressurized steam, ethylene oxide and hydrogen peroxide sterilization methods. Swabs were taken from surgical sets containing non-contaminated hair (Experiment group 1, n=6), hair contaminated with five different microorganisms (Escherichia coli, Staphylococcus aureus, Pseudomonas aeruginosa, Candida albicans, Enterococcus faecalis) (Experiment group 1, n=30), and no hair (control group, n=6). The hair strands were cultured in 5% sheep agar, EMB, Saboroud Dextrose agar and chocolate agar, and incubated at 37°C in a 5%CO₂ medium. Checks for growth were performed at hours 24, 48 and 72 and the end of day 7.

Results: No growths were identified in the swab or hair cultures in either the experiment groups or the control group following sterilization.

Conclusion: The absence of growth of any microorganisms in the hair and swabs of surgical instruments after sterilization suggests that the subject may benefit from further research. Similar trials should be performed in different surgical set masses, with different microorganisms and using different sterilization methods.

278 Are the multi-resistant microorganism stay in the transfer in the operating theatre

Selma Gomes¹, Maria Jesus Luís¹, Esmeralda Nunes¹

Background: The patient undergoing cancer treatment has compromised immune system, becoming more susceptible to develop infections and to condition their treatment, which have a negative impact on the increase of morbidity and mortality of these patients.

In the Operating Room of IPO Porto, although there was a set of actions and recommendations (Basic Precautions and Isolation) of good local practices adopted until then in these situations, there was no implemented and standardized procedure for the colonized/infected patient. Thus, in order to continuously improve the quality of care and safety of these patients, the Procedure of measures for the prevention and control of infection in patients suspected/infected or colonized in containment isolation in an intraoperative context was elaborated and implemented.

Objectives: present the procedure that allowed the operationalization of the surgical approach of the infected/colonized patient with MMR in the Operating Room; Propose quality indicators sensitive to nursing care for a culture of safety and continuous improvement of intraoperative quality.

Methods: Case study: implementation of a quality tool.

Results: Implementation in 3 phases from May to July 2022. Elaborated quality procedure, carried out questionnaires on prevention and control measures of infection to colonized/infected patients to nurses and operational assistants and after analysis of results carried out training. Finally, presentation and implementation of the standard procedure to the professionals involved. Proposal of quality indicators of structure, process and result to be implemented in the future.

Conclusion: normalization of behaviors; training, involvement and accountability of professionals; process efficiency; environmental control; safety and quality of care; optimization and centralization of communication.

Round Table Sessions

307 Individual traceability of surgical instruments: legal obligation or necessity?

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Objectives: Reusable surgical instruments follow an immutable cycle between sterile use on the patient, reprocessing in the CSSD and sterile availability for the next surgical procedure. Various European laws guarantee the perpetual (or almost perpetual) quality of surgical instruments as reusable medical devices.

In this presentation, we look at the mandatory framework or the need to trace surgical instruments, and the pitfalls to be avoided when embarking on this approach.

Methods: Under Regulation (EU - European Union) 2017/745 of the European Parliament (MDR), the traceability obligation concerns Class III instruments, but Member States encourage healthcare establishments and professionals to record and retain, the Unique Device Identifier supplied to them, and may require them to do so. There is therefore no obligation to register, but only advice, to be applied before May 26, 2025.

Results: With this in mind, we have studied and tested different ways of identifying and recognizing surgical instruments, and we propose to share with you this information, the limitations of each identification and reading system, the good and bad decisions that could impact on the management of this traceability and on the ability of each sterilization department and each operating theatre concerned to commit to this path, for the benefit of efficient management accounting and staff confidence, but above all for the benefit of the quality and safety of care.

Conclusion: Individual surgical instruments traceability processed in the sterilization department and used in increasingly large operating theatres is strongly recommended by the authorities but becomes a necessity when a sterilization platform handles surgical instruments from different sources. Preparing and implementing traceability are a major quality assurance challenge. The choices made will determine the quality of the final products, the cost of the project and the high level of service provided to perioperative nurses, surgeons and, ultimately, patients.

Round Table 2: COVID

242 The impact of social media on the Perioperative environment of Nurses during the covid-19 pandemic and beyond

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Introduction: The COVID-19 pandemic has brought significant changes to the way nurses live and work. During this crisis, social media has become very important and has significantly affected the perioperative environment of nurses.

Purpose: The purpose of this study is to examine the impact of social media on nurses during the COVID-19 pandemic and beyond. We will focus on studying how nurses use social media, its impact on psychological well-being and work performance, and their perception of the quality of care provided.

Material - Method: To fulfill our objectives, we collected data from various research studies, but also from records from the practical experience of nurses. Questionnaires and interviews were used to gather information about the use, perceptions and effects of social media in the perioperative environment of nurses.

Results: The results showed that nurses widely use social media to communicate, exchange information and gain support from other health professionals. Furthermore, the use of social media affected the psychological well-being of nurses, sometimes positively and sometimes negatively. Nurses realize the value of social media in their professional lives, but they also recognize the risks and challenges of overusing it.

Discussion: Overall, the opportunities and challenges arising from the use of social media in the perioperative environment of nurses are significant. Careful guidelines and training on the proper use of social media are needed to strike a balance between providing information and maintaining the safety and well-being of nurses.

Conclusion: The impact of social media on the perioperative environment of nurses during and after the COVID-19 pandemic is undoubtedly significant. Using these tools can provide support, but must be done with care and sensitivity. The management of social media in the perioperative environment should be based on expertise and guidelines to ensure good quality of care and the well-being of nurses.

Round Table Sessions

139 Moral Distress Among Operating Room Personnel During the COVID-19 Pandemic: A Qualitative Study

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Background: The COVID-19 pandemic necessitated a reallocation of healthcare resources, and a minimization of elective activities. Healthcare personnel involved in COVID-19 care have been negatively affected by the associated excess stress. The existing COVID-19 research has focused on the experiences among healthcare personnel in general, and not particularly on the operating room team members, who have often been relocated to overburdened workplaces.

Objectives: The aim was to explore the OR team members' experiences during the COVID-19 pandemic.

Methods: This study has a qualitative inductive design based on interviews with a strategic sample of 12 operating room team members: surgeons, anesthesiologist, specialist nurses, and nurse assistants. The interviews were analyzed using content analysis.

Results: Three themes were identified: "Feeling safe in the familiar and anxiety in the unknown", "To be the ones left behind", and "The possibility for recuperation in a seemingly everlasting situation". The participants described working hard, although their efforts were experienced as not enough according to their moral ideals. We interpreted this as feelings and signs of moral distress, a commonly described concept in previous studies during the COVID-19 pandemic, and a risk for burn out.

Conclusion: The operating room team members emphasized the negative stress of being in the unknown, performing work tasks in an unfamiliar place and situation, and experiencing conflicting feelings of relief and guilt. Organizational strategies toward a functional leadership and support should be emphasized. Such strategies might reduce the risk of psychological consequences such as burn out.

212 The Impact of Operating Room Nurses' Stress Levels on Healthy Lifestyle Behaviors in the Covid-19 Pandemic

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Background: The Covid-19 pandemic in Turkey, with over 15 million reported cases, has led to changes in nurses' working schedules, increased workloads, and restrictions on leave and resignation. Understanding nurses' challenges during the Covid-19 process is crucial for future pandemic preparedness.

Objectives: This descriptive study aimed to determine the stress levels and assess the impact on healthy lifestyle behaviors among operating room nurses during the Covid-19 pandemic.

Methods: Data were collected between August 2021 and February 2022. The study population was 198,465 nurses in active practice in Turkey. The sample group was reached online using the snowball method after obtaining the necessary permissions for the study. The sample included 347 operating room nurses involved in pandemic duties. Data were collected using the "Individual Characteristics Form," the "Perceived Stress Scale," and the "Health-Promoting Lifestyle Behaviors Scale II." Statistical analyses included descriptive methods, t-test, ANOVA, Tukey test, Pearson correlation, and Multiple Linear Regression ($p < 0.05$).

Results: Among participants, 56.5% were aged 30 or below, 79.8% were female, and 72.3% had a bachelor's degree. During the pandemic, nurses worked an average of 47.22 ± 8.23 hours per week, with 68% rotating to other departments. Additionally, 84.7% participated in surgeries for Covid-19 positive patients, and 42.9% contracted Covid-19. Nurses had a mean perceived stress score of 30.33 ± 5.71 and a mean health-promoting lifestyle score of 123.33 ± 20.08 . Negative correlations were found between perceived stress and health-promoting lifestyle scores ($r = -0.169$; $p = 0.002$). Age, education level, and working in specific units were identified as factors influencing healthy lifestyle behaviors.

Conclusion: As nurses' perceived stress levels increased during the pandemic, their engagement in healthy lifestyle behaviors decreased. Higher education levels were associated with better health-promoting behaviors, while working in public hospitals increased perceived stress levels. Increased physical activity, along with years of professional experience, decreased nurses' perceived stress levels.

Round Table Sessions

Round Table 3: Perioperative/clinical practice

215 Moving from participation towards partnership in the perioperative phase

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Background: Meeting with health care gets short before and after the operation. The difficulty at the day surgery is that preparation and information takes place in close proximity to the operation. Health professionals must not only take care of the child during the medical visit, but also of the accompanying parent, too. Parents' participation in the perioperative care, sometimes unable to attend.

Objectives: This study aims to investigate how parental involvement in the perioperative process can be facilitated

Methods: A qualitative design based on observations and interviews with semi structured questions with open answers.

Results: The results conveyed involvement in the child's perioperative process in diverse ways and to a different depth. This is highlighted in the theme Allowed with the under themes Security and Being accepted. However, the theme Exclusion with the under-theme Rejection revealed a non-caring approach where no caring relation could be established. Quotes from the transcribed material are used to highlight the results.

Conclusion: The study's findings confirm earlier studies in the perspective that information is of central importance in enabling parents to be involved in the perioperative process. The results showed that parents' involvement in the perioperative process is a prerequisite for creating safety in the child and reducing concerns in connection with the operation. Parental involvement may be hindered by a conventional approach that does not include the child's perspective.

333 Preoperative and postoperative fasting durations, and its association with discomfort among surgical patients; A descriptive study

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Background: Prolonged perioperative fasting is a risk factor for postoperative complications. It is important for health care workers to get acquainted with the updated perioperative fasting protocols using evidence-based approach.

Objectives: The aim of this study is to determine the preoperative and postoperative fasting durations, and its association with discomfort among the surgical patients.

Methods: This descriptive cross-sectional study was conducted on patients who undergo elective surgery procedures at a city hospital in Nigeria between August and November, 2021. The 64 voluntary patients were composed the sample of the study, with an access rate of 87.7%. Data were collected through the use of a questionnaire developed by the researchers based on the guidelines of the American Society of Anesthesiology and Enhanced Recovery After Surgery protocols. Data were collected with self-completion method. Ethical committee approval and informed consent from the participants were obtained. Descriptive statistics, Spearman correlation, Cross tabulation and Fisher's exact test were used in the analysis of the data.

Results: The minimum, maximum and mean preoperative fasting hours were eight, 13, and 10.78 (1.67) respectively. The minimum, maximum, and mean hours for postoperative fluid fasting were four, 24, and 10.88 (6.23); while that of postoperative meal were four, 24 and 13.16 (8.31) respectively. Regarding the intensity of preoperative discomforts experienced by patients, 53.1% of the participants experienced mild level of thirst. In terms of preoperative hunger, the intensity level with the highest number of patients was also mild (46.9%). Regarding postoperative discomforts, 42.2% experienced severe thirst. A 43.8% had a moderate level of hunger, followed by 40.6% severe hunger.

Conclusion: Implementation of the revised guidelines to improve the patients' surgical experiences is recommended.

Round Table Sessions

335 Ergonomic Status of Operating Room Employees and the Effect Of Muscle-Skeleton Pain Developed Due to Ergonomic Risks on Work and Life Satisfaction

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Background: Ergonomic risk factors are very important in the formation of occupational diseases related to healthcare workers.

Objectives: The aim of this study was to determine the ergonomic status of operating room employees and the effect of musculoskeletal pain, which develops due to ergonomic risks, on job and life satisfaction.

Methods: The multicite and descriptive type study was conducted between January and December 2022 in Turkey and this research was completed with 535 operating room employees. The data of the study were collected with "Sociodemographic and Occupational Characteristics Form", "Ergonomic Risks Form", "Extended Nordic Musculoskeletal System Questionnaire", "Minnesota Job Satisfaction Scale" and "Life Satisfaction Scale". In the analysis of the data number, percentage, mean and standard deviation values; Kolmogorov-Smirnov test, Student's t test, and Mann-Whitney U test were performed.

Results: It was determined that the employees experienced the most neck pain (37.9%), they were hospitalized mostly due to low back pain (3.4%), and they changed their duties due to low back (1.3%) and neck pain (1.3%). The mean total job satisfaction score of those with neck pain was 62.3±14.3, and those without neck pain were 65.4±13.8; there was a statistically significant difference between them (p<0.05). The mean total job satisfaction score of those with shoulder pain was 61.2±15.8; those who did not have 65.1±15.3; there was a statistically significant difference between them (p<0.05). In those with low back pain, the mean total job satisfaction score was 62.3±15.3, and 65.2±15.5 in those without; the mean life satisfaction score was 12.2±4.3, and those without it were 13.1±4.5; there was a statistically significant difference between them (p<0.05).

Conclusion: Ergonomic risks in operating rooms affect the work and life satisfaction of employees as well as musculoskeletal pain.

Clinical Case Studies

Clinical Case studies

479 Implementation of cures with negative pressure in the immediate postoperative period

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BACKGROUND: The surgical procedures included in the minimum surveillance of the national surveillance system for surgically located infections are procedures selected due to their great hospital relevance. On the one hand due to the frequency of interventions performed and on the other hand, given the high incidence of surgical infections that they entail. The latest report published by EPINE shows that SSIs are the first most common nosocomial infection (1). Surgical site infection is common after a laparotomy surgery and is associated with increased cost. Prophylactic Negative pressure wound therapy has previously been shown to reduce surgical site infection compared with conventional dressing (2). This mechanical treatment used as an adjuvant in wound healing; provides an occlusive and sterile healing environment that reduces bacterial load and promotes tissue granulation, stimulating healing by second or third intention, reducing wound surface area (3). Implement negative pressure therapy treatment in the closure of surgical wounds after the intervention, prevent surgical site infections (SSI); specifically incisional SSI, and dehiscences (3), in abdominal surgeries (4), limiting subsequent complications (5,6,7).

OBJECTIVES: This case study aims to determine whether the application of prophylactic negative pressure wound therapy after laparotomy surgery is effective.

DESIGN: It is a descriptive observational study, we used prophylactic negative pressure wound therapy after a laparotomy surgical in oncological patient previously chosen according to criteria evidence.

MAIN FINDINGS: After the surgical intervention, the patient admitted to the ward with a negative pressure dressing. After five days without removing the dressing, the first cure performed without signs of infection or dehiscence. Finally, after medical discharge, the wound seems perfectly healed.

Conclusion: The use of negative pressure wound therapy seems a good strategy with improved outcomes compared with conventional dressing.

230 Perioperative paediatric skin disinfection and draping

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Background: In Sweden it's mandatory to have a specialization after becoming R.N., working in the perioperative care. However, it is not in the content of the education how to care for the paediatric patients.

Children are not small adults. Specific care is needed depending on the size of the child. It also depends on different diagnosis, anatomical and physical differences, and immature skin. Different draping is also needed.

Working at a university clinic/hospital has as ongoing knowledge demand and therefore the continuing learning needs to secure the highest safe patient care and specifically in supporting a patient centered care.

Aims: Illuminate the demands of education for operating room nurses working in paediatric care, regarding skin disinfection and draping.

Objectives:

Paediatric perioperative care.

Skin disinfection and draping.

Learning

Standardization.

Methods: Local obligatory guidelines, MYORCO website and workshops

Results: New operating room nurses is shown where to locate the guidelines. MYORCO allows each new nurse within perioperative paediatric care, to ensure that practices are correctly followed. Allows the nurses to train by themselves.

Conclusion: The higher staff turnover, the more educational support will be needed. It is important to have workshops and guidelines, but to also use the MYORCO website.

Clinical Case Studies

468 Lean Management in the Operating Room: A Case Study of the 424 Military Hospital in Thessaloniki, Greece.

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Background: Lean management is a business philosophy that is gaining prominence in the field of strategic management. Lean process improvement is a culture of ideas, tools and processes designed to improve workflow and eliminate waste, providing maximum value for minimum cost. Our study supports that lean management principles can be effectively applied in an organization, such as a hospital and specifically within an operating room.

Objectives: The primary objective of this poster is to present the philosophy and basic principles of lean management, exploring how these can be implemented in the demanding workplace of the operating room. The discussion lays on the experience gained from the implementation of lean process improvements in the operating room of our hospital.

Methods: A comprehensive literature review was conducted in PubMed, Elsevier and Google Scholar databases. Supportive to these were additional data and experience gained during the planning and the implementation phase of the whole project, under the guidance of our head nurse who had underwent training in Lean Six Sigma and became the initial instructor.

Results: Lean process improvements included:

- Implementation of wireless telephones by both the cleaning crew and paramedics.
- Utilization of electronic codes by authorized nurses instead of passport keys.
- Establishment of new storage spaces categorized by material type and usage.
- Grouping of surgical instruments based on the color corresponding to each surgical specialty.
- Reconfiguration of surgical instrument sets.
- Reduction in turnover time.

Conclusion: Lean philosophy contributes to a more efficient and effective operating room, by eliminating waste and non-adding value activities. Lean process improvements minimized communication and overprocessing problems, improved our inventory management contributing to a smooth workflow and a significant reduction in turnover time. Nurses mitigate fatigue by minimizing unnecessary movements and eventually potential errors. Lean management is evidently applicable in the operating room.

ePoster Guided View

ePoster Guided View: ePoster Mini Presentations

348 Failure to sterilize hinged instruments submitted to low temperature sterilization

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Background: Although rongeurs and bone cutters are made of stainless steel and therefore autoclavable, not infrequently these instruments are sterilized at low temperature.

Objectives Our aim was to determine whether the sterilization of hinged instruments is effective using low-temperature sterilization methods.

Methods: An experimental laboratory study was conducted. We submitted 3 rongeurs and 2 bone cutters to three different low temperature sterilization methods, ethylene oxide gas (EO), hydrogen peroxide gas plasma (HP), and low-temperature steam formaldehyde (LTSF) and to steam sterilization. To analyze the effectiveness of sterilization, we inserted substrate papers of biological indicators indicated to each method (*Bacillus atropheus* for EO and *Geobacillus stearothermophilus* for steam sterilization, HP and LTSF) between the faces of the instrument. After sterilization, in the biological safety cabinet and using aseptic technique, the packages of both rongeurs and bone cutters were opened and with the help of sterile forceps the substrate papers were removed and inoculated directly into test sterilized tubes containing Sodium Thioglycolate culture medium (BD Difco™, France) and incubated in an oven at 55°C± 2°C for 7 days. In the absence of microbial growth, samples were heat shocked at 80°C for 20 minutes and re-incubated at 55°C± 2°C for an additional 72 hours for final reading.

Results: None of the substrate paper inserted into the instruments that were submitted to steam sterilization showed microbial growth. Four out of 5 substrate paper inserted in instruments sterilized in HP were not effectively sterilized.

Conclusion Our results show the risk of ineffective sterilization of articulated materials, which cannot be kept open during sterilization.

422 Investigation of children's desire for information during the perioperative period

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Background: The perioperative discussion between the child patient and the healthcare providers could be ideal. Both children and their parents need comprehensive information preoperatively.

Objectives: The aim of this study is to estimate the desire for information of the child patients preoperatively aged 7-17 years old, as long as to clarify the interaction between the level of anxiety of these children and their need for information during the perioperative period.

Methods: The study is cross-sectional observational. The sampling was convenient. We collected 80 questionnaires from children aged between 7-17 years old, both boys and girls who underwent surgical operation. As an instrument of interviews was used the translated in Greek CDI (Children's Desire for Information) questionnaire with internal consistency coefficient Cronbach's alpha 0,918. In additional, we used the Greek version of STAIC-State and STAIC-Trait with internal consistency coefficients 0,922 and 0,826 respectively.

Results: From the statistical analysis of the data the results obtained highlighted the following factors as important for their interpretation. Thus, the multivariate analysis of the "CDI-total score" indicates that the child's fear of surgery with $p < 0.012$ is decisive and points out the way children feel about surgery when the information they have received is insufficient and incomplete. The family status of the caregiver with $p < 0.006$ also plays its role as a socio-demographic factor in the degree of desire for information from the child who is going to be operated on. As well as with $p < 0.016$ the child's anxiety state analyzed from the answers to the Greek version of STAIC-State questionnaire.

Conclusion: Therefore, we conclude that the ability of healthcare professionals to adequately understand children's desire for information preoperatively and their ability to resolve their queries and instill confidence in their patients is paramount as this can alleviate the fear and anxiety that children experience.

ePoster Guided View

496 Self-assessment of nursing skills in the Operating Room: a literature review

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Background: Operating room nurses are required to have theoretical knowledge and technical skills. Competence in the perioperative setting is a difficult concept to define and measure. Assessment tools are necessary to evaluate operating room nurses' technical and non-technical competencies. Objective

The aim of the present study is to identify a validated instrument that allows subjective assessment of competency for all roles performed by the Operating Room nurse.

Methods: A literature review based on Cochrane recommendations was conducted. The review protocol was edited according to PRISMA criteria. Data were retrieved by consulting six of the major available databases, analyzing the bibliographic references and citations of the included studies. All research processes were conducted between June and July 2022. Interrater reliability was calculated using the Krippendorff test.

Each included study, being cross-sectional, was evaluated using STROBE.

Results: A total of 709 articles were retrieved by database search (n= 370, 52.2%) and additional searches (n= 339, 47.8%). Duplicates were removed and relevance assessed. At the end of the title and Abstract screening phase, 11 articles were obtained on which the review was conducted.

All articles were included in the review. The risk of bias was considered acceptable.

The most frequently used validated rating scale (n= 8, 72.7%) was the Perceived Perioperative Competence Scale - Revised (PPCS-R).

In 2021 in China, the Core Competence Scale (CSS) was validated. All studies agree that applying a competency assessment scale in this setting allows for a positive implication in managing work activity and staffing needs.

Conclusion: The PPCS-R rating scale turns out to be the most widely used and investigates the main facets of hard and soft skills, highlighting crucial aspects to best understand the strengths and weaknesses of a work situation. Its wide use would allow further international comparisons to be made.

455 A study on the proper expiration date of sterilized products according to packaging materials

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Background: The expiration date of sterilized products vary depending on the packaging materials. Therefore, it is necessary to prepare accurate information that can maintain the product in the safest and sterile state for a long time according to the storage environment, packaging materials, etc.

Objectives: In order to examine an appropriate expiration date of sterilized products by packaging materials, the temperature and humidity of storage environment and the contamination of sterilized products were observed at E Hospital of C University in Seoul from February to September on 2023.

Methods: The average and standard deviation of the storage environment were analyzed using Micro-soft office professional Plus 2016 EXCEL (STDEV).

360 samples of linen and nonwoven packaging and 108 samples of sterile bags were calculated and placed in 6 departments. Microbiological examination were conducted every 2 weeks, 3 for each packaging material.

Results: The overall average temperature was 21.57+2.14°C and humidity averaged 44.60+16.8% overall in the storage environment.

One out of samples wrapped in linen and two out of samples wrapped in nonwoven fabric was contaminated in the 10th microbiological examination.

In case of sterile pouch, bacterial contamination was observed in one sample in the first microbiological examination. After that, no bacterial contamination was observed until the fifth examination.

Conclusion: It was found that the average temperature and humidity of the sterilized product storage environment were

ePoster Guided View

properly maintained within the standard value of 24 degrees or less and within 70%.

In the case of sterilized products packaged in linen and nonwoven fabrics, they remained sterile for up to five months, so the valid expired date can be extended from the current one month to five months. Also, in the case of sterilized products packaged in sterile pouch, the valid expired date, currently six months, can be extended to eight months.

501 Greening the Operating Room: Simple Changes to Reduce Cost and Carbon Footprint

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Background: Operating rooms (ORs) produce approximately 70% of hospital waste. Greening strategies in the OR aim to reduce the environmental impact of surgery while maintaining patient safety and outcomes. It is therefore important to implement simple strategies that provide an opportunity for improvement with conscious consumption of reusable medical devices.

Objectives: Demonstrate that reusable surgical drapes can reduce the carbon footprint providing economic benefits and waste reduction, focusing on reuse and end of life recycling.

Methods: In order to demonstrate the benefit of this practice, an economic-environmental and exploratory study was conducted in a Portuguese hospital.

Results: Each “green drape” resulted in a 60% saving compared to the cost of disposables drapes, accompanied by 75% of cost savings associated with reduced surgical waste treatment. This translates into a minimum annual institutional savings of 109,631 euros in the use of reusable surgical drapes. This analysis shows that the reusable fields generate a financial return of €109,631 per year and a saving in group III waste of 10,193kg, which corresponds to an expense of €7,262 for the institution and in a long term is a more efficient method and sustainable. There are studies that prove that no increase in complications or infections of surgical wounds was observed after the introduction of greening.

Conclusion: The reprocessing of medical devices optimizes efficiency and reduces waste generation, has a positive impact on the environment and can be accompanied by cost reduction. Given that the field of sustainability in healthcare is young but expanding, more research is needed to help decrease single-use disposables.

489 Navigating Evidence-Based Preoperative Recommendations in Cardiac Surgery: A Scoping Review.

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Background: In the perioperative process, nurses assume a pivotal role, requiring essential resources, materials, knowledge, and skills, plus high-quality pre-surgical preparation. This study aims to contribute to the scientific community by consolidating multi-professional recommendations tailored specifically for the preoperative preparation of adult patients undergoing cardiac surgeries.

Objectives: To explore into the available evidence and current knowledge surrounding recommendations for preoperative preparation in diverse types of cardiac surgery, encompassing both elective and urgent procedures

Methods: This is a scoping review following Joanna Briggs Institute guidelines, a systematic search was conducted in January 2022 across multiple databases, including Cochrane Library, Cumulative Index to Nursing and Allied Health (CINAHL), Gale Academic OneFile, Literatura Latino-Americana e do Caribe em Ciências da Saúde (LILACS), ScienceDirect, Scientific Electronic Library Online (SciELO), Scopus, Trove - National Library of Australia, and Web of Science. This approach ensures a comprehensive literature review while adhering to established rigorous and thorough searching guidelines.

The strategy incorporated terms related to thoracic and cardiac surgery and preoperative care, tailored for each data

ePoster Guided View

source. Inclusion criteria involved studies published online, without temporal or language restrictions, while exclusion criteria eliminated studies not aligned with the research question. The search was performed independently by two researchers.

Results: Out of 286 articles, 28 satisfied the review criteria. These articles were selected and characterized, elucidating key preoperative recommendations for cardiac surgeries. These encompassed preoperative education, medication management, utilization of risk stratification scales, inspiratory muscle training, and specific preoperative tests.

Conclusion: The identified recommendations demonstrated efficacy in promoting hemodynamic stability, alleviating patient fear and anxiety related to surgery, reducing arrhythmias, minimizing hospitalizations, lowering mortality rates, and mitigating postoperative complications. This comprehensive review provides valuable insights into evidence-based preoperative practices in cardiac surgery, offering a foundation for future research and clinical applications.

372 Quality Indicators Sensitive to Nursing Interventions in Ambulatory Surgery: Survey Development and Validation

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Background: Assessing quality indicators in Ambulatory Surgery (AS) sensitive to nursing care, is essential for continuous quality improvement; for patient safety; to assess the operational efficiency of the Ambulatory Surgery Unit (ASU); for improving patient satisfaction; for risk management; and evidence-based decision-making.

Objectives: To develop a questionnaire to assess quality indicators sensitive to nursing interventions in AS.

Methods: The guidelines of Hill & Hill (2016) and Vilelas (2022) were used. A scoping review was conducted to find the best definition of the construct. The first step was listing all the research variables; then the number of questions to measure each variable was specified; thirdly, the items were operationalized as well as the general structuring of the questionnaire and analyzed its content validity using a focus group; a pre-test was performed on nurses working in ASUs. To conclude the process of developing the questionnaire, it will be validated on a representative sample of the population.

Results: In the focus group, it was suggested that more detailed information on ethical issues be included in the participant information form; the sociodemographic data to be requested was discussed; adjustments were made to the Likert scales used, as well as changing the order in which some items were presented. In total, 7 questions were removed from the initial version, leaving 63 questions and one open-ended question, divided into the following sections: ASU Functioning and organization, Providing Nursing Care at the ASU, Teamwork and Training, Learning and Responding to Errors, Safety Events, Management, Leadership and Support for Nurses, Global Assessment and Comments. The pre-test involved 36 nurses working in ASU and no further changes were required.

Conclusion: Developing this tool is essential to ensure the provision of safe, effective and patient-centered care, and to promote the continuous improvement of health services.

185 Intra-hospital transfer anxiety of patients in the neurosurgery intensive care unit: a prospective cohort study

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Background: Transferring a patient from the intensive care unit to different locations within the hospital can cause transfer anxiety. Transfer anxiety is an important factor that adversely affects various physiological and psychological parameters.

Objectives: The aim of the study is to evaluate the intra-hospital transfer anxiety of patients in a neurosurgery intensive care unit and factors affecting it.

Methods: This prospective cohort study was conducted between November 2021 and June 2022 in a neurosurgery intensive care unit in Istanbul. A total of 171 adult patients who stayed in the intensive care unit for at least 24 hours, with a Glasgow Coma Scale score of 14 and above and who had undergone their first intra-hospital transfer were included.

ePoster Guided View

Patients' vital signs were recorded, and their anxiety levels were assessed using the State-Trait Anxiety Inventory.

Results: The mean age of the patients was 53.16±15.51 years and 56.72% were women, 75.43% of transfers were performed during the day and 64.32% of patients were transferred to an in-patient ward. Factors affecting transfer anxiety were gender, employment status, timing, and purpose of transfer ($p<0.05$). Blood pressures and heart rates tended to increase during transfer and decrease again after transfer, while oxygen saturation decreased during transfer ($p=0.035$) and increased again after transfer ($p<0.001$). State anxiety levels were moderate before transfer and decreased to mild level after transfer ($p<0.001$).

Conclusion: The transfer process can be a cause for concern for intensive care patients. Transfer process increased anxiety and caused changes in the vital signs of intensive care patients. Individual and transfer-related factors may influence transfer anxiety. Patients should be monitored for transfer anxiety and nursing interventions to reduce anxiety should be planned.

342 Preventing pressure injuries in patients undergoing surgery A qualitative interview study of perioperative nurses' experiences of preventing pressure injuries in the operating department

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Background: Every year 110 000 patients suffer from an injury due to care. Eight % of these consist of pressure injuries. The most common reason is surgery or other treatments. Many factors contribute to the occurrence of intraoperative pressure injuries. Some are patient specific while others are caused by the surgical surrounding such as positioning of the patient. One of the perioperative nurse's responsibilities is to safeguard the patient, which also includes preventing intraoperative pressure injuries.

Objectives: The aim was to study the perioperative nurses' experience of preventing intraoperative pressure ulcers.

Methods: Seven interviews were performed and analysed with content analysis as described by Graneheim & Lundman.

Results: The analysis resulted in three categories. Intraoperative care show that nurses have knowledge of pressure injury risks and base their preventing measures on this knowledge and their clinical judgement of the patient.

Organisational factors affecting the work show that perioperative nurses feel responsible for the preventing work and that the organisation has a responsibility to enable qualitative work. Thoughts about communication and competence development show that nurses need feedback and training to develop their preventive skills in the department.

Conclusion: The perioperative nurse has knowledge of factors contributing to the occurrence of intraoperative pressure injuries. Using this knowledge, their experience and patient information, they make a clinical judgement of the specific patient's risk of developing pressure injuries. The clinical judgement is then the base for the preventing care actions. Lack of feedback hinders perioperative nurses from developing their preventive care further.

356 Evaluation of psychological well-being and perioperative nursing care perception in patients under surgery

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Background: Psychological well-being is an important component of postoperative recovery that affects an individual's functioning and overall health. Many surgical patients' negative experiences impair psychological health and general well-being.

Objectives: This descriptive and cross-sectional study was conducted to evaluate the psychological well-being and perception of perioperative nursing care in patients under surgical intervention.

Methods: The population of the study consisted of patients under surgical intervention at Training and Research Hospital between October 2020 and March 2021. The sample of the study consisted of 285 patients from the whole universe who met the inclusion criteria of the study and agreed to participate in the study. Personal Information Form, Psychological Well-Being Scale (PIOS) and Quality Perioperative Nursing Care Scale (KPHBS) were used to collect data.

Results: Preoperative (AS) Psychological Well-Being Scale mean score was 43.68±5.97, postoperative (AS) Psychological

ePoster Guided View

Well-Being Scale mean score was 42.48 ± 6.97 , and Quality Perioperative Nursing Care Scale total score mean was 122. It was found to be $.64 \pm 12.42$. It was determined that there were significant differences in the mean scores of the Quality Perioperative Nursing Care Scale according to the presence of the disease and the clinical status of the diagnosis. In line with the results obtained from the research, it is seen that the quality perioperative nursing care of the patients positively affects their psychological well-being.

Conclusion: As a result, it was determined that the high quality perioperative nursing care of the patients under surgical intervention was effective in improving the psychological status of the patients. Therefore, it can be recommended to apply quality perioperative nursing care to patients under surgical intervention.

405 Evaluation of Self-Efficacy and Satisfaction with Post-Discharge Tele-Health Monitoring of Patients Undergone Coronary Artery By-Bass Graft Surgery

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Background: Heart surgery is a major intervention that can cause vital complications, and affects the physical, emotional and social dimensions of individuals' lives. These effects are usually seen within the first six weeks after patients are discharged. Self-efficacy and patient follow-up are important factors in overcoming post-discharge problems.

Objectives: This study was conducted to evaluate patients' self-efficacy and satisfaction with post-discharge tele-health follow-up after undergoing coronary artery by-bass graft (CABG) surgery.

Methods: The sample of this descriptive, cross-sectional study consisted of 102 patients who underwent CABG surgery in the cardiovascular surgery clinic of a university hospital. Data was collected with Personal Information Form, 15th day and 30th Day Patient Control Form, and Barnason Efficacy Expectation Scale. SPSS 23.0 statistical program was used in data analysis, which involved number, percentage, mean and chi-square.

Results: The mean age of the patients was 63.97 ± 9.75 years and 75.7% were male. Regarding disease management, 96.1% had visitor restrictions, 85.4% applied nutritional recommendations, 85.4% took indoor or outdoor walks, and 97.1% took home medication as instructed. A significant decrease was found in patients sleeping on their back, using the chest corset, wearing compression stockings before getting out of bed, and using the triflo ball from the 15th day to the 30th day after the surgery ($p < 0.05$). It was determined that the patients' self-efficacy levels were moderate and all were satisfied with the telehealth service provided.

Conclusion: The study found that the patients undergoing CABG surgery had low levels of self-efficacy, however, they were generally satisfied with the telehealth follow-up after discharge. Thus, it is recommended to increase the frequency of nurses' telehealth follow-ups after discharge, and to focus on patient education to increase their self-efficacy.

477 The Effect of Foot Massage on Pain, Sleep Quality and Early Discharge In Patients Undergoing Spinal Surgery

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Background: Foot massage is often preferred among non-pharmacological methods due to its simple application, low cost, and the fact that it can be performed without the need for special equipment.

Objectives: This study aimed to determine the impact of foot massage applied to patients who have undergone spinal surgery on pain, sleep quality, and early discharge.

Methods: This non-blinded, randomized controlled trial was carried out between April, 2022, and April, 2023, in the neurosurgery clinic of a university hospital. Ethical committee and institutional approvals were obtained. Seventy patients meeting the inclusion criteria were randomly divided into experimental ($n=35$), and control ($n=35$) groups using simple randomization. Patient Information Form, Pittsburgh Sleep Quality Index (PSQI), Richard-Campbell Sleep Scale (RCSQ),

ePoster Guided View

and Visual Analogue Scale (VAS) were used as data collection tools. Unlike the control group, patients in the experimental group received foot massage 4 times after surgery. Patients in the experimental and control groups were evaluated in terms of pain and sleep quality on postoperative days 0th, 1st and 2nd. Hospitalization times of both groups were compared for early discharge. The results were evaluated with a 95% confidence interval and a significance level of $p < 0.05$.

Results: The Visual Analogue Scale scores of the patients in the experimental group who received foot massage were statistically significantly lower and reported less pain on the 0th, 1st and 2nd postoperative day compared to the control group ($p < 0.05$). Patients in the experimental group who received foot massage had higher RCSQ scores on postoperative days 1 and 2 than those in the control group and reported sleeping well on both days. The hospital stay of patients in the experimental group was shorter than the control group ($p < 0.05$, $p = 0.001$).

Conclusion: Patients who received foot massage after spine surgery experienced less pain, earlier mobilization and discharge, and improved sleep quality.

350 Surgical positioning injuries following lateral positioning

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Background: Careful and correct surgical positioning is important in order to prevent positioning injuries.

Objectives: The objective of this study was to investigate the number of patients who experienced postsurgical positioning injuries caused by lateral positioning for urological procedures.

Methods: We prospectively included 82 patients who in December 2022- October 2023 underwent a urological procedure in lateral position. The ipsilateral arm was positioned on an armboard in level with the shoulder with a slight flexion of the elbow. The lower extremities were secured and the table flexed, whereby the kidney space was opened and slightly rotated posteriorly to the side of the procedure. The study was approved by Region Hovedstaden (P-2022-322). Baseline and operative data were recorded. Postoperative positioning injuries were assessed with interview by OR-nurses at the first postoperative day, after 3 and 5 weeks. Descriptive statistics were used and associations between preoperative and operative factors and postsurgical positioning injuries assessed with logistic regression.

Results: Twenty-nine (35%) patients were female with a median age of 62 years (IQR 52-72) and a median BMI of 26 (IQR 24-32). Two patients (2%) underwent an open procedure, 29 (35%) patients underwent conventional laparoscopic procedure and 51 (62%) underwent a robotic assisted laparoscopic procedure. The median duration in lateral positioning was 150 min. (IQR 120-183). Post-surgery 32 (39%) patients experienced injuries that was attributed to the positioning. At five weeks 13 (16%). Patients reported a range of injuries with pain and numbness the most common. There were no correlation between the side of the procedure and the side or type of the injury. There were no preoperative or postoperative variables associated with the risk of having injuries 5 weeks following the procedure.

Conclusion: Surgical positioning injuries following urological procedures in lateral positioning is nonnegligible and likely underreported.

370 Development and validation of a risk prediction model for inadvertent intraoperative hypothermia in patients undergoing off-pump cardio hybrid operation based on decision tree and nomogram

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Background: Intraoperative hypothermia is one of the most serious complications of patients undergoing off-pump cardiac hybrid operation. However, there is a lack of risk prediction models for them which helps nurses to identify high-risk patients as early as possible and take targeted preventing measures. The nomogram and CART decision tree model are model construction methods based on machine learning. This study used two methods to build intraoperative hypothermia risk prediction model for patients undergoing off-pump cardiac hybrid operation, and conducted internal verification of the model.

ePoster Guided View

Objectives: To analyse the influencing factors of inadvertent hypothermia in patients undergoing off-pump cardio hybrid operation, construct a nomogram and a CART decision tree model respectively, and compare the predictive performance of the two models.

Methods: A total of 429 cases of off-pump cardio hybrid operation patients' data were collected from January 2019 to December 2022 in the hospital, and meaningful influencing factors were screened out using one-way analysis, and influencing factors without multicollinearity among them were included in stepwise multifactorial regression analysis. The nomogram and the CART decision tree model were constructed respectively. Accuracy, precision, recall, F1 value and AUC are used to compare the performance of the two models.

Results: Inadvertent intraoperative hypothermia occurred in 310 of 429 patients, with an incidence of 72.26%. The accuracy of the nomogram model was 0.80, precision was 0.75, recall was 0.96, F1 value was 0.84, and AUC was 0.91. The accuracy of the CART decision tree model was 0.87, precision was 0.93, recall was 0.89, F1 value was 0.91, and AUC was 0.92.

Conclusion: The AUC of the CART decision tree model was significantly higher than that of the nomogram model ($P < 0.001$), which can provide a reference for the development of preventive measures of inadvertent intraoperative hypothermia for nursing staff.

493 Patients Recovery Room discharge and modified Aldrete score: an observational study about timing in a multidisciplinary surgical single centre.

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Background: Implementing an objective scoring scale during the patient's post-operative awakening phase, as through the modified Aldrete Score (mAS), could increase safety in the patient's discharge from the Recovery Room (RR) and the relative transfer to the ward.

Objectives: The study aims to report the discharge time from the RR through the final scores measured by the mAS.

Methods: The study has an observational design and was conducted in September 2022 and authorized by the Local Ethics Committee (IRCCS IFO protocol n. 1735/22 - July 12th, 2022). Patients were enrolled consecutively in the post-surgical phase, to whom the mAS was administered. The exclusion criteria were related to the paediatric population, emergency surgery, and expected postoperative course in the intensive care unit.

Results: The sample (165 patients) was composed of 64.8% (n=107) female and 35.2% (n=58) male (mean age of 59.35 SD \pm 16.9). The body mass index calculated was normal for 55.2% (n=91), overweight for 33.3% (n=55), and obese for 11.5% (n=19). The surgical approaches (principally urological and breast) were "open" for 57% (n=94), 17% (n=28) robotic surgery and laparoscopic for 26% (n=28). About the ASA score, 73.9% (n=122) was classified as ASA 2. Most interventions lasted up to 2 hours (73.9% n=122), and the general anaesthesia approach was used for 84.2% (n=139). The main results regarding RR discharge timing and mAS are summarised in the following table.

Conclusion: 84.9% (n=140) of patients were discharged from RR after 45', scoring 10. Likely, these patients reached the threshold of dischargeability (score \geq 8) as early as 5 minutes after awakening in RR. These results, although with limitations, may suggest how systematic and routine use of the mAS at postoperative awakening could significantly reduce the time patients stay in RR while still ensuring patient safety, as known in the literature.

ePoster Guided View

126 Lessons Learned from the Implementation of the Laser Safety Training Program in a Greenfield Hospital for Women's and Children in Qatar

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Background: Sidra Medicine is a new tertiary referral hospital in Qatar, with a focus on pediatric and women's healthcare. Nursing staff has been recruited from around the world, from over 90+ different countries, with a high percentage of healthcare professionals trained in the USA, UK, Australia, Ireland, Canada and Philippines. This diversity of nursing staff with different training and practice background poses unique challenges when implementing a Laser Safety Training Program. In order to safely activate laser services, nursing staff involved in laser procedures must be trained.

Objectives: The overall aim of this poster is to share our experience of implementing a training framework and learning resources that can be used for a wide audience to help implement a training program that promotes safety of patients and staff from the risks of the medical laser use in the Operating Room.

Methods: A review of the training and safety guidelines from different international professional bodies and organizations was carried out including the American National Standards Institute (ANSI), Laser Institute of America (LIA) and Association of periOperative Registered Nurses (AORN). Accreditation requirement from the Joint Commission International (JCI) were also taken into consideration.

Results: Laser safety training commenced June 3, 2020. We delivered 11 training sessions in total from June 2020- May 2021 and 121 staff completed the training. This is an ongoing training program offered to new nursing staff and for trained Laser Assistants for revalidation of competence.

Conclusion: The Laser safety training program has been developed in order to meet standard recommendations of ANSI Z136.3-2018 and JCI accreditation requirements and to address safety concerns in an environment where members of staff are diverse thus may have different experience and expectations. Our Laser Safety Training Program contributed to the successful activation of our Laser Service in the Operating Room.

227 The Role of the Surgical Patient Safety Nurse Specialist: Importance and Influence in Daily Surgical Activities

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OBJECTIVE: To promote a culture of patient safety in the Operating Room, promoting, evaluating, and training in excellent and safety nursing care. To act as a reference figure and safety consultant, collaborating with the rest of the multidisciplinary team and participating in various quality and safety committees within the centre. To decrease adverse events (AEs) related to nursing practice and to report, analyse, evaluate, and correct AEs originating in the surgical area.

METHODOLOGY: Using the ADDIE management analysis model, an initial identification of strengths and weaknesses (SWOT) was conducted regarding nursing care and patient safety culture in the surgical area. The competency profile of the Surgical Patient Safety Nurse Specialist was defined based on the criteria of the European Operating Room Nurses Association (EORNA) Competency Framework and the nursing figure established by the Ministry of Health as a recommendation within the Safe Surgery Program (2019). In December 2021, a public internal call was made for the position of Surgical Patient Safety Nurse Specialist in the Surgical Area of the Canarian University Hospital (Canarian Health Service), and that specialist began working in January 2022. The specialist completed specialized courses in Patient Safety in Anesthesiology (SENSAR) and Risk Management and Patient Safety.

RESULTS: Notifications in 2022: 41 AEs in the Operating Room, with over 80 proposed corrective actions.
Nurse training: 36 courses and workshops, 10 protocols developed.

CONCLUSION: The University Hospital of the Canary Islands has been nationally recognized as a "Safe Hospital" by SENSAR for being the hospital in Spain with the highest number of reported adverse events and for implementing the most measures to prevent their recurrence

ePoster Guided View

464 The role of nursing leadership in the operating room as a guarantor of patient safety

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Background: The nursing profession has become integral to the healthcare system, evolving due to qualities such as leadership, character, commitment, compassion, and communication skills. Leadership is crucial in clinical practice, especially in complex specialties, as seen in surgical settings where nurses lead to achieve optimal outcomes and ensure safety. The operating room poses significant challenges, competent training and the use of tools like checklists, hand hygiene, and multidisciplinary collaboration. Focus is on understanding the specific leadership role nurses play in guaranteeing patient safety during surgical procedures.

Objectives: Examine the role that nursing leadership in the surgical setting plays in patient safety.

Methods: A bibliographic review was conducted on how nursing leadership influences patient safety in the operating room during the month of December 2023. Several databases were used, with MeSH search terms. Original articles published in the last 10 years in Spanish or English and that dealt with perioperative nursing leadership and patient safety were included. References that did not answer the question, duplicate articles and articles in another language were excluded.

Results: The review identified 129 records, and after the selection process, 12 relevant articles were included.

Three key points emerged from the reviewed literature. The first emphasized safety measures in the operating room, with significant impacts on patient health and safety, particularly through checklists, hand hygiene, and preventing surgical wound infections. The second highlighted the importance of skills in nursing leadership and its effects on patient safety. The third addressed communication and multidisciplinary work difficulties affecting nursing leadership and patient safety.

Conclusion: Nursing leadership and patient safety converge in the operating room, aiming to provide patients with a sense of security and confidence in the successful resolution of their interventions. The integration of praxis, protocols, experience, and collaboration ensures the best possible outcomes, regardless of the procedure's complexity.

361 Determining the knowledge level of nurses with regard to medical device-related pressure injuries and the affecting factors

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Background: It is important to determine the factors affecting the knowledge level of nurses in the care and prevention of pressure sores caused by medical devices.

Objectives: The purpose of this research was to determine the knowledge level of nurses' with regard to medical device-related pressure injuries and the affecting factors.

Methods: The research was conducted in a cross-sectional-descriptive design. In a cross-sectional descriptive design, the sample of the research consisted of 252 nurses. Data were collected by face-to-face and online data collection method with the Medical Device-Related Pressure Injuries (MDRPI) Knowledge Questionnaire.

Results: The average age of the nurses participating in the research was 34.61±7.44, the average number of years working in the profession was 11.72±7.49, 79.4% were women, 54.0% were single, and 68.7% had a bachelor's degree, 48.4% worked in the intensive care unit. The average rate of the correct response about MDRPI Knowledge Questionnaire was 67,87% (20,11±3,83). The highest percentage of correct responses was on the "prevention and treatment" dimension rated 67.87% (10.86±2.43). The lowest percentage of correct responses was on the "staging" dimension rated 31,87 % (,956±,715). It was determined that age (p= .001), gender (p=. 025) and working shift in the clinic (p=. 006) affected the total score average of MDRPI Knowledge level. In addition, a moderate, positive relationship was determined between the level of knowledge about medical device-related pressure injuries and age (rrho:,.632-p:;.000). However, a low-level negative relationship was determined between the level of knowledge "staging" dimension and "working experience as a nurse (years) (rrho:-,139-p:;.005) and weekly working time (hours) " (rrho:-,140-p:;.005).

Conclusion: As a result, it is recommended that the subject of medical device-related pressure injuries should be given more attention in the in-service training planned to be given to nurses.

ePoster Guided View

366 Examination of Person-Centered Perioperative Nursing Cares and Potential Influencing Factors Among Nurses Working in Surgical Clinics

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Background: Person-centered care is a holistic care process that focuses on the Person in conjunction with the disease. The approach of surgical nurses in this context is crucial for providing comprehensive care to patients.

Objectives: The aim of this study is to investigate the Person-centered perioperative nursing approaches of nurses working in surgical clinics and the influencing factors.

Methods: The study was conducted with 120 nurses working in surgical clinics of a public and a state hospital in a central province in Turkey. Data were collected using a demographic information form and the Person-Centered Perioperative Nursing Scale. T-test/Mann-Whitney U test, one-way ANOVA/Kruskal-Wallis, and Pearson correlation analysis were employed for data evaluation. The research was conducted with ethical approval, institutional permissions, and voluntary consent forms.

Results: Of the participating nurses, 90% were female, and 75.8% were graduates. 64.2% of nurses think that they provide Person-centered perioperative care and allocate 1.33 ± 0.68 (0.00-4.00) hours for care during an eight-hour working period. Among the factors influencing nurses' Person-centered perioperative nursing approaches, statistically significant differences have been identified concerning age, educational background, duration of professional and surgical clinic experience, the specific clinic of employment, time allocated for care, provision of preoperative and post-discharge education to patients, belief in delivering Person-centered perioperative care, and membership in a surgical nursing association ($p < 0.05$).

Conclusion: Nurses scored at a high level on the Person-Centered Perioperative Nursing Scale. Enhancing nurses' knowledge through education is recommended to improve Person-centered perioperative care. Additionally, membership in surgical nursing associations may contribute to increased awareness of patient care.

378 Determining the relationship between operating room employees' patient safety attitudes and artificial intelligence anxiety level

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Background: Today, the development of technology continues rapidly in healthcare services, especially in operating rooms. With this change, healthcare professionals need to ensure patient safety by using artificial intelligence technologies.

Objectives: The research aimed to determine the relationship between operating room employees' patient safety attitudes and artificial intelligence anxiety levels.

Methods: It is descriptive and cross-sectional. Data were collected in the operating room of a University Hospital and a City Hospital in Turkey. The sample consisted of 155 healthcare professionals who agreed to participate in the study. Data were collected using the "Data Collection Form", "Artificial Intelligence Anxiety Scale-AIAS", "Safety Attitude Scale-Operating Room SAS-OR". Descriptive analyses, t-test, one-way Anova test, Tukey test and Pearson Correlation were used in the statistical analysis of the data.

Results: Accordingly, the participants' AIAS total score average is 59.57 ± 11.89 . According to AIAS, artificial intelligence concerns were found to be high. The total score average of the SAS-OR scale is 43.22 ± 10.52 . When the total score of the scale and the scores of the sub-dimensions are evaluated, it can be said that the employees have a moderate level of attitude, and their team cooperation, stress level and job satisfaction attitudes are at a lower level. No significant relationship was found between the SAS-OR score, AIAS and SAS-OR scales. The total mean score of the artificial intelligence anxiety scale of those who think that artificial intelligence technology can be used to ensure patient safety in the operating room is higher than that of individuals who do not think so, and the difference between them is statistically significant.

Conclusion: It was determined that operating room employees' concerns about artificial intelligence were high, and their security attitudes were at a medium level. By strengthening team cooperation, safety attitudes, stress levels and job satisfaction can increase. They can be informed through trainings and seminars on the areas of use of artificial intelligence.

ePoster Guided View

416 The Effect of An Instructional Video Regarding the Operating Room Administered to Patients Undergoing Total Knee Replacement Surgery on Post-Operative Pain and Anxiety

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Background: Total knee replacement (TKR) surgery, being a major surgical intervention, often leads to intense pain and anxiety in patients during the postoperative period. The reduction of experienced pain and anxiety can positively impact the postoperative recovery process.

Objectives: The aim of this study is to determine the impact of an instructional video about the operating room, administered to patients scheduled for TKR surgery during the preoperative period, on postoperative anxiety and pain. **Methods** This study was quasi-experimental design. The study was conducted in a training and research hospital in Türkiye between April 2022-October 2022. The research sample consisted of a total of 80 patients, with 40 in the intervention group and 40 in the control group. The intervention group underwent the administration of the State-Trait Anxiety Inventory (STAI-I) to assess anxiety levels one day before surgery. Patients in the intervention group were exposed to an instructional video related to the operating room. The instructional video was created by the researchers and was a 20-minute recording captured in the operating room environment. Conversely, the control group did not experience any interventions beyond routine preoperative care procedures. Pain levels were measured with Visual Analog Scale (VAS) for both intervention and control groups at 6th and 12th hours post-surgery, while pain and anxiety levels were assessed at 24th hours post-surgery.

Results: Between the intervention and control groups, no statistically significant difference was found in the mean VAS scores for all measurements ($p > 0.05$). However, although there was no statistically significant difference in STAI-I averages between the groups before the intervention ($F = 1.153, p = 0.028$), a significant difference was observed in the STAI-I averages between the group that watched the video and the control group ($F = 75.406, p < 0.001$).

Conclusion: The preoperative instructional video about the operating room undergoing TKR surgery didn't have an impact on patients' postoperative pain levels. However, it was found to reduce anxiety levels among the patients.

251 Allergy signaling in the operating room

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Introduction: Health professionals must record allergies in each episode of care (DGS Rule 002/2012), which is a "highly recommended" practice by the WHO. There is a high number of medical errors associated with the poor/non-existent record of allergies and the failure to signal them, implying potential and serious complications in the safety of users.

Problem: Users with allergies at CICA.

Objective: To ensure the safety of patients with allergies in the CHTMAD CICA, reducing perioperative complications, improving safety and quality of care.

Material and Methods: Using a quantitative, descriptive and cross-sectional study, data were collected on the number of users with reported allergies during the period from 01/01/2021 to 12/31/2022 and, subsequently, from 04/10/2023 to 30/06/2023, after the implementation of a signaling procedure in the service - placement of a purple bracelet, with the name of the allergen, to all users with allergies and registration (in their absence) on the SClínico platform.

Results: In the period prior to the implementation of allergy signs, 10630 users were intervened at CICA. 80.72% of users were unaware of having allergies, 0.86% had known and registered allergies, 18.06% had known/unregistered allergies, 0.36% had contradictory records.

After the implementation of allergy signs, 782 users were intervened at CICA. 78.51% were unaware of allergies, 12.53% had known and registered allergies, 8.82% had known unrecorded allergies and 0.25% had contradictory records.

Conclusion: The universe of users with allergies before and after the implementation of the signs is 19.27% and 21.61% respectively, demonstrating the reliability of the sample.

The percentage of users with known unregistered allergies decreased from 93.70% to 40.82%. The percentage of users with known allergies registered increased from 4.39% to 57.98%.

The procedure is low cost, recyclable, easy to implement and with a high benefit for the user's safety.

ePoster

1 Comparative Study of TIVA versus Balanced Anesthesia, after implementation of Enhanced Recovery Surgery (ERAS) Program in a Day Care Center

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Background: The evolution of anesthetic agents and the management of acute postoperative pain, in combination with patient's pain assessment and the development of perioperative care are the main reasons for providing safer anesthesia to day care centers. Meanwhile, the introduction of minimally invasive surgical techniques and the ERAS Programs result in the reduction of tissue damage and postoperative pain, as well as the patients discharge the same day of surgery.

Objectives: The aim of this study was to compare total intravenous anesthesia (TIVA) versus balanced one, after plastic reconstruction surgery, in a day care center.

Methods: It was a prospective randomized clinical study. Sixty patients, who underwent plastic reconstruction surgery, participated. In group A, (N=30), TIVA protocol was applied (midazolam-fentanyl-propofol) and, in group B (N=30), balanced anesthesia. Patients' demographic and anthropometric data, the presence or absence of nausea-vomiting, as well as the evaluation of pain levels and the patients' awakesness were recorded. Statistical analysis was performed with SPSS 22 (IBM SPSS Software) at a significant level 0.05.

Results: There were no significant differences according to gender and body mass index (BMI), but there was a significant difference in the age ($p=0.001$) between the 2 groups. Also, there were no significant differences in the pain levels and the awakesness. Likewise, in TIVA group, there was a negative correlation between age and propofol dosage ($\rho=-0.48$, $p=0.007$) and, a positive correlation between BMI and droperidol dosage ($\rho=0.41$, $p=0.022$). While, in no TIVA group, there was a negative correlation between midazolam and fentanyl dosage ($\rho=-0.37$, $p=0.039$).

Conclusion: It is showed that the implementation of TIVA in combination with ERAS program is safe and efficient for the patients, since there was no difference in pain levels and awakesness, between the 2 groups.

114 A comparison of two clothing systems in the level of fluorescent bioparticles - Air cleanliness in hip and knee replacements

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Background: Prosthetic joint infections is a patient safety risk. Bacteria-carrying airborne particles that end up in the surgical wound, on surgical instruments or implants are likely to be of great importance. Airborne particles come to a large extent from the healthcare personals. Traditionally, the number of colony-forming bacteria per unit of air (CFU/m³) has been used as a measure of air cleanliness. An alternative measure is the number of fluorescent bioparticles per unit of air (FBP/dm³), which can be measured in real time with a Bio Aerosol Monitoring System (BAMS).

Objectives: The aim of the study was to compare levels of fluorescent bioparticles between two dressing systems of different density in the context of prosthetic surgery.

Methods: The mean level of FBP/dm³ per surgery was first recorded in 37 consecutive primary hip and knee replacement surgeries where all personnel wore a reusable dressing system, Mertex (cotton-polyester). Subsequently, 37 matched (surgery type) consecutive patients were included where all staff wore a disposable system, Clean Air Suit (polypropylene). The surgeries were performed in two identical modern operating theatres with mixed ventilation (49 air changes/h) at Karolinska University Hospital, Huddinge during the period January - June 2022.

Results: Levels of biofluorescent particles were almost 6 times higher when the staff wore Mertex clothing (102 FBP/dm³, CI 92-114) compared to when Clean Air Suite clothing was used (18 FBP/dm³, CI 16-20), $p < 0,001$.

Conclusion: Clothing systems with higher density provide a reduced number of fluorescent bioparticles in the operating theatre air and therefore probably a lower risk of prosthetic-related infections. Real-time measurement of fluorescent bioparticles is likely to have great potential as a real-time monitoring system of operating room air quality as it gives than immediate detection of air impurities.

ePosters

133 Reflection on practice situation - ROPS

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Background: Students' reflection in clinical practice is often practiced in either an oral or written presentation based on a practice situation. Various models can be used as a frame of reference for reflection, for example the Pedagogical Reflection Model (PRM) (Færch & Bernild 2015) or Clinical Reflection Around Decision Making (KROB) (Grohe Thomsen 2019). Evaluations from both students and clinical supervisors show that the nursing student may find it challenging to understand the concept of reflection and furthermore the purpose of and the benefits from reflection, but also in practice how to reflect. Reflecting is a working method which, in clinical practice, must connect the student's theoretical knowledge and clinical skills in order to achieve the competencies of the nursing profession.

Result: Physical reflection tool has been prepared - ROPS; Reflection on Clinical Situations. ROPS has been prepared with inspiration from board games, where a board delimits a given clinical situation. There are also a number of pieces belonging to ROPS which represent the subject's areas of need, theories, concepts and methods. Based on the individual's health challenges and disease contexts, the board can be built based on the exact situation the student wants to reflect on using the associated pieces which can be put together in different ways. The tool allows for individual reflection as well as group-based reflection.

Conclusion: ROPS has been developed and implemented over a period of 2 years and is tested for 1½ year on selected students and semesters with subsequent evaluation and development of the tool. Evaluations from students show that the tool creates an overview and structure for the students and that the students are generally enthusiastic about the tool.

138 Effect of interventions to increase early ambulation women with gynecological surgery: A systematic review, meta-analysis and GRADE profiles

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Background: Various interventions have been tried to increase early ambulation and little is known about the content and method of interventions and their effectiveness on patient outcomes.

Objectives: This study was conducted to determine the interventions related to early ambulation after gynecological surgery in the literature, to determine the effects of interventions on patient mobility, hospital stay, and postoperative pain, and to determine the clinical evidence for the effectiveness of interventions to increase clinical decision-making in postoperative early ambulation.

Methods: The methodology of this study includes the systematic review, meta-analysis of randomized/non-randomized controlled trials, and the presentation of the evidence from these studies with a GRADE profile. Studies published between January 2002 and March 2023 were published using electronic databases PubMed, EBSCO, Web of Science, Cochrane and Turkey national databases scanned. Two independent researchers evaluated the quality of the studies using the Joanna Briggs Institute. Meta-analyses with random effects models were performed to evaluate the effectiveness of interventions using Comprehensive Meta-Analysis Software Version 4.

Results: Preoperative patient education, exercise protocol, ambulation goal setting, and activity tracker use interventions were identified among the 6 articles that met the inclusion criteria. While the most commonly used method was patient education and ambulation goal setting, it was determined that the most common method of application was the use of verbal and written training materials and reminders. According to the meta-analysis results, the low quality of evidence of the preoperative patient education on mobilization related to the patient's mobility ($g=0.227$, 95% CI: -0.03 0.5; $p=0.085$), postoperative pain ($g=0.150$, 95% CI: -0.2, 0.5; $p=0.4$) was found to have no effect and reduced the length of hospital stay ($g=-0.227$, 95% CI: -0.45, -0.003; $p=0.047$).

Conclusion: According to the results, postoperative mobilization programs given to patients undergoing gynecological surgery with different methods may increase postoperative patient mobilization.

141 Surgical Plume Management: An Imperative for Surgery Today

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Background: Surgical plume is produced when energy-generating devices are used during surgery to cut, coagulate, and vaporize tissue. The plume contains hazardous byproducts, including toxic and mutagenic chemicals, volatile organic compounds, viruses, and bacteria. The perioperative team and their patients may experience adverse effects from exposure to surgical plume when recommended practices and standards are not implemented. Product designers and engineers, healthcare leaders, policymakers, and multidisciplinary surgical team members can progress changes in practice by raising awareness, advocacy, and increasing professional education and training.

Objectives: The purpose of this presentation is to increase awareness and provide resources for developing healthcare policies and procedures that can guide perioperative teams toward a healthy workplace environment free of the hazards and risks of exposure to surgical plume.

Methods: We present a synthesis of the literature that has been used to inform international standards and best practices for surgical plume evacuation, the results of a United Kingdom survey on attitudes and practices around surgical plume and provide an eight-step sustainable and clinically relevant plan for surgical plume management.

Results: The surgical plume eight-step implementation plan can empower perioperative teams to work with healthcare leaders and professional organizations to mitigate the risks of exposure to the harmful health hazards associated with surgical plume.

Conclusion: Based on the findings presented, we conclude that evacuation devices for surgical plume are available but only sometimes used. Opportunities for education and training exist, and healthcare leaders must prioritize resources that support plume management programs. This presentation will serve as an avenue to contribute the perioperative voice to the development of plume evacuation and management standards and recommended practices with the goal of creating a healthy work environment for the entire surgical team and their patients.

153 Addressing Health Uncertainty in Post-anesthesia Nurses' Clinical Reasoning: key contributes of the Integrative Framework of Uncertainty Management taxonomy

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Background: Healthcare uncertainty is a pervasive and important problem that arises in a wide variety of circumstances, and affects both providers and recipients of healthcare. The strategies that nurses use to manage it have not been systematically described.

Objectives: The objectives of this study are: to describe uncertainty management strategies in clinical reasoning of nurses in recovery rooms, and to analyze those strategies in light of the Integrative Framework of Uncertainty Management taxonomy.

Methods: Qualitative descriptive study. Fourteen nurses from a recovery room of a central Portuguese hospital were selected by convenience sampling. Data were collected through semi-structured interviews and thematic analysis was performed using MAXQDA.

Results: Ignorance-focused strategies, uncertainty-focused strategies, response-focused strategies, and person-focused strategies were the themes radicated from the major theme 'uncertainty management strategies in the clinical reasoning of nurses in the recovery room'. The strategies centered on ignorance and uncertainty have a curative goal and the strategies centered on response and the person have a palliative goal.

Conclusion: Nurses employ a variety of uncertainty management strategies focused on different goals (cure or palliation), and their tolerance for uncertainty evolves with their abilities to cope with uncertainty. More research is needed to understand and improve the management of healthcare uncertainty by nurses.

ePosters

168 Use advanced dressing in cardiac surgery: cost- benefit analysis

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BACKGROUND: Cardiac surgery is a surgical specialty associated to a high risk of Surgical Site Infections (SSI) caused by very long surgical times, hemotransfusions, intraoperative hypothermia, and extracorporeal circulation. Coronary artery bypass graft (CABG) is considered the cardiac surgical procedure with the highest risk of SSI.

SSI cause social and psychological distress to the patient and costs for the NHS. The choice of an appropriate dressing applied to the surgical wound can help reducing SSI and the costs related to them.

Objectives: (March 2022-February 2023) Observational Study conducted in Cardiac Surgery of GOM Hospital in Reggio Calabria. The purpose was to identify a dressing that is effective in reducing the incidence of SSI, promoting healing processes, ensuring greater patient comfort, quality, and a good cost-benefit ratio.

Methods: Review of the literature from 2010 to 2018 (10 studies).

Enrolled 66 adult patients undergoing CABG with median sternal wound at high risk for SSI. The SSI risk scale was constructed on 7 variables with preoperative analysis (Age>70 years, BMI>27%, smoking, hypertension, diabetes, CKD, COPD) Three types of dressings were used and compared for surgical wound treatment: simple gauze, silver hydrofiber, and polyurethane foam at negative pressure.

Results:

- Effectiveness in preventing SSI: simple gauze 88.88%; silver hydrofiber 96.29%; polyurethane foam at NP 100%.
- Wound healing times (within 12 days post-operative): simple gauze 61.11%; hydrofiber 88.88%; NP 85.71%.
- Cost per unit piece: simple gauze 0.80€; hydrofiber 23€; NP 300€.
- Infected wound resolution costs: simple gauze 14.196€; hydrofiber 2.632€; NP 0€.

CONCLUSIONS: Simple gauze dressing is the cheapest but least effective to prevent SSI. Polyurethane foam at NP dressing is the most effective but also the most expensive. Instead, silver hydrofiber dressing is very effective and inexpensive. The authors conclude that silver hydrofiber dressing is the most convenient and effective.

191 Surgical Smoke in Türkiye: A Review of Nursing Theses

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Background: Surgical smoke is an important issue that negatively affects the operating room team.

Objective: The aim of this study is to determine the postgraduate theses related to surgical smoke in the field of nursing in Türkiye.

Methods: The study data were accessed on 5.7.2023 from the National Thesis Center Database of the Higher Education Council of Türkiye. Criteria for the inclusion of theses in the study were that it was made in the field of nursing, that the full text was reached, and that the research word included the phrase "surgical smoke". 8 theses were included in the study. "Thesis Evaluation Form" was used to collect the data. The data were evaluated with descriptive statistical methods.

Results: It was determined that the theses on the subject were made between 2017-2023, most of them were master's theses (n=6), all of the master's theses were descriptive, and the doctoral theses were experimental (n=1) and case-control (n=1) types. In the thesis, the sample group mainly consisted of health workers in the operating room. In the theses, health problems after surgical smoke exposure (n=4), attitudes and opinions towards surgical smoke (n=4), methods used to remove surgical smoke (n=3), use of protective equipment (n=3), and medical gas evacuation systems (n=2) were discussed.

Conclusion: It was determined that the theses were carried out in the last seven years, that there was no thesis data in the field of nursing in Türkiye before, and that the research design was generally of a descriptive type. In line with these results, it is recommended to conduct randomized controlled intervention studies with a high level of evidence in graduate theses.

196 Safe Surgery Checklist Türkiye: A Review of Theses

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Background: The complete implementation of the Safe Surgery Checklist (SSC) is an important element in ensuring patient safety.

Objectives: The aim of this study is to determine the postgraduate theses related to SSC in Türkiye.

Methods: The study data were accessed on 8.7.2023 from the Council of Higher Education Thesis Center Database in Türkiye. Inclusion criteria of theses; full-text access and search terms include “safe surgery checklist” or “safe surgery”. 7 theses were included in the study. “Thesis Evaluation Form” was used to collect the data. The data were evaluated with descriptive statistical methods.

Results: It was determined that theses (n=7) were carried out between 2012-2022 and all types of theses were master's thesis. Inclusion criteria of theses; full-text access and search terms include “safe surgery checklist” or “safe surgery”. The number of samples in the theses was between 41-469. The study design of the theses was descriptive (n=6) or qualitative (n=1). The majority of the sample group consisted of health professionals (surgeon, nurse, anesthesiologist, anesthesia technician, surgery technician) in the operating room. In the theses, the opinions of the team on the safe surgical checklist, the status of the application of the list, and its effect on preventing the development of complications were discussed.

Conclusion: It has been determined that a limited number of thesis studies have been conducted on the subject of SSC in Türkiye, and most of them were descriptive studies. In the theses, it is recommended that qualitative research methods conducted to reveal the experiences related to the subject and randomized controlled intervention studies with high level of evidence.

203 Hands Deserve Better. Systematic Review of Surgical Gloving Practice.

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Background: Glove damage during surgery is defined as breaches to the aseptic barrier secondary to tears/rips, shear force, sharps puncture, needle-sticks and micro-perforations. Research studies have demonstrated that glove damage during surgery occurs at frequent time points, across multiple specialties and impacts all operating room personnel equally. The rationale for this study: to determine the best available evidence describing four key fundamental principles of surgical gloving practice: appropriate glove fit, double gloving, indicator systems, glove change frequency during surgery.

Objectives: Inform existing and future operating room personnel on the importance of appropriate gloving practice to optimize health care provider performance and ensure patient safety.

Methods: A 4-arm systematic review of available literature was conducted during 2022 - 2023. A multi professional team of researchers including nurses and surgeons from different specialties as well as infection preventionists, collaborated to review the available literature using the following inclusion criteria: surgeries performed in an operating theatre, adult, pediatric and neonatal surgical populations. Each key fundamental principle formed the basis for research groups, evidence tables were cross referenced, abstract reviews and full text reviews for the included papers. All scored for strength of evidence and risk of bias using the John's Hopkins, ROBIS 1.2 Systematic Review, ROB-2RCT and Newcastle-Ottawa non RCT assessment tools.

Results: Recommendations for clinical practice change will be reported for those statements which reach 80% consensus by Delphi process and strength of the recommendation and evidence rationale reported. When consensus not reached or where research evidence not available, the group will render expert opinion recommendation based on good practice standards suggesting opportunities for future research.

Conclusion: This study will be published in late 2023. Study results will be significant for all operating room personnel, suppliers of surgical gloves and inform future research.

ePosters

204 THE EFFECT OF PREOPERATIVE COLD APPLICATION ON POSTOPERATIVE PAIN, BLEEDING, AND FUNCTIONAL STATUS IN TOTAL KNEE REPLACEMENT SURGERY

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Background: It has been determined that there is a gap in the literature on how starting cold application in the preoperative period affects pain, edema, and functional status in the postoperative period.

Objectives: This study was performed as a prospective, experimental, and randomized controlled design in order to determine the effect of local cold application started in the preoperative period for patients who will undergo unilateral total knee prosthesis on the patient's pain, bleeding, and functional status in the postoperative period.

Methods: The study was conducted with 60 patients who were randomized into experimental (n=30) and control (n=30) groups. In the experimental group, the knee of the patients to be treated with surgery was applied cold with a gel ice pack 2 times 20 minutes at 30-minute intervals in the morning of surgery. The patients in the control group were not treated with any cold in the preoperative period. In the early postoperative period (3 days), the pain, bleeding, edema, and functional status of the patients were monitored.

Results: While there was a statistically significant difference between the groups of patients in terms of pain, amount of drainage, amount of edema on the first day, and physical function ($p < 0.05$), there was no significant difference in terms of HGB and HTC values, amount of edema on the second and third days ($p > 0.05$).

Conclusion: It was seen that cold application was effective in pain management in the preoperative period, in reducing the amount of bleeding from the amount of drain in the early period, in reducing the edema in the knee area, and in improving the functional status. In the preoperative period, cold application is recommended to be applied in patients who do not have any contraindications to cold.

229 Postoperative skin disinfection with chlorhexidine: Evaluating bacterial growth after shoulder arthroplasty surgery

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Background: Surgical site infections (SSIs) pose a significant risk to patient well-being, resulting in increased morbidity, mortality, and financial burden on society. Effective infection prevention measures during surgical procedures are of utmost importance. The primary source of causative microorganisms for SSIs is the patient's own skin flora. Therefore, proper skin preparation before surgery is crucial in reducing bacterial colonization at the surgical site. Chlorhexidine in ethanol is commonly used for skin disinfection and has a sustained effect in inhibiting bacterial growth. The human skin takes 48 hours to naturally develop its own defense mechanisms against bacterial colonization, raising the question of whether postoperative disinfection with chlorhexidine can impact bacterial colonization during the initial 48 hours following surgery.

Objectives: The main objective of this study was to evaluate postoperative bacterial growth on the skin 48 hours after shoulder arthroplasty surgery, using a 5 mg/ml chlorhexidine in ethanol solution prior to dressing application.

Methods: A single-blind, controlled, block-randomized intervention study was conducted at a county hospital in southeast Sweden from 2019 to 2023. A total of 60 patients were included in the study.

Results: At the time of submission, no analyses have been conducted; however, they will be completed in time for the conference in May 2024.

Conclusion: Refer to the above information.

233 Continuing education for right medication administration in the nursing staff of a health service providing institution in the city of Ibagué

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Background: According to the World Health Organization, patient safety aims to “prevent and reduce the risks, errors and damage suffered by patients during the provision of health care”. In Colombia, the National Patient Safety Policy and guidelines of the Ministry of Health were developed, whose objective is to prevent the occurrence of situations that affect patient safety, reduce and, if possible, eliminate the occurrence of adverse events in order to have safe and secure institutions. internationally competitive.

Objectives: To implement and evaluate a continuing education plan on safe medication administration in the operating room service for health workers of a health service provider institution in the city of Ibagué-Colombia

Methods: quantitative, descriptive, cross-sectional approach. Two phases were established, in phase I the diagnosis was made through a Beliefs, Attitudes and Practices (CAP) type survey and in phase II the educational sessions were designed and developed in three modules. The results are not complete since the education plan has not been fully executed. The development of the proposal had the endorsement of the directives of the institution

Results: the total nursing staff (nurses and assistants) was 19 people. In the first module, 2 measurements were carried out in the first, 78.9% approved and in the second, 68.4%. In module 2, only one measurement has been carried out in which 89.4% approved.

Conclusion: The continuing education of health personnel continues to be essential to reduce errors and improve the quality of care, there must be an individual commitment in the preparation and updating of knowledge in the safe administration of medications. We hope to present all the results at the event

245 Lighting the way: An advocate's journey for improving safety for current and future perioperative nurses

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Background: Since the beginning of healthcare, nurses have sacrificed themselves to ensure patient safety. ORs are identified as being particularly high-hazard environments, with occupational injuries and illnesses being left underreported and overlooked.

There has been significant work completed recently to reverse this paradoxical safety culture. In 2020, the World Health Organisation announced that “No country, hospital or clinic can keep its patients safe unless it keeps its health workers safe”. Nursing associations such as EORNA have shone light on key safety concerns within perioperative practices, including surgical plume and sharps injuries.

In Europe, one million sharps injuries are estimated to occur annually. While there have been improvements in reducing needlestick injuries in non-surgical settings, injuries from suture needles and scalpels in surgical settings remain commonplace. Even one preventable sharps injury is too many.

Objectives: This case study outlines actions taken by safety advocates in Australia to improve sharps safety in ORs. This advocacy journey will be examined at four key stages of advocacy: the individual, organisational, national, and international levels.

The advocate's goals in this case study was to help empower individual nurses to apply safer sharps practices, ensure that facilities implemented the Hierarchy of Controls and safety-engineered devices, update national guidelines and standards to align with current evidence-based recommendations, and collaborate with advocates globally for an international approach.

Conclusion: Healthcare professionals have a long history of advocating for patient safety, but it is imperative that we also stand up for our own safety. In Australia, sharps safety advocates have made significant progress for sharps safety, with recent updates to the Australian Infection Control Guidelines and a revised Australian Standard for safe removal and containment of scalpel blades. Perioperative nurses and leaders can replicate these advocacy strategies to contribute to a systematic culture of safety for current and future nurses.

ePosters

249 Integrating Simulation and Video-Based Training for Enhanced Competence in Acute Thoracic and Vascular Surgical Scenarios: A Comprehensive Approach

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This study presents an innovative integration of simulation and video-based training to optimize acute scenarios within the thoracic and vascular surgical operating room. By focusing on the development of technical skills, improved communication, enhanced situational awareness and fostering interdisciplinary collaboration and coordination, the project aims to prepare healthcare professionals to handle acute situations effectively. Ethical considerations, including obtaining informed consent, are prioritized to ensure participant understanding of the purpose, procedures, and potential risks and benefits.

To facilitate the training process, a dedicated simulated operating room and a comprehensive training program is devised. Realistic simulation exercises designed to closely replicate actual scenarios, providing participants with hands-on experience in dealing with various challenges. Debriefing sessions and video analysis are employed to facilitate reflective learning, enabling participants to identify areas for improvement.

The implementation of the project is to encounter limitations and challenges, particularly in terms of time and resource constraints. Therefore, adequate funding and collaboration with stakeholders are crucial elements for successful execution. The integration of simulation and video-based training offers significant advantages, including the provision of a realistic learning environment, improved technical skills, and enhanced teamwork and decision-making abilities.

In conclusion, this study highlights the potential of simulation and video-based training integration to optimize acute scenarios within the thoracic and vascular surgical operating room. Ethical considerations, limitations, and challenges associated with the project have been addressed, with a strong emphasis on obtaining informed consent and allocating resources appropriately. The comprehensive and integrated approach presented has the potential to enhance the competence of healthcare professionals, foster effective teamwork and improve decision-making skills, thereby contributing to safer surgical procedures. To achieve success, it is imperative to secure adequate resource allocation and foster collaboration among relevant stakeholders.

265 THE EFFECT OF MUSIC INTERVENTION ON PAIN LEVEL AND ANALGESIC CONSUMPTION AFTER SURGERY USING A MOBILE APPLICATION: RANDOMIZED CONTROLLED TRIAL

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Background: Orthopedic surgical interventions are implementations that cause patients to experience pain the most. Music intervention is a universal approach that distracts patients' attention from negative experiences such as pain. **Objetives:** This study aimed to determine the effect of tonalities applied at different times of the day on the pain levels and analgesic consumption of the patients with the mobile / android application after the surgery.

Methods: Randomized controlled single-blind experimental study. The study was conducted with 60 patients who had undergone orthopedic surgery in the orthopedic service of a university hospital between May 2021 and April 2022. Different tonalities were used that affect the moods of the people in the morning (T1), noon (T2), and evening (T3). The data of the research were collected using the "Music Mobile / Android Application" developed by the software developer and which included tabs for patient information form, pain, analgesic consumption amount, and music intervention.

Results: It was determined that the pain levels of the music group decreased at all times. It was found that the use of analgesic in the postoperative 24 hours was significantly less in the experimental group.

Conclusions: The music intervention (different hours of the day) applied to patients undergoing orthopedic surgery on the 1st postoperative day in the morning, noon, and evening hours reduced the severity of pain and the amount of analgesic consumption.

266 The Effect of Visits by Operating Room Nurses Before Cardiac Surgery on Anxiety and Pain Management

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Background: It is recommended that preoperative visits be made to ascertain the physiological, social, and psychological status of patients, and that care be maintained in the operating room. The preoperative patient visits by operating room nurses contribute to the improvement of postoperative patient outcomes and support the development of the Enhanced Recovery for Cardiac Surgery (ERCS) protocol in cardiac surgery.

Objectives: The study investigates the effects of preoperative visits by operating room nurses to patients scheduled for cardiac surgery on postoperative anxiety, pain severity and frequency, and the type and dose of analgesic medication.

Methods: The study is a quasi-experimental with a pretest-posttest control group design involving nonrandomized groups. It was conducted in a hospital between 20.08.2020-15.04.2021 in Istanbul. Included in the study were patients selected based on a nonprobability sampling approach who met the study inclusion criteria. The treatment group was visited preoperatively by operating room nurses, and followed-up for the first 72 hours after surgery.

Results: The intervention was effective in reducing postoperative state anxiety levels. In the control group, each one-point increase in the preoperative state-anxiety level caused a 9% increase in the length of stay in the intensive care unit. Pain severity increased as the preoperative state-anxiety and trait anxiety levels, and the postoperative state-anxiety levels, increased. While there was no significant difference in pain severity, the intervention proved to be effective in reducing pain frequency. It was further noted that the intervention reduced the use of opioid and nonopioid analgesics for the first 12 hours. The probability of using opioid analgesics increased 1.56 times with each one point increase in pain severity reported by the patients.

Conclusion: The participation of operating room nurses in preoperative patient care can contribute to the management of anxiety and pain and the reduction of opioids.

270 Determination of Pressure Injury Risk Factors in COVID-19 Intensive Care Unit Patients

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BACKGROUND: The prevalence of pressure injuries (PI) in COVID-19 patients has been extensively studied, and many risk factors play a role in pressure injuries.

OBJECTIVE: To determine the risk factors for pressure injury (PI) in intensive care unit (ICU) patients with COVID-19.

METHODS: This study was carried out as a retrospective by examining the observation forms of 270 COVID-19 patients who were hospitalized in the ICU between April 2020 and July 2022 and met the sampling criteria. Patients aged 18 and over, who did not have acquired pressure injury on admission, who were patients Braden Score not between 6-12 points on ICU admission, and who were hospitalized in the intensive care unit for at least 24 hours were included in the study.

RESULTS: PI developed in 25.2% of the patients and it was determined 79.4% of the patients who developed PI were Stage I: redness and 36.8% was in the sacrum. A significant difference was found between age, length of hospital stay, GCS and Braden score, albumin-hemoglobin levels, oxygen and medications used in patients PI and non-PI ($p < .05$). The factors independently associated with PI in the scale for the evaluation of the risk of PI (Braden) (1.398 [1.122-1.742]), hemoglobin (0.067 [0.007-0.643]), high-dose steroids (0.026 [0.002-0.317]) and oxygen (0.108 [0.012-0.964]).

CONCLUSIONS: It was found that stage I developed in patients and the most PIs were in the sacrum. The risk of PI was associated with the Braden score, hemoglobin, high-dose steroids, and oxygen. Nurses should evaluate the risk of developing PI in the ICU. They should minimize the conditions that will threaten the safety of patients at risk.

ePosters

275 EFFECT OF TENS APPLICATION AFTER THORACIC SURGERY ON PAIN LEVEL AND ANALGESIC CONSUMPTION DURING CHEST TUBE EXTRACTION

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Background: After thoracic surgery, a chest tube is inserted to evacuate the air and fluid formed in the pleural space and to provide hemodynamic stability. The chest tube adheres to the tissue it comes into contact with and may experience mild, moderate and severe pain due to the separation of the adhesion due to pulling during removal.

Objectives: In this study, it was aimed to determine the effect of Transcutaneous Electrical Nerve Stimulation(TENS) application after thoracic surgery on the pain level and analgesic consumption during chest tube removal.

Methods: The research was carried out as a randomized controlled study. The study is currently in the data collection phase, and a total of 32 patients have been reached so far. A total of 60 patients will be reached in the study. TENS was applied to the experimental group 45 minutes before and 15 minutes after the chest tube was removed. The patients' pain scores were evaluated using the Numerical Pain Scale(NPS) 45 minutes before, when the chest tube was removed, and 15 minutes after the TENS application was finished. After the procedure, the amount of analgesic consumption by the experimental group in the first hour was recorded. Before starting the research, necessary ethics committee and institutional permission were obtained.

Results: The pain of TENS and control groups before, during and after the procedure was evaluated, and it was seen that the mean pain scores were lower in the TENS group ($p=0.000$) than in the control group ($p=0.004$). Considering the post-procedure analgesic drug use of the patients in the TENS and control groups; Paracetamol ($p=0.032$) and tramadol ($p=0.028$) analgesic use were found to be statistically significantly different ($p<0.05$).

Conclusion: As a result, it was determined that TENS application reduced the patient's pain score during chest tube removal and analgesic use after the procedure.

277 Evaluation of Nursing Students' Perspective on Aesthetic Surgery

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BACKGROUND: Individual factors such as age, gender, cultural differences, desire to look beautiful and to be liked to affect the attitude towards aesthetic surgery. Moreover, social factors such as social acceptance of aesthetic surgery procedures and media news about changing the physical appearance also affect attitudes towards aesthetic surgery. **OBJECTIVE:** This study evaluated nursing students' personal, social, and intellectual perspectives on aesthetic (cosmetic) surgery.

METHODS: This descriptive study was conducted with 1st and 4th-year students studying at the nursing of a state university. A total of 435 students who met the research criteria were included in the study. The data of the study were collected using the Student Introductory Information Form (SIIF) and the Acceptance of Cosmetic Surgery Scale (ACSS). Descriptive statistical analyses were used in the study, and ethical committee and institutional permissions were obtained.

RESULTS: The average age of the students participating in the study was 21.66 ± 3.46 . The ACCS personal sub-dimension mean score (23.48 ± 7.01) was found to be higher than the social (12.52 ± 7.55) and intellectual (17.56 ± 8.53) sub-dimension mean scores. In addition, it was determined that the attitude towards plastic surgery was more positive (median=54.00) among 4th-year students.

CONCLUSIONS: This study determined that students accepted aesthetic surgery at a moderate level, male students had higher social motivation related to aesthetic surgery, students were affected by the media news in accepting aesthetic surgery, and those 4th-year students had a more positive attitude towards aesthetic surgery. In summary, it can be said that the fact that the students in our sample are both young and health workers affect their attitudes towards plastic surgery positively.

283 Evaluating the Effectiveness of a Multimodal Educational Approach on OR Nurses' Documentation Compliance and Accuracy using the AORN Surgical Wound Classification Algorithm

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Background: The Association of PeriOperative Registered Nurses (AORN) Surgical Wound Classification Decision Tree (SWCDT) was used as the evidence-based tool for standardizing OR nurses' accurate assessment and documentation of SWC. A multimodal approach was used to educate nurses on the appropriate use of the SWCDT. The project was an evidence-based practice teaching initiative plan that used pre- and post-education intervention strategies. A surgical clinical nurse educator (CNE) reviewed the Surgical wound classification documentation (SWCD) and compared it with surgeon operative notes found inaccuracies. SWC is a crucial factor in the early identification of surgical site infection and reimbursement.

Objectives: Review what is the impact of a SWC multimodal educational intervention on the accuracy and compliance with SWCD.

Demonstrate competency in operating room nurses' skills to enhance clinical outcomes.

Methods: The intervention timeframe was April to July 2022. The learning methods consisted of a 1:1 session, a PowerPoint presentation, gaming (using Kahoot!), and lectures demonstrating appropriate assessment and correct documentation. To assess education effectiveness, nurses were invited to attend workshops with pre-and post-test and gaming (Kahoot!). Assessment of nursing documentation accuracy involved a review of charts by a CNE. SWCD in surgical operative notes was used as a point of comparison. If the same nurse had more than three inaccuracies in a week, the CNE provided 1:1 remediation.

Results: Post-intervention average inaccuracy rate (August to September 2022) was 3.14%. This represents 31.77% decreased in SWCD inaccuracies.

Conclusions/Discussion: The results of this project support using an evidence-based multimodal educational approach with just-in-time follow-ups as an effective method for nurses to learn the SWCD algorithm with subsequent improvements in the accuracy of nursing SWCD.

The multimodal pedagogical strategies effectively cement knowledge and promote compliance with SWCD. Therefore, we recommend and encourage the adoption and use of various methods when designing and implementing education.

288 Investigation of the Relationship Between Perception of Discrimination and Attitudes Towards Refugee Children of Pediatric Surgery Nurses

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Background: It has become more important to understand the attitudes and perceptions of discrimination towards refugees in health care services.

Objectives: To examine the relationship between the perception of discrimination of pediatric surgical nurses and their attitudes towards refugee children.

Methods: The population of this descriptive and cross-sectional study consisted of 680 pediatric surgical nurses. The sample of the study consisted of 206 pediatric surgical nurses. The data were collected between March-July 2023 with the "Socio-demographic and Occupational Characteristics Form", "Nurses' Perception of Discrimination Scale", and "Attitudes Towards Refugee Children Scale". Independent groups t test, One Way ANOVA and correlation analysis were used in the analysis of the data.

Results: It was found that 78.2% of pediatric surgery nurses were women; 55.3% are married; 35.9% had children; 48.5% of the nurses worked in the neonatal intensive care unit; 53.4% were not satisfied with the patient profile; 34% of the nurses stated that they had too many problems in communicating with refugee children; 43.7% of them stated that the difficulties with refugee children due to cultural differences are high; 55.3% of them stated that the difficulties they experienced in the care and treatment practices for refugee children are high; 55.8% reported that refugee children had too many difficulties in meeting their needs. It was determined that nurses' perception of discrimination was moderate (91.54±33.10; Min-Max:

ePosters

30-150) and their attitudes towards refugee children were high (94.44±14.21; Min-Max: 22-110). There was no statistically significant relationship between nurses' perception of discrimination and their attitudes towards refugee children ($r_p = 0.122$ $p > 0.005$).

Conclusion: There is no relationship between the perception of discrimination and the attitude towards refugee children. Nurses' attitude to refugee children is not affected by the perception of discrimination. Nurses show the best attitude towards their patients without discrimination

300 Management of Operating Rooms during Covid-19 Pandemic Period: The Case of Turkey

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The infection, which started in December 2019 in Wuhan, has been identified as COVID-19. On January 30, 2020, the World Health Organization (WHO) declared that the COVID-19 outbreak constituted a public health emergency of international concern and on March 21, 2020, it was reported that there were more than 283,000 cases and more than 11,561 people had died.

Since a suspected/confirmed COVID-19 case requires a lot of time for surgical preparation, daily routines should be established so that surgery can be performed even if surgery does not take place.

As a private healthcare institution serving with sixteen hospitals in Turkey, an action plan has been created and put into practice in line with the guidelines and recommendations of WHO and the Ministry of Health for the management of our operating rooms. This plan includes: organization of operating rooms, preoperative patient assessment, patient transfer process, preparation for surgery, employee safety and training, cleaning of operating rooms and waste management.

In the first year of the pandemic, 32 of 121 operating rooms in all our hospitals were put under negative pressure for covid patients and a total of 113113 surgeries were performed during the period, and 275 hours of training per person per year was provided to operating room nurses. In 2021, 32 of 133 operating rooms were put under negative pressure and used in this way until 2023. In 2022; 112960 surgeries, 251.3 training hours per person. In 2022, the number of operating rooms was 134, the number of operations was 126692, and training per person was 236 hours.

In this article, it's aimed to share our experiences in the management of operating rooms during the pandemic, the measures to be taken in the operating room process and to contribute to the management of operating rooms in possible pandemic situations.

303 The Effect of Operating Room Device Training Webinar Programs on Safe Use of Devices: The Case of Private Health Group Hospitals

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Background: Operating room devices are an essential part of the modern system and play an important role in the safe and effective performance of surgery. Improper use of devices or inadequate precautions can put patients' conditions at risk and negatively affect surgical outcomes. Nurses are expected to be competent in every field as a result of increasing awareness in the health system and increasing expectations of the society. The professional competencies of nurses working in 16 hospitals of a private health group are carried out within a program and device use competencies are developed. The transfer and use of special devices between hospitals has led to the need for device training webinar programs.

Objectives: This study was conducted to determine the effect of device training webinars on nurse device use competencies and the occurrence of equipment-related problems during surgery.

Methods: The study was descriptive. The sample consisted of 412 nurses. The data were collected with Pre-Post Test Exam, Device competency table, quality indicator monitoring form and Webinar Program Evaluation Form and evaluated using number and percentage calculations.

Results: Of the 412 nurses, 60% had a Bachelor's degree and 4% had a Master's degree. 30% have 5 years and more experience. In pre-test exams, 6% scored 81-90 and 2% scored 91-100 points. In post-test exams, 33% scored 81-90 and 66% scored 91-100 points. Participants' answer to the question "Would you recommend online nursing education to a friend? A score of 4.53 was found. Participants' post-test evaluations on the "Device Competency Table" were 84.2% successful. "The number of equipment-related problems during surgery" decreased by 31.3%.

Conclusion: The findings of the study showed that device training webinars increased the device competencies of nurses, reduced the incidence of equipment-related problems during surgery, and contributed to patient safety.

304 Injury Situations of Operating Room Nurses with Sharps Injuries Turkey Example: 4 Different Geographical Regions and 16 Hospitals

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Background: It is estimated that 12 billion injections are administered to patients worldwide each year and that approximately 800,000 to one million sharps injuries occur annually in the United States. According to the U.S. Occupational Safety and Health Administration, one in seven health care workers sustain an accidental sharps injury during the year. It is known that operating rooms, emergency departments and surgical clinics are the departments with the highest number of injuries and nurses are at risk.

Objectives: The aim of this study was to investigate the incidence of sharps injuries among operating room nurses working in a private health care group.

Methods: Retrospective and descriptive study was conducted. Nurses working in the operating rooms between January 2020 and December 2022 constituted the population, and operating room nurses who were injured with sharps constituted the sample. The data in the Safety Reporting System were analyzed by taking numbers, percentages and percentages in Microsoft Excel program.

Results: A total of 106 injuries occurred between 2020 and 2022. According to the number of nurses working in the operating rooms in the year of injury, the injury rates were 9% in 2020, 12% in 2021, and 7% in 2022. Of the 106 injuries, 26% were caused by someone else, 35% were self-injured, 39% were injured on the swimsuit table. 39% had 0-6 months of experience. In the three-year average, it was determined that the most injuries were 32% scalpel, 29% suture needle, 22% injector needle. A total of 338590 surgeries were performed in 2020-2022.

Conclusion: In the study, it was determined that nurses with 0-6 months of experience were injured more. These injuries may threaten the health of nurses and negatively affect their work efficiency. It is recommended to provide a safe surgical environment against injuries and to prepare special training programs.

305 Monitoring the use of the WHO surgical safety checklist at Vaasa Central Hospital

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Background: World Health Organization (WHO) published Surgical Safety Checklist in 2008. The checklist was developed to decrease errors and adverse events, and to increase teamwork and communication in surgical settings (1). We added more items to our checklist. Modified checklist has been in use from the year 2010. We noticed that in practice the usage of checklist varied depending of the team members.

Objectives: We wanted to find out if all the items were checked correctly by using the checklist.

Methods: Patient safety coordinator observed the usage of the checklist in eight operations in May-July 2019. The observation turned out to be time-consuming and the observations were similar, that is why we settled for such a small sample.

Results: From the 36-item list, eleven items were not checked in any of the observed cases. For example, the risk for difficult airway or aspiration and risk for blood loss were not checked before induction of anesthesia. In addition, patient

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specific concerns and essential imaging were not checked before skin incision. Furthermore possible equipment problems were not checked before patient left the operating room.

Before induction, patient's identity was checked from the wristband in every case. Before skin incision patient's identity, procedure and site were checked in all cases. Before patient left the operating room, follow-up care instructions were checked in all cases.

Conclusion: Monitoring the use of surgical safety checklist pointed out that multiple significant items were checked with the team. Nevertheless, several items from the original WHO checklist items were not checked. Our additions to the checklist prolonged the protocol. Observation results were presented to the staff. New reduced checklist was done, but due to covid-19-pandemic, testing of the new list was postponed up to fall 2023.

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306 Patient Experiences in Robotic Surgery: A Web of Science Database Review

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Background: Robotic-assisted laparoscopic surgery represents a rapidly evolving surgical approach that has witnessed a significant surge in popularity over recent years.

Objectives: This study sought to analyze patient experiences in robotic surgery by investigating relevant literature within the Web of Science database.

Methods: A meticulous and advanced search was conducted in the Web of Science (WoS) database, utilizing keywords such as "robotic," "surgery," and "patient experience." The collected articles were analyzed using R studio and bibliometric methods.

Results: The analysis encompassed 4,966 articles published between 2005 and 2023. Notably, 11 articles were published between 2005 and 2014, whereas 36 articles emerged between 2015 and 2023. Remarkably, each article garnered an average of 35.34 citations, and a total of 360 authors contributed to the 47 published articles, reflecting an average of 7.7 co-authors per article. A comprehensive examination of the articles revealed the utilization of 137 different keywords. Notably, researchers predominantly emphasized keywords such as "quality of life," "robotic surgery," "prostatectomy," "prostate cancer," "urinary incontinence," "laparoscopic," and "patient satisfaction." Additionally, 25.53% of the articles were published in prestigious journals, including "Journal of Urology," "Journal of Robotic Surgery," and "Surgical Endoscopy and Other Interventional Techniques."

In the scrutinized studies, patients expressed satisfaction with the care they received during robotic-assisted surgery, and many of them recommended this approach due to its positive impact on postoperative quality of life and daily activities. Furthermore, patients experienced reduced hospital stays and faster recovery times. Notably, physicians' development was influenced by patient-reported outcomes, and patients encountered fewer problems related to urinary incontinence and sexual functioning.

Conclusion: The literature review highlighted a limited number of studies examining patient experiences in robotic surgery. To enhance our understanding and enhance patient experiences during robotic surgery, further research focused on patient-centered care approaches is warranted.

312 Determining the Effect of Surgical Smoke Exposure on the Anxiety, Depression and Stress Levels of Operating Room Nurses in Different Countries

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Background: Surgical smoke is one of the chemical dangers that affects the safe working environment in operating rooms when diathermy technologies, such as electrocauterization tools, lasers, and ultrasonic scalpels, are used during surgery.

Objectives: The aim of this study is to determine the effect of surgical smoke exposure on the anxiety, depression and stress levels of operating room nurses in different countries.

Methods: The study descriptive design. It will be collected from nurses who are members of the operating room nurses association in Turkey, Israel, Croatia and Italy by using google form. Data will be collected using the Personal Information Form, Survey of Surgical Smoke Prevention Practices and Measures in Operating Rooms, Depression, Anxiety and Stress Scale (DASS 21). The data collection process continues.

Results: As the data collection process continues, there are no results yet. For this reason results will be communicated later

Conclusion: As the data collection process continues, there are no conclusion yet. For this reason conclusion will be communicated later

314 Cesarean Drape

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Background: Currently, the known cesarean drapes completely cover the patient, leading to an increase in the patient's body temperature. Moreover, during the removal of the baby, there is a possibility of overflow of accumulated fluids in the part that surrounds the surgical area, which may cause the operating room staff to come into contact with the fluids.

Objectives: In this context, aiming to address and resolve all these issues due to reasons such as an increased risk of surgical site infection and the development of secondary complications, the aim is to develop a cesarean drape.

Methods: The designed cesarean drape; surrounds only the abdominal area where the surgical procedure will take place. It also features leak-proof lateral fluid collection reservoirs, a leak-proof and aspiratable main fluid collection reservoir, and an aspirator connection point to aspirate the accumulated fluid in the main fluid collection reservoir. The lateral and main fluid collection reservoirs, responsible for collecting and draining the fluid, are intended to be made of transparent nylon material. The conical design of the main fluid collection reservoir ensures that the collected fluid flows smoothly from the lateral fluid collection reservoirs towards the main fluid collection reservoir and ultimately towards the aspirator connection point.

Results: Thanks to the simultaneous drainage of the accumulated fluid in the discussed cesarean drape, the prevention of fluid build-up will reduce the risk of exposure for the operating room personnel, ensuring a safer surgical environment. The invention has been applied for a TURK PATENT (Application no: 2022/016234).

Conclusion: In conclusion, it can help maintain the cleanliness of the surgical area throughout the cesarean, preventing contamination and surgical site infections. Additionally, it can ensure the thermal comfort of the patient during the surgical procedure. Furthermore, with its features that do not restrict surgical interventions and allow the detection of any opening or bleeding that may occur during cesarean surgery, the design is considered innovative.

ePosters

315 Competencies and professional performance of the surgical nurse in Spain

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Background: In Spain, surgical nurses are those who carry out their activity in the surgical area, regardless of their training or job access criteria.

The standards and recommendations of the Ministry of Health identify them as those in charge of providing surgical care as circulators, instrumentalists and URPA nurses. Likewise, the need for them to have training for the care of surgical patients is collected. This situation in Spain does not correspond to the European context, where specific training is defined and required to perform the functions of the surgical nurse.

Objectives: Analyze the profile of the surgical nurse in Spain, describing and identifying her competencies in daily practice.

Methods: Research project for a cross-sectional observational study of surgical nurses who carry out their daily practice in Spanish operating rooms. Data collection will be carried out using a questionnaire prepared in 3 phases: translation, validation by a group of experts and evaluation of psychometric properties (calculation of the Content Validity Index (CVI) at the item level (I-VC) and scale (S) -VC) and the Content Validity Coefficient (CVR). The study variables are based on the perioperative nursing study plan prepared by EORNA. It will be carried out respecting ethical regulations and prior informed consent. The calculation size The sample has been calculated using the GRANMO calculator. The data analysis will consist of calculating absolute/relative frequencies and confidence interval.

Results: This project is based on the results obtained in a pilot study carried out in an autonomous community of Spain. No significant relationships were identified between nursing competencies and the experience/specific training variables.

Conclusion: This study aims to be a tool to know the competencies of surgical nurses in Spain and to work specifically on those in which weaknesses are identified.

316 Surgeries after Falls in Elderly Individual:A Retrospective Study

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Background: Falls are one of the leading causes of injuries, hospitalizations, and even fatalities among older adults.

Objectives: This study aimed to investigate the causes of falls and fall-related surgical conditions in individuals aged 65 years and older, seeking medical attention at the emergency department after experiencing a fall.

Methods: Conducted as a retrospective, cross-sectional, and descriptive study between March 2020 and December 2021, the research examined 2,502 patient files of elderly individuals who presented with a fall complaint during the specified period. Additionally, the study analyzed 581 patients who underwent fall-related surgeries. The research obtained the necessary ethical and institutional approvals, and measures were taken to ensure the privacy and confidentiality of personal data. Data were collected through a comprehensive questionnaire consisting of 26 questions.

Results: The study's findings revealed that a higher proportion of women (65.4%) experienced falls indoors, while a significant percentage of men (48.9%) fell outdoors. Following falls, 56.2% of individuals were diagnosed with fractures, and 40% presented soft tissue trauma. Furthermore, 28.1% of the studied individuals required hospitalization, with the orthopedics and traumatology service admitting the largest share (22.1%) of patients. Gender-based analysis demonstrated a notable difference in hospitalization rates, with 30.3% of women and 24.7% of men hospitalized due to falls. Women were found to be more vulnerable to severe injuries and fractures following falls, as their fracture rate was higher than that of men. Statistical analysis confirmed a significant difference in surgery rates based on age, with elderly individuals aged 75 and older exhibiting higher surgical rates than their younger counterparts.

Conclusion: The findings from this research will provide valuable insights into the impact of falls on the health and well-being of elderly individuals, thus contributing to the development of evidence-based interventions and policies to enhance their safety and quality of life.

319 IMMERSIVE AND INTERACTIVE VIRTUAL REALITY: SCOPING REVIEW OF ITS APPLICATIONS IN THE CLINICAL TRAINING OF HEALTH PROFESSIONALS

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Introduction: Nowadays, new technology has taken on a greater importance in learning. Furthermore, immersive and interactive virtual reality is becoming more important in the clinical training of health professionals. However, we do not know the full depth of its classification and potential as a training tool. The concept must be defined clearly and precisely in order to understand the technology and devices which are used.

Objectives: The aim of this exploratory review is to research how this technology is used in the context of teaching clinical skills to health professionals and to rigorously define concepts and terms with the purpose of being understandable for those who are unfamiliar with virtual reality.

Methods: A scoping review based on Joanna Briggs Institute methodology was used. Firstly, an electronic search strategy was designed in the main databases including keywords. In second round, we included filters and selection criteria based on population, context and concept.

Results: Four studies are analysed to research the scientific evidence about immersive and interactive virtual reality in the clinical training environment and the data is shown in a table with the studies' characteristics.

Conclusion: Immersive and interactive virtual reality is a tool that improves learning and training in the context of clinical nurses and other health care professionals.

Virtual reality is an immersive and interactive tool. It is easy to use, safe for the patient and is an innovation in training, which shortens the time and the learning curve when it is used with haptic devices. Moreover, despite these advantages, it is necessary to conduct research with larger sample groups and develop a valid test to score the quality of learning when virtual reality is used. Furthermore, there must be a study of economic viability for the implementation of this technology in higher education.

320 The Relationship Between Stress Levels And Teamwork Attitudes of Healthcare Professionals Working In The Operating Room

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Background: Operating rooms are places where advanced technology is used, teamwork is crucial, and quick decision-making and implementation are essential. The stress encountered by operating room staff in this environment and its impact on teamwork is also significant from the perspective of patient safety.

Objectives: The aim of this study is to determine the stress levels among healthcare professionals working in the operating room and examine the relationship between their stress levels and their attitudes towards teamwork.

Methods: The study design was descriptive and correlational. The study was conducted in two separate hospitals' operating room units in the provinces of Türkiye between September and November 2022. The sample of the study consisted of 166 healthcare professionals. Data were collected using face-to-face interviews and the instruments used were a descriptive information form, the Perceived Stress Scale (PSS), and the Teamwork Attitudes Questionnaire (TAQ). This study was presented as an oral presentation in Turkish at the 2nd International Gazi Health Sciences Congress in Türkiye.

Results: Healthcare professionals have an average working experience of 14.73±9.35 years in the operating room, with a weekly average working time of 52.69±19.25 hours. Among them, 37.3% are operating room nurses. While there is a statistically significant difference in PSS scores among different professional groups of healthcare professionals working in the operating room ($F=6.62; p=0.00$), there is no statistically significant difference in TAQ among these groups ($F=0.198; p=0.89$). The highest total TAQ score is observed among surgeons, while the highest PSS score is observed among operating room nurses. The study found no statistically significant relationship between the mean PSS score and the mean TAQ score for healthcare professionals ($r=-0.83, p=0.28$). However, there is a statistically significant, negative, and moderate-level relationship between the mean PSS score and the teamwork structure subscale of the TAQ ($r=-0.25, p=0.00$).

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Conclusion: The perceived stress scores of healthcare professionals are at a moderate level, while their teamwork attitude scores are above the moderate level. It is observed that as perceived stress scores increase, teamwork attitude scores decrease.

321 Improving Patient Safety in Robotic Surgery: A Systematic Review of Checklists for Robotic Procedures

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Background: As robotic-assisted surgeries have become more prevalent, understanding potential complications, and optimizing safety measures is essential.

Objectives: This systematic literature review aims to enhance patient safety in robotic surgery by examining suitable checklists for use exclusively in robotic procedures.

Methods: A comprehensive systematic review of English open-access research and review articles published between 2010 and 2023 was conducted. The review included both quantitative and qualitative data. The Web of Science (WOS) and SCOPUS databases were searched using keywords such as “robotic-assisted surgery,” “robotic surgery,” “surgical safety checklist,” and “patient safety checklist.” Boolean operators and wildcards were used to expand the search. Inclusion criteria required articles to be peer-reviewed, published in English, and pertain to robotic-assisted surgeries.

Results: In this systematic review, a comprehensive search was conducted to access relevant studies from databases. A total of 10,259 studies were retrieved, with 27 articles sourced from the Scopus database and an extensive collection of 10,232 articles from the WOS. After eliminating articles that did not match the subject content, a further 2,092 full-text articles were excluded. Ultimately, the systematic review incorporated a total of 6 articles that met the predefined inclusion criteria. This selected pool of studies formed the basis for the analysis and synthesis of the research findings in this review. The study included 4 articles with a qualitative design and 2 articles with a quantitative design. Among the included articles, 4 were conducted in the USA, 1 in the UK, and 1 in New Zealand.

Conclusion: Based on our research results, the implementation of specialized robotic surgery checklists can lead to improved patient safety and problem resolution in this rapidly growing field. However, the number of studies focusing on this subject is limited, underscoring the need for more research in this area.

322 Roles, Experience, and Views of Nurses Working in Robotic Surgery Settings: A Mixed-Methods Study

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Background: Nurses working in robotic assistive surgery settings need to be provided adequate training for robotic assistive surgery settings in studies. Furthermore, national legislation on nurses' roles in robotic assistive surgery settings has not been implemented in Turkey yet.

Objective: This study aimed to demonstrate the roles and experiences of nurses in robotic assistive surgery settings.

Methods: This study was conducted as mixed-method research. A questionnaire form in the quantitative part and focus group interviews in the qualitative part guided data collection with the participation of 60 and 30 nurses, respectively. The qualitative data was analysed by content analysis as per COREQ guidelines.

Results: More than half of the nurses (66.7%) had received basic training in robotic surgery settings. Almost all the nurses reported that they verified whether the instruments of the robot were in the correct position (98.3%) and whether the laparoscopic and open surgery sets were ready for use in the operating room in case of an indication to convert to laparoscopic or open surgery (98.3%). Qualitative data consisted of five themes, including the effects of robotic surgery,

feelings, and thoughts on robotic surgery, working as a nurse in robotic surgery settings, responsibilities of nurses, and competence of nurses working in robotic surgery settings.

Conclusion: Because the use of robotic surgery will expand in the future, it was suggested that the roles and responsibilities of nurses should be standardized, their working conditions should be improved, and standardized continuing education programs should be implemented. Determining nurses' working conditions and roles in robotic assistive surgery settings by policymakers in legislation and regulations is crucial for improving the quality of nursing care and the outcomes of patients and healthcare organizations.

323 Non-Pharmacological Nursing Interventions in Postoperative Nausea and Vomiting: A Systematic Review

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Background: Postoperative nausea and vomiting (PONV) is one of the common problems after surgery. Evidence-based non-pharmacological nursing practices for the prevention and management of PONV are of great importance to reduce associated complications PONV and improve patients' quality of life after surgery.

Objective: The objective of this study was to assess the impact of non-pharmacological nursing interventions on PONV.

Methods: This was a systematic review study. MEDLINE, Web of Science, Science-Direct, Tübitak-ULAKBİM, and TRDizin databases were searched for the following search terms, including "Postoperative Nausea and Vomiting," "Nurse," "Nursing," "Non-Pharmacological Interventions" to identify non-pharmacological nursing interventions for PONV. A systematic review of English and Turkish articles published in the period between January 1, 2012 and April 26, 2022 was conducted. The PICOT-SD method was used to determine the compatibility of the articles with the Eligibility Criteria.

Results: Forty-three of the 3247 articles obtained from databases fulfilled the eligibility criteria. In this study, it was determined that acupuncture and aromatherapy decreased the incidence of nausea and vomiting and increased the quality of life. Additionally, it was found that patients' quality of life tended to improve along with reductions in postoperative complications.

Conclusion: The results of this study support previous findings in the literature and demonstrate that non-pharmacological nursing interventions help reduce and prevent PONV. Based on these results, we suggest that non-pharmacological nursing interventions can be employed for the management of PONV in patients undergoing surgery.

324 OPINIONS AND EXPERIENCES OF PATIENTS USING STERNAL VESTS AFTER MEDIAN STERNOTOMY AND OF NURSES PROVIDING CARE FOR THESE PATIENTS: A MIXED METHOD STUDY

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Background: The use of sternal vests after median sternotomy helps avoid mechanical complications, improves sternal healing, alleviates pain and increases patient autonomy because of improved patient comfort and early mobilization. However, it is also reported that the use of a sternal vest is not free of unfavorable consequences such as limitations in daily activities in association with the design of the sternal vest, pain and impaired comfort for patients.

Objectives: This study aimed to evaluate the effectiveness of the sternal vest used after coronary artery bypass surgery and explore the patients' experiences and challenges nurses face in the care process.

Methods: This qualitative study was conducted in a single hospital. Participants included patients who underwent median sternotomy and their nurses. Patients were interviewed between the 3rd and 6th postoperative days, and a follow-up interview was conducted 15 days later to assess persisting issues. Nurses were interviewed once. Data were collected through semi-structured interviews and analyzed using content analysis.

Results: Patients reported various problems and discomforts associated with using chest vests, including difficulty moving, pain, insomnia, shortness of breath, lacerations in the armpits, metallic wire tips hurting, and sweat-inducing.

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Nurses confirmed similar problems experienced by patients and emphasized the importance of a non-tight, easy-to-wear vest that does not cause armpit discomfort and allows for size adjustments.

Conclusion: Patients and nurses identified similar problems, and it was observed that these problems persisted beyond the initial postoperative period. These findings highlight the need for improvements in sternal vest design and the importance of incorporating patient and nurse suggestions.

326 Medical And Surgical Intensive Care Nurses' Caring Behaviors

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Background: There are differences between nurses in terms of their perceptions of care behaviors, and the educational status of nurses, professional satisfaction, and the values of their patients are important variables to be considered in terms of care behaviors.

Objective: This study aimed to determine medical and surgical intensive care nurses' caring behaviors.

Methods: This study was descriptive and cross-sectional. No sampling was made and the whole population was targeted and was conducted between December and March 2023 with 121 nurses who work in the medical and surgical intensive care units of a university hospital. Data were collected using the Individual Introduction Form, the Caring Behaviors 24 Scale. The study was approved 2011-KAEK-2 ve 2022/579 number by the Clinical Research Ethics committee of a university. Descriptive statistical methods (mean, standard deviation, median, frequency, ratio, minimum, maximum) were used to analyze the data. Furthermore, the Student t-test was applied for the quantitative comparison of two groups concerning normally distributed variables. A one-way ANOVA test was used for three or more groups with normal distribution.

Results: 43.8% of the intensive care nurses who participated in the study were between 27 and 30 years. Of whom, 66.9% were females and 66.9% were undergraduates. The total mean score of the Caring Behaviors 24 Scale of Intensive Care Nurses was 5.32±0.683. The total mean score of the Caring Behaviors 24 Scale of Surgical Intensive Care Nurses was significantly higher. There was no found statistically significant between nurses' age, gender, educational level, marital status, and Caring Behavior 24 Scale mean score.

Conclusion: The mean scores of intensive care nurses on care behaviors were found to be high. It can be stated that intensive care nurses have perceptions of providing quality and safe care.

334 Hand Hygiene Beliefs and Practices among Nurses; A Cross-Sectional Study

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Background: Healthcare associated infections are related to significant morbidity, mortality, and hospital costs. The compliance of health care personals to hand hygiene will go a long way to control the spread of diseases and the reduction of health care induced complications.

Objectives: This study was performed to evaluate nurses' beliefs and practices regarding hand hygiene. Primary aim of the study was determination of the knowledge, belief and compliance of hand hygiene among nurses in North Cyprus. Secondary aim was investigation of association between descriptive characteristics and belief and practices of hand hygiene among nurses.

Methods: A descriptive, cross-sectional study was conducted in two University hospitals from North Cyprus, between November-December 2020. Turkish revised version of Hand Hygiene Belief Scale and Hand Hygiene Practices Inventory was used for data collection. All voluntary nurses who work in medical and surgical clinics composed the sample of the study (a total of 80). Data were collected with self-completion method. Ethical committee approval and informed consent from the participants were obtained. Descriptive statistics and Pearson Chi-Square tests were used in data analysis.

Results: Regarding the hand hygiene belief, results showed that the overall mean for the Hand Hygiene Belief was 3.99 (± 1.74) on the scale of 5. Results concerning hand hygiene practices showed that, the overall mean is 4.85 (± 0.83) on the scale of 5. A comparison of hand hygiene belief and practice scores of the nurses with their descriptive data showed that male had a slightly higher scores than female.

Conclusion: Nurses had a good level of hand hygiene belief score and high level of practice score of hand hygiene. Based on the results of the study, educational and administrative strategies to maintain and improve hand hygiene beliefs and practices of the nurses is recommended.

336 Operating theatre nurses' main concerns during the operative process of organ donation- a grounded theory

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Background: Little is known about operating theatre nurses' (OTNs) main concerns during the perioperative organ donation process. When caring for an organ donor in the OR, many of the OTN's responsibilities are both mentally and physically challenging. The organ retrieval is unplanned and occurs suddenly, often at night when the OTN is on duty alone. The theatre environment is usually associated with lifesaving surgery, but now the OTN is faced with death and retrieval of organs.

Objectives: The purpose of this study was to explore OTNs' experiences of caring for the organ donor during operations where organs are retrieved and to answer the question: what is the main concern during this procedure and how do they deal with it?

Methods: A total of ten OTNs, one man and nine women with a mean age of 51.8 years (range 38-63 years) were interviewed in this Constructive Grounded Theory study.

Results: A core category emerged: Optimum organ retrieval, where the generated grounded theory is present in the four main categories: Brace oneself, Facilitate, Retrieve and Completion. Commitment is the force that binds the OTN to a course of action of relevance for optimum organ retrieval. Respect for and the dignity of the donor are essential.

Conclusion: The first Grounded theory on OTNs main concerns during perioperative care of deceased organ donors is developed and presented. This theory might be useful to support clinical practice in the OR as well as to illuminate what to focus on when educating OTNs in organ donation and perioperative nursing care.

343 Effect of eHealth Interventions on Symptom Management in CABG Surgical Patients: A Systematic Review

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Background: E-health interventions targeting symptom reduction seem to yield both positive and negative outcomes. This study aimed to evaluate the effectiveness of eHealth interventions on symptom management outcomes of patients undergoing CABG surgery.

Objectives: This systematic review aimed to determine the effects of eHealth interventions on symptom management for patients who have undergone CABG surgery.

Methods: A systematic review was performed on CINAHL, PubMed, Web of Science, Ovid MEDLINE, and Scopus from 2006 to June 2022. The following search terms were run in each of the databases: "CABG surgery", "Symptom Management", "eHealth", "Randomized Controlled Trial", "Quasi-experimental study" and word derivatives. For inclusion, publications were evaluated by two separate authors. The Joanna Briggs Institute's (JBI) evaluation tools for RCT and quasi-experimental studies were used to assess the methodological quality of the publications included in this review and to determine the extent to which each publication addressed the possibility of bias in its design. (PROSPERO registration number: CRD42023398498)

Results: A systematic analysis of eleven publications involving 2586 patients showed that the eHealth intervention

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effectively increased activity and self-management ($p < 0.05$). eHealth interventions, which are also effective in the management of psychological problems, had results that were partially effective in pain management and effective in quality of life. RCT publications were with a range of scores between eight and eleven, with a maximum score of eleven. Also, five publications were of moderate quality and three publications were of high quality. The overall quality of included quasi-experimental publications was high, with a maximum score of nine.

Conclusion: eHealth interventions may improve symptom outcomes of patients after CABG surgery. Digital healthcare has become an important component of patient care. Nurses providing care should be aware that eHealth interventions are showing promising results in patient care.

346 Patient Safety Perceptions of Operating Room and Surgical Intensive Care Nurses: A Multicenter Study

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Objectives: It was aimed to determine the perceptions of nurses working in the operating room and surgical intensive care unit, where latent systemic risk factors are high in terms of patient safety in five different hospitals, by examining their perceptions on this issue

Methods: It is a descriptive and cross-sectional research that was conducted with the participation of 377 nurses working in the intensive care and operating room units of 5 hospitals. The data of the study were collected on February 8 between 25 July 2023 by using the "Socio-demographic and Occupational Characteristics Form" and "Leiden Operating Room and Intensive Care Safety Scale-LOTICS". The scale consists of five sub-dimensions. An increase in the score obtained from the scale indicates that the perception of working conditions is higher/positive. In the analysis of the data, t test in independent groups, Kruskal Wallis Test, One Way ANOVA and multiple linear regression were used.

Results: It was determined that the patient safety total perception score of the intensive care nurses (ICN) (106.03 ± 15.93 ; min-max: 67-151) was higher than that of the operating room nurses (ORN) (101.81 ± 14.24 ; min-max: 43-132); It was determined that ICN perceived "resource management and planning" and "team work instructions and preparations" sub-dimensions more strongly than ORN. It was determined that being married, being an ORN and having received training on team collaboration predicted nurses' perceptions of patient safety.

Conclusion: It has been determined that ICN have higher patient safety perception scores than ORN. Also it was determined that the married ones had higher patient safety perception scores than the singles, and the nurses who received training on team collaboration had higher perceptions of patient safety and therefore more positive perceptions of the working conditions.

Differences in perceptions of patient safety are important in designing measures to improve safety.

349 Modernizing the Virtual Library in the Perioperative Setting

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Background: The contribution of perioperative nursing care is vital in the provision of comprehensive care for surgical patients. However, there is limited exposure to perioperative nursing in the Canadian undergraduate nursing curricula.¹ The provision of knowledge to perioperative nurses is imperative in ensuring patient safety while fostering a supportive learning environment.²

Objectives: The objective is to enrich the learning experience for perioperative nurses through the optimization of the existing operating room (OR) Virtual Library. An updated resource would provide simplified access to up-to-date knowledge about surgical procedures. Perioperative staff will be able to coalesce clinical practice with online learning to better prepare for surgery.

Methods: A pre-survey is distributed to a sample of 36 Toronto Western Hospital (TWH) perioperative nurses. This survey provided data regarding use of the Virtual Library in relation to nursing expertise. Additionally, satisfaction of the current resource is explored. Data on the ten most performed neurosurgery and spine procedures in 2019-2020 is obtained to determine surgeries to be highlighted with consultation of staff surgeons and expert nurses.

Results: An updated Virtual Library benefits novice nurses by providing knowledge through a resource which is easily accessed and maintained. Novice and advanced-beginner nurses can better prepare themselves and coalesce online with in-person learning. Additionally, the platform serves as a resource for expert perioperative nurses who may find themselves “off-service,” seeking reorientation to less familiar areas of knowledge.

Conclusion: The OR Virtual Library is accessible to any TWH perioperative nurse via SharePoint. Perioperative nurses are encouraged to participate in the development of the resource. Current efforts are made to expand the resource to cover additional neurosurgery/spine procedures as well as procedures of other services. The updated Virtual Library is utilized to gain better understanding of surgical procedures – ultimately, contributing to an environment of safety and improved patient outcomes.

357 EVALUATION OF PATIENTS QUALITY OF LIFE BEFORE AND AFTER BARIATRIC SURGERY

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Background: Bariatric surgery results in significant weight loss in the majority of patients. the purpose in obesity surgery is to free the patient from their excess weight in a healthy way and increase their quality of life in all areas.

Objectives : The study was planned and applied to determine the quality of life of patients who underwent bariatric surgery before and after surgery.

Methods: The research population consisted of 39 patients who underwent morbid surgical surgery between January 2021 and November 2022 in Istanbul University Cerrahpaşa Faculty of Medicine General Surgery Clinic. The study was completed with 35 patients who agreed to participate in the study. Necessary permissions were obtained from the ethical committee and the institution prior to the research. The data were collected using the Patient Identification Form and the Moorehead Ardel Quality of Life Scale II-TR, prepared by the researcher by reviewing the literature, and evaluated with appropriate statistical methods.

Results: As a result of the research, it was determined that an average increase of 1.81 ± 1.04 points was observed in the postoperative quality of life score of the patients compared to the pre-surgery ($p=0.001$; $p<0.01$). A mean decrease of 12.40 ± 5.70 kg/m² after surgery compared to BMI, which is an important parameter in obesity, was found to be statistically significant ($p=0.001$; $p<0.01$)

Conclusion with weight loss, decrease in BMI values, increase in mobility, increase in physical activities, independence in daily life and increase in quality of life were observed. In line with the results, it can be suggested that the study can be carried out in larger groups due to the insufficient number of samples and it is necessary to organize support and education programs for the prevention of obesity.

ePosters

365 Endovascular treatment of pararenal aortic aneurysm

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Background: Aorta is the largest vessel of the human body; it arises from the heart, passes through the thoracic cavity and ends in the abdomen where it divides into the two iliac arteries.

The part of the aorta located inside the abdomen is called the abdominal aorta and supplies the abdominal organs and lower extremities with blood.

Abdominal aortic aneurysm (AAA) is defined as the dilatation of the abdominal aorta to a diameter that is more than 50% increased compared to the normal diameter of the vessel.

Seventy-five percent of the aneurysms are asymptomatic and firstly manifested when they rupture. Therefore, aneurysms are commonly diagnosed incidentally during scans performed for other reasons (e.g. ultrasound or CT scans for urology or general surgery issues). Abdominal aortic aneurysms that include the renal arteries are called pararenal aneurysms.

Objectives: The addition of fenestrations and scallops to the classic endografts results in blood flow preservation to the visceral branches of the abdominal aorta. Partial graft deployment, the markers of the graft and high-resolution intraoperative angiogram along with the use of guidewires allow the appropriate manipulations in order to align the fenestrations within the orifices of the target vessels.

Methods: Treatment - surgical repair - is necessary when the AAA diameter exceeds 5cm or an increase of its diameter of 0,5 cm within 6 months or 1 cm within 1 years is observed. Symptomatic and saccular aneurysms also require surgical treatment.

Results: Placement of covered bridging stent-graft into the target-vessels secures and stabilizes the graft and allows blood flow to the kidneys, the superior mesenteric artery and the celiac arteries.

Conclusion Contemporary fenestrated and branched endografts make endovascular repair of pararenal and juxtarenal aneurysms with hostile anatomy feasible; this option was not available a few years ago

367 Evaluation of anxiety and stress levels on preoperative waiting time with DASS Scale between day care surgery clinic versus long-term hospitalization; Pilot Study

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Background: The anxiety and stress levels of patients, who are scheduled for elective procedures, cause great concern to many health professionals. In fact, the effects of this problem could be seen in all aspects of patient's hospitalization, causing higher morbidity after surgery. Many factors influence preoperative stress levels, such as the waiting time before surgery.

Objectives: The aim of this study was the impact of the waiting time, on preoperative levels of anxiety and stress of patients admitted for long-term care (LONG) in relation to these levels of patients admitted to day care center (DCC) for surgery, with ultimate goal the implementation of Quality Health Management.

Methods: It was a prospective cross-sectional clinical study which was conducted in 2020 with a sample of 176 patients who had undergone elective surgery. In DCC group (n=88), patients were hospitalized in DCC, while in group LONG (n=88) patients were hospitalized in LONG care oncological hospital. Demographic and clinical data were collected and patients were assessed by the Depression, Anxiety and Stress Scale (D.A.S.) scale, preoperatively. Statistical analysis was performed with SPSS 25.0, at a significance level $\alpha = 0.05$.

Results: D.A.S. scale's Cronbach's α was 0.923. There was no statistically significant difference between the groups for age, but there were significant differences in the waiting time (months) before surgery and the waiting time (days) before surgery after the admission to the hospital ($t=-0.719$, $p=0.473$, $U=2884$, $p=0.002$ and $U=0$, $p<0.001$, respectively). In group LONG, patients were waiting at least three days before surgery. Evaluation of stress levels showed statistical difference between the two groups ($p=0.05$).

Conclusion: Prolonged preoperative waiting time has shown to have a negative impact on patient's stress levels. Therefore, the goal of health administrators should be the provision of individualized information to patients, through the improvement of the elective surgery process.

368 “Set up for Success” Fundamentals of Perioperative and Anaesthetic Nursing 2 Day Programme

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Engaging in Continuous Professional Development (CPD) is essential to maintain and enhance professional standards and provide safe, high quality, evidence based care (NMBI, 2015). Perioperative Nurses are experts in one or more of the fields of Perioperative Nursing care and must display awareness of current developments, knowledge and skills critical to provide safe patient care (EORNA, 2019).

Develop a 2 day programme, NMBI Category 1 approved.

- Provide CPD opportunity for Perioperative Nurses, an integral component in the delivery of high quality, safe patient care.
- Ensure access locally to CPD.
- Ensure availability of bespoke CPD education.
- Increase the skills set of the advanced beginner Nurse.

Bespoke education programme developed, NMBI Category 1 approved.

Comprehensive curriculum document was developed.

An interdisciplinary programme incorporating a number of teaching and learning methodologies.

- Pre assessment questionnaire provided baseline data on participants' knowledge and skills prior.
- Evaluation forms gathered participants' perceptions of the programme content, delivery methods and relevance.
- A post assessment questionnaire was conducted to measure the knowledge and skills gained.
- Three months post completion of the programme a follow up survey was conducted to assess the long term impact of the programme on clinical practice.
- Feedback from key stakeholders was compiled to assess the programmes' effectiveness and impact on delivery of safe, high quality, evidence based patient care.

A combination of these evaluation methods enabled the author to garner a comprehensive overview of the effectiveness and impact of the programme.

Evaluations to date have ensured the bespoke programme is now mandatory for all RGN's new to the operating theatre department in the hospital. As a result of the success of the programme, the overwhelmingly positive evaluations and the noted positive impact on direct patient care and ensuring availability of highly skilled RGN's, a 5 day programme is under development.

369 THE EXPERIENCES OF PATIENTS WHO HAD SURGERY IN THE COVID 19 PANDEMIC

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This research was conducted as a qualitative study to examine the experiences of patients who underwent surgical intervention in the Covid-19 pandemic. The study group consisted of 37 patients who underwent surgical intervention during the pandemic period in the General Surgery Service of Kütahya Health Sciences University Evliya Çelebi Training and Research Hospital. The study was explained to the patients and their verbal and written consents were obtained. Research data were collected by in-depth interview method using a patient introduction form containing the sociodemographic characteristics of the patients and semistructured research questions. Face-to-face interviews were conducted with the patients for approximately 30-45 minutes and the interviews were recorded by a voice recorder. Three main themes have been identified regarding the experiences of patients who underwent surgical intervention in the Covid-19 pandemic. The main theme of emotions; It covers five sub-themes: surgery-related, prognostic-related,

ePosters

disease-related, hospital-related, and pandemic-related. The main theme of thoughts consists of two sub-themes: related to the pandemic and related to the disease. The main theme of experiences consists of four subthemes: vaccination, receiving social support, experiences with nurses and pandemic measures. Finally, it was found that patients were afraid of surgery, but wanted surgery because they were afraid their disease would get worse and they could not stand the severe pain associated with the disease. It was also found that patients wanted to be discharged early. While some of the patients want to be alone because they are afraid of Covid-19, some of the patients have confidence in the vaccine and the precautions taken; it was found that some of them did not trust and communicate positively with nurses during the pandemic period. It was observed that patients have fear and anxiety about undergoing surgery under pandemic conditions; it is recommended that nurses inform patients about pandemic diseases.

375 A Cross- Sectional Study of the occurrence of anxiety disorder and depressive symptoms among perioperative healthcare professionals during Covid pandemic in a public hospital in Greece

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Background: The sudden onset of the virus and the high transmissibility of COVID-19 disease has created a rapidly evolving global health crisis, which clearly has an impact on the mental sphere on an individual and collective level.

Objectives: To discuss how the pandemic affected the physical and mental health of healthcare professionals.

Methods: This study used a cross-sectional and survey design. Data collection was achieved using the Connor Davidson Resilience Scale [CD- RISC]), the Maslach Burnout Inventory (MBI) and Fear of Coronavirus - 19 Scale (FCV-19S) In addition, questions were asked about the general working conditions of the respondents as well as about their working and personal life and situation during the pandemic.

Results: Between May 2020 and September 2023 117 Health Professional's, participated, (44.44%) were men and (55.56%) were women in the field of health and specifically of a public hospital staffing the departments that had direct contact with admissions and hospitalization of Covid-19 cases. The results of the research through the Likert scale showed that health professionals do not feel safe with the personal equipment provided by the hospital at a rate of 64.1% and at the same time 63.25% feel fear for life, during their work.

Conclusion: Healthcare professionals are the ones who have the anxiety of having to deal with COVID-19 immediately. Awareness of their needs and intervention to help will have a huge impact on their mental health. Knowledge of the ways in which the pandemic is experienced can help us plan, organize, implement, and evaluate interventions to support workers in this critical area.

376 Synovial fluid calprotectin: A reliable biomarker in the diagnosis of periprosthetic infections

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Background: Periprosthetic infections (PJI) are the most common complication in hip and knee surgical reconstruction. The diagnosis of periprosthetic joint infection (PJI) is a challenge in clinical practice, and synovial fluid analysis is a useful diagnostic tool. Calprotectin is an inflammatory biomarker and is widely used in the evaluation of chronic inflammatory diseases. However, little is known about its role in periprosthetic infections (PJI). Calprotectin has recently been shown to be a promising biomarker for the diagnosis of periprosthetic infections (PJI) in total hip arthroplasty (THA) and total knee arthroplasty (TKA).

Objectives: The purpose of this study is to determine the reliability of Calprotectin in the diagnosis of periprosthetic infection.

Methods: The methodology included research studies and referred to the value of Calprotectin as a diagnostic aid in gauging the risk of infection in patients with suspected periprosthetic joint infection.

Results: The most important finding of this study is that Calprotectin has excellent diagnostic value in cases with other possible causes of inflammation that may mimic infection.

Conclusion: The present study suggests that synovial calprotectin immunoassay test has a high sensitivity and specificity in the diagnosis of PJI. Moreover, it is easily applied, quick and valuable in clinical practice.

377 Determination of Individual Innovative Characteristics of Surgical Nurses of Different Generations

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Background: Innovation in care is ensured by nurses assuming important roles in innovation in the units and positions where they work. Differences in the perceptions of nurses who grow up in different periodic characteristics and are in different age groups may affect their innovativeness.

Objectives: The study aims to determine the individual innovative characteristics of surgical nurses of different generations.

Methods: The data of study was collected between April and June 2023. The sample of the study consisted of 216 surgical nurses in Turkey. Data were collected online using the data collection form, Individual Innovativeness Scale, and Multidimensional Nursing Generations Scale. In the statistical analysis of data; number-percentage distributions, t-test in independent groups, ANOVA test, and correlation analysis were used.

Results: It was determined that the average age of nurses was 31.10±8.67 years and Generation Z took part in the study the most (50.5%). The total score obtained from the Individual Innovativeness Scale was 59.97±8.00, and the total score obtained from the Multidimensional Nursing Generations Scale was 73.93±15.68. When the generations of nurses and the scales were compared, it was found that there was a statistically significant difference between the two scales. It was determined that this difference resulted from the statistical significance between Generations X and Z in the individual innovation scale ($p=0.038$), and between Generations X and Generation Y in the Multidimensional Nursing Generations Scale.

Conclusion: As a result of the study, it was seen that the nurses' individual innovation scale score averages were not low, and surgical nurses were skeptical according to the classification of individual innovation behaviors. It was observed that nurses' generation, gender, the institution they work in, and their freedom to innovate affect their individual innovativeness characteristics, and their generation and the institution they work in also affect their multidimensional nursing generation scale scores.

385 Longer work experience and age associated with safety attitudes in operating room nurses: an online cross-sectional study

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Background: Patient safety is of utmost importance in operating rooms. Still, adverse events and errors are a global challenge in this context. To prevent avoidable patient harm, organizations need to foster a positive safety culture, encompassing its measurable component safety climate. To improve the safety climate effectively, the existing safety attitudes must first be understood.

Objectives: To explore operating room nurses' safety attitudes and their views on how to improve patient safety in operating rooms.

Methods: A cross-sectional study using the Swedish-translated version of the Safety Attitudes Questionnaire, Operating Room version (SAQ-OR). Data were collected using an online survey platform.

Results: A total of 358 operating room nurses completed the questionnaire. The results show that the older age group rated their working conditions and management support as better than the younger age groups while also reporting lower stress recognition. Similarly, more experienced nurses had higher scores for working conditions and lower scores for stress recognition. When comparing hospital types, county hospital employees had higher factor scores for safety climate, job satisfaction, and working conditions than university hospital employees. The respondents' most recurring recommendations for improving patient safety at their workplaces included "Having better and clearer communication" followed by "Having enough time to do things the way they should be done".

Conclusion: Our study showed a trend toward increased safety awareness among operating room nurses with older age and longer experience. The necessity for enhancements for patient safety in operating rooms was reported, mainly when it comes to communication and workload management - both crucial for patient safety within operating rooms. To enhance patient safety effectively in operating rooms, the organizational safety climate needs to be actively managed and developed. One step in actively managing the safety climate may involve initiatives to retain experienced operating room nurses.

ePosters

386 Quality Indicators in Perioperative Care

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Introduction: Quality indicators are an essential element and tool for managing organisations. Their necessity is to set a measurable criterion, which allows comparison with a certain standard, guideline, requirement and shows how far the standard has been achieved. The indicators identify critical phenomena occurring in relation to the activities implemented in the environment at different workplaces. Quality measurement tools should be flexible, customised, reliable and available for monitoring. The output is either taking corrective actions or confirmation of the correctness of the set processes.

Research and methodology: The poster is an output of the internal grant “Improving patient safety in perioperative care at Central operating theatres I (COS) in relation to hidden risk factors” of the University Hospital Brno (FN Brno), which was implemented for two years. The aim of the grant was to identify risks related to the use of operating theatres, to establish quality indicators and to verify monitoring of indicators in practice, including the setting and taking corrective actions for the identified deficiencies. To achieve this goal, the researchers used their knowledge and experience in operating theatres.

Results: The outcome of the grant is the setting of quality indicators, identification of risks and the development of standard procedures related to perioperative care. The outputs of the grant have been published in the book “*Quality and Risk Management in Perioperative Care*”, which can be used by management in other healthcare institutions providing perioperative care.

Conclusion: In order to achieve a high level of quality of perioperative nursing care, continuous monitoring, measurement and subsequent evaluation of quality indicators that are connected in quality management are necessary. This grant and publication can provide information and guidance to operating theatres management on how to approach this issue.

391 Management of emergency situations in the operating room: a survey of professionals

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The response to cardiorespiratory arrest or emergency in the surgical area is time critical. We know that the implementation of rapid response teams with a protocolized organization reduces mortality in these situations. However, translating scientific evidence into practice is often complex. It is recommended to analyze the barriers and assets in each specific case and to involve stakeholders to plan adapted strategies.

Objective: To identify and evaluate the perception of the management of emergency situations experienced the knowledge and attitudes of the different professionals involved in the surgical area.

Methods: Observational, descriptive exploratory study through a survey of professionals.

Variables: sociodemographic, perception of the management of emergency situations experienced, perception of knowledge and attitudes towards the implementation of the team.

Instrument: Anonymous questionnaire designed “ad hoc” in electronic format using the REDCap application.

Results: 88% of the professionals had participated in some situation of these characteristics. 53% strongly or somewhat disagreed that the management of the situations was carried out calmly and only 11% considered that their tasks were clearly defined. 49% of professionals said they did not always feel satisfied with the performance and believe that improvements are needed. 34% of professionals think they have sufficient formal training and 15.8% think it has very good training. In contrast, 49% believe that their training is poor, limited, or moderate (7%; 16%; 26% respectively). Most

professionals agree to protocolize a system of action with well-defined roles for each professional (72%), they would be willing to do training (72%).

Conclusion: Professionals strongly agreed on protocolizing a system of action in emergency situations. However, it is necessary to improve the training of those professionals who have stated that they do not feel as qualified. With this prior evaluation we will be able to evaluate the effectiveness of the proposed implementation strategy in the future.

393 Does Surgical Smoke from Open or Closed Major Surgeries Negatively Affect The Patient's Carboxyhemoglobin, Methemoglobin and Some Blood Gases?

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Background: Surgical smoke mostly occurs during tissue dissection in open and closed surgical interventions and can disrupt some physiological parameters of the patient: blood hydrogen potential (carboxyhemoglobin, Methemoglobin, partial oxygen and carbon dioxide (pH, COHb, MetHb, PaO₂ and PaCO₂, respectively).

Objectives: To determine the effect of surgical smoke on the patient's pH, COHb, MetHb, PaO₂ and PaCO₂ in open or closed major surgeries.

Methods: The research is cross-sectional and descriptive. The data were collected in a training and research hospital in Istanbul, Turkey (n=87). The data were obtained from the 'Patient Identification Information Form' and the results of the arterial blood sample taken before and immediately after the surgery.

Results: The average age (mean± standard deviation) of the participants in the study is 56.45±16.30.

Patients' pH(p=0.034), PaO₂(p=0.001), COHb(P=0.640) were lower, and MetHb(p=0.052), PaCO₂(p=0.035) were higher in the postoperative period than in the preoperative period. There were some variables that had a statistically significant impact on these physiological parameters. According to these data, only PaO₂ was lower in smokers than in non-smokers compared to young and old people (p<0.05). pH, COHb, and PaO₂ (respectly, p<0.05) were lower, and MetHb and PaCO₂ were higher in neurosurgery patients compared to other surgical procedures (respectly, p<0.05). MetHb(p=0.014) and PaCO₂(p=0.023) were statistically higher and PaO₂ (p=0.002) was lower in patients using electrocautery compared to ultrasound cautery. pH(p=0.005) and PaO₂(p=0.010) were lower and PaCO₂ (p=0.029) was higher in those using an aspiration stick for smoke, compared to other methods. pH(p=0.012) and PaO₂(p=0.001) were lower, and MetHb(p=0.012) and PaCO₂(p=0.007) were higher in open surgery compared to closed surgery. Statistical pH(p=0.001) and PaO₂ (p=0.004) levels were lower in patients whose surgery time was 3-5 hours.

Conclusion: In surgeries where surgical smoke is seen, pH, MetHb, PaO₂ and PaCO₂ levels of patients may be affected after surgery.

396 Creating a safe room

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This project aimed to create a supportive safe room where the newly employees could investigate and pursue the feelings, they met during training. We hoped by giving them this space, they would be able to practice awareness by reflection and bring it into to clinical practice.

We generated two units and later 2 more within the first year, each one consisting of 6-8 nurses employed within 2 months. The nurses worked at similar departments but in different specialties such as theatre and the department of recovery. Each unit had a process lasting 5-6 months with meetings every week for 8 weeks and after that every month. The Meetings were facilitated by a clinical nurse specialist with a master's degree in organizational psychology. After completing the process, the participants were asked to participate in individual semi-structured interviews, facilitated in spring 2023 by clinical nurse specialist with a master's degree in clinical nursing. We completed 6 interviews. The interviews were analyzed using a theoretical psychodynamic framework, that draws upon emotions in understanding

ePosters

of both social and organizational phenomena and the way in which emotions shape our experience, both consciously and unconsciously.

Analysis of data illuminated three major themes “*An eyeopener*”, “*A safe room*” and “*A path into the employee group*”. Each theme presented 3-4 subthemes that expanded the understanding of the themes above.

“An eyeopener”

- Reflect in others
- Creating hope and individual development
- Prepare for clinical practice

“A safe room”

- Containing as a method
- Holding structure established a safe frame
- Organizational support

“A path”

- In group out group
- Learning as a social process
- The need for transparency

Conclusion: The units supported the informants by giving them the space and the time to reflect. The feelings and experiences they shared and reflected upon together, enabled them to practice double awareness in clinical practice.

398 Loaned instruments in perioperative care

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Background: Currently, most medical facilities use the loan of instrument sets mostly for spinal and orthopedic surgeries or new and uncommon procedures. Using the loaned instruments solves the problems with limited storage and investing in owning these expensive sets. But the loaned instruments in perioperative care also cause several hazards. Many challenges are associated with the management of loaner instrumentation. In some facilities, dealing with loaner items is a daily struggle that can have a profound effect on the department personnel’s productivity (SEAVEY, R., 2010). The following research is focused on this topic.

Objectives:

- What problems does the use of loaned instruments bring?
- What are the cleanliness issues?
- What are the completeness issues?
- What is the problem with the functionality?

Methods: Research methods: the qualitative interview and the quantitative questionnaire.

Respondents: experienced perioperative nurses, managers of operating theatre from one teaching and one small hospital
Methods: open coding, axial coding, selective coding, statistic methods

Results: Interviews: Participants reported problems with missing instruments or implants, instrument transport, broken instruments, instrument cleanliness.

Questionnaire: The results show that a significant part of the respondents declare a low possibility to check the surgical instruments before the operation and also incorrect number of instruments or implants. Seldom they receive damaged instruments. 61 % of respondents faced a situation where an instrument was missing.

Conclusion: The conditions for using loaned instruments during surgical procedures are inadequate in terms of hygiene and safety. Deficiencies were found in the transport and insufficient control of the instruments, as well as in the control of their decontamination and sterilization. Improvements are to be found in the loan system, better documentation and handing over of instrument sets.

401 THE EFFECT OF NURSING STUDENTS' ARTIFICIAL INTELLIGENCE ANXIETY ON THEIR ROBOTIC SURGERY KNOWLEDGE LEVEL: THE MEDIATOR ROLE OF INDIVIDUAL INNOVATIVE FEATURES

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Objectives: The aim of this study is to determine the mediating role of individual innovative characteristics in the effect of nursing students' artificial intelligence anxiety on their robotic surgery knowledge level.

Methods: It is a cross-sectional study. It was conducted with 391 nursing students studying in the nursing department of a university. Artificial Intelligence Anxiety Scale, Robotic Surgery and Robotic Surgery Nursing Knowledge Level Survey and Individual Innovativeness Scale were used to collect data. PROCESS Macro and Bootstrap methods were used for the mediation model.

Results: There was a negative, very weak and significant relationship between artificial intelligence anxiety and individual innovativeness and robotic surgery knowledge levels ($r = -.200$; $r = -.122$). There was a positive, very weak and significant relationship between students' individual innovativeness and robotic surgery knowledge levels ($r = .168$). It was determined that the indirect effect of artificial intelligence anxiety on the level of robotic surgery knowledge was significant, and therefore, individual innovativeness mediated the relationship between artificial intelligence anxiety and robotic surgery knowledge levels ($b = -0.015$, %95 CI [- 0,031, -0,003]).

Conclusion: It can be stated that the individual innovation feature contributes to reducing the anxiety of artificial intelligence in order to increase the robotic surgery knowledge levels of nursing students.

402 Examining the Relationship Between Anxiety Before Gynecological Surgery and Psychological Well-Being and Spirituality

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Background: Preoperative anxiety caused by hospitalization and related procedures in healthcare institutions is one of the most common psychological reactions in patients awaiting surgery.

Objectives: This study was conducted to determine the relationship between spirituality and preoperative anxiety on psychological well-being in patients awaiting gynecologic surgery.

Methods: The sample of this descriptive and cross-sectional study consisted of 180 inpatients awaiting gynecological surgery in the Gynecology and Obstetrics Clinic of a university hospital between August and September 2023. Data was collected with Personal Information Form, Anxiety Scale STAI-II, Psychological Well-Being Scale and Spirituality Scale. Ethics committee approval and institutional permission and patients' written consent to participate were obtained for the study. Data were tested using number, percentage, mean and Pearson correlation analysis using SPSS 23.0 statistical program.

Results: The mean age of the patients was 52.48 ± 12.37 , 56.7% primary school graduates, 58.9% housewives, 88.9% married, 87.8% Turkish, 12.2% Syrian, and 18.8% had a chronic illness. According to the mean scores of the scale, there was a high level of psychological well-being (47.53 ± 7.54), a medium level of spiritual well-being (31.72 ± 7.76), and medium levels of state anxiety (47.23 ± 3.48) and trait anxiety (51.94 ± 4.90). A significant positive relationship was found between spiritual well-being and psychological well-being. There were significant negative correlations between state anxiety and trait anxiety, and between spiritual well-being and psychological well-being ($p < 0.05$).

Conclusion: It was found that preoperative anxiety decreased as psychological well-being and spiritual well-being increased while awaiting gynecological surgery. For this reason, it is considered that interventions to increase psychological well-being and spiritual well-being will contribute to reducing pre-surgery anxiety.

ePosters

413 Use of the UVD Robot in the Operating Rooms

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Background: Healthcare Associated Infections affect patients in a hospital or other facility, and are not present or incubating at the time of health-care admission. Include infections contracted in the hospital but showing symptoms after discharge. Disinfection implies the use of various means and technologies that help destroy microorganisms and time reduce the possibility of spreading pathogens of surface to patient. The highest number of infections are on intensive care departments, neonatal units and operating rooms. It's important to constantly carry out personnel education, control samples of the non-living environment and introduce new means and technologies that destroy microorganisms. One of these technologies, or devices, is the UVD Robot, which destroys microorganisms by emitting high-intensity UVC light. The first installation of a UV robot in the Republic of Croatia took place in December 2022 in the General Hospital "Dr. Ivo Pedišić" in Sisak.

Objectives: Saving staff time to prepare the next operating procedure, preventing human errors in the disinfection process and highest level of patient and staff safety.

Methods: Swabs of non-live environment taken at the Department for Orthopedic Surgery and its Operating Rooms.

Results: Swabs of non-live environment taken after mechanical cleaning, chemical disinfection and application of UVD robotic disinfection resulted in the absence of any living microorganisms in the Department of Orthopedics and Operating Rooms.

Conclusion: UVD Robot use ensures high levels of patient and staff safety. Reduces risk of human error, reduces incidence of HAI and it is very effective in suppression of SARS-CoV. Research at local and global level has proven UVD Robot effectiveness.

417 INVESTIGATION OF THE MANAGEMENT OF BURNS IN PAEDIATRIC PATIENTS - SYSTEMATIC REVIEW

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Background: Children usually suffer partial thickness burns. The management of the burn includes wound preparation, wound coverage and post-traumatic care. There are different types of patches. An ideal pad should ensure that the wound remains moist, but not too wet.

Objectives: The purpose of the thesis was to investigate the management of burns in pediatric patients.

Methods: This is a systematic literature review. The literature search was performed in the Pubmed and Google Scholar databases. We used research articles that had been published in the last decade, were written in English and Greek, had access to the full text of the article, and concerned a pediatric population.

Results: Of the 5235 articles found, 10 were finally used. Adjunctive negative pressure therapy accelerates re-epithelialization in children with minor burns. Negative pressure therapy associated with skin regeneration has a higher success rate in treating complex burn wounds, promotes increased skin graft take rate, decreases skin graft maturation time, and increases skin graft take rate. Dressings containing silver, calcium, or zinc have similar effects on non-infectious burns compared to dressings containing only nitrofurazone and are superior in efficacy to plain paraffin dressings. Among silver dressings, the Mepilex AgTM dressing is more cost-effective in burn healing in children. Silver dressings require fewer changes, promote early burn healing with less hypertrophic scar formation.

Conclusion: Although the initial price of dressings with silver, calcium or zinc is more expensive than plain dressings, ultimately the treatment of burns with these dressings is cheaper because children stay fewer days in the hospital, need fewer changes and develop fewer complications. Silver dressings should not be considered the gold standard in non-infectious partial-thickness burns in children.

423 Reception of surgical patients in a high-tech environment

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Background: A surgery experience is perceived as stressful for the patient (pt). The pt. describes anxiety about being forgotten, feeling completely alone, like a cow in a stall, fear of changes in the body's appearance and fear of death. Nurses are encouraged to perform specialized tasks in line with technological advancements, rather than individual person-oriented nursing. This is particularly true for surgical procedures, where there is a significant focus on instrumental nursing. Nurses without surgical experience must complete eight competency cards in the first year. Card three deals with the reception of surgical patients.

Methods: Approximately ten informal interviews were conducted in connection with acquiring card three and analyzed with content analysis.

Results: Nurses describe feeling uncertain about their role. They feel that the focus is on technology and instruments. They experience a division between their focus on technology versus the patient. For example, "I am usually good at talking to patients, but I don't know what's happening," and "I'm afraid anesthesia-personal will get annoyed with me if I interfere".

Conclusion: A systematic learning program is developed to help newly hired nurses focus on personal individualized care in a highly technological environment.

424 The effect of nursing practice standard education for operating room nurses on the implementation of nursing practice standards -Surgical Count-

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Background: Nursing practice standards are valid statements about the quality of nursing care and are indicators of improving the quality of patient care and help to improve nursing practice. This study aims to measure the effectiveness of nursing practice standard education for operating room nurses and present basic data.

Objectives: The purpose of this study is to provide safe nursing care to surgical patients by improving the implementation of surgical practice standards and educating nursing practice standards centered on surgical coefficients for operating room nurses.

Methods: This study is a single-arm pre- and post-experimental study that evaluates the effect of nursing practice standards education on the standards implementation performance. The number of subjects was selected through the G-power program and evaluated through on-site practical observation using the <Surgical Count Checklist>. The data collected were analyzed by using IBM SPSS 25. It was carried out after receiving approval from the Research Ethics Deliberation Committee for the protection of the subject's intellectual health.

Results: For both scrub and circulating nurses, there was a statistically significant difference in the degree of implementation of the surgical coefficient after the training, and in particular, the degree of implementation of the 4th surgical count of the scrub nurse showed a significant difference.

Conclusion: As a result, after the nursing practice standard training, there was a significant change in the degree of practice. The significance of this study is that the effect of nursing practice standard education was conducted through on-site practice evaluation rather than self-report. However, since it is limited to a single hospital, it is difficult to generalize to all operating room nurses.

ePosters

427 EFFECTIVENESS OF PSYCHOSOCIAL INTERVENTIONS IN CHILDREN WITH BURNS AND CAREGIVERS -SYSTEMATIC REVIEW

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Background: Paediatric burns are very painful and traumatic injuries. The pain management of children with burns is very poor, with the result that both children and their caregivers have increased stress and distress. Non-pharmacological psychosocial interventions have been suggested to be effective in reducing pain and psychological illness.

Objectives: The aim of this study was to evaluate the effectiveness of each psychosocial intervention in reducing pain and psychological trauma, distress and / or stress in children with burns and their caregivers.

Methods: It is a systematic review of the literature. The literature review was done through the Pubmed database. Keywords used: Paediatric burns, Psychosocial interventions, Pain, Anxiety, Distress, Psychological trauma. Included were studies that were published in the last decade, were written in English or Greek, were performed on minor patients with burns of any degree and in any anatomical area, and were randomized and non-randomized controlled clinical trials.

Results: Of the 122 references found in the literature, 10 were included. These include distraction-based techniques, hypnosis / familiar images, therapeutic approaches, and patient preparation for the procedure. Distraction techniques that incorporate preparation for the procedure reduced pain, while increased "patient control" reduced patient and caregiver stress. Online Cognitive Behavioral Therapy reduced the symptoms of post-traumatic stress disorder in the short term but not in the long term.

Conclusion: The effects of psychosocial interventions on children with burns should be further investigated in other areas of health care settings.

428 ATTITUDES AND VIEWS OF MEDICAL AND NURSING STAFF REGARDING THE PARENTAL PRESENCE DURING VENIPUNCTURE OF PEDIATRIC PATIENTS

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Background: Venipuncture is a common practice in health care that most pediatric patients will need to undergo at some point. Studies show that parental presence during invasive procedures significantly diminishes children's distress, while improves cooperation with the healthcare team.

Objectives: This research study focuses on exploring the views of medical and nursing staff regarding parental presence during venipuncture. Additional objectives are the assessment of the degree of parental presence, as well as evaluating the information that is offered to them.

Methods: This cross-sectional study was done using data from medical and nursing staff of the Pediatric Hospitals "Agia Sofia" and "Panagioti & Aglaia Kyriakou". A specifically designed questionnaire was distributed from May to July 2020 to 360 doctors and nurses, with a return rate of 82%. Data processing was done with the statistical analysis software IBM® SPSS®.

Results: From the statistical data analysis emerged that doctors (50.6%) more highly perceived the positive psychological effect of parental presence during child venipuncture, compared to the nurses (12.6%), making them more willing to encourage parents to stay. Variables that increased the positive response to parental presence were female sex, higher nursing education level, personality traits such as emotionality and patience as well as the degree of emphasis given to patient's rights. At the same time, all medical and nursing staff mentioned use of helping practices, mostly immobilization of the child (48.8%) and distraction, while the use of local anesthetic wasn't favored.

Conclusion: In conclusion, the majority of doctors and nurses don't seem to recognize the benefits and don't encourage parental presence during venipuncture. Change in their behavior could improve pediatric patient care, via the achievement of a trusting and respectful relationship between child-parent and medical- nursing staff, so that possible physical and emotional repercussions of this painful procedure can be smoothed out.

429 Dehydration Among Sterile Operating Room Teams with a Focus on the Perioperative Nurse.

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Background: Healthcare professionals in interdisciplinary surgical teams face a potential risk of dehydration during prolonged and complex surgeries. Team members' working conditions rely on interdependence, and collaboration is influenced by each other's performance, crucial for patient safety and the work environment. Surgery is a high-risk, time-sensitive activity, demanding the team to be in optimal performance, well-hydrated, and fully focused on the operation. Literature reveals limited studies on this issue. According to El-Sharkawy et al., dehydration weakens memory, concentration, and decision-making. Hwang et al. found that perioperative dehydration is a common issue (91.1%) among 79 surveyed surgeons in California, with 70% reporting frequent dehydration symptoms such as headaches, fatigue, concentration difficulties, dry mouth, and constipation. Fluid intake was requested after 4-6 hours, leading to 69.6% experiencing dehydration symptoms (92% in women and 60% in men). Women reported earlier and more frequent dehydration impact than men, as reported by Hwang et al.

Objectives: No study in Denmark has examined how perioperative nurses and surgical teams' decision-making, problem-solving ability, and concentration are affected by dehydration.

Purpose: The pilot study aims to investigate whether perioperative nurses perceive themselves as dehydrated and how it affects performance and indirectly patient safety if so.

Methods: Questionnaire with both qualitative and quantitative elements sent to 50 perioperative nurses with 36 responses.

Results: 83.3% have experienced feeling dehydrated in the operating room. 63.9% of perioperative nurses report experiencing dehydration symptoms 4-6 hours into surgery before seeking fluids.

Conclusion: Perioperative nurses perceive dehydration as a significant and frequently occurring problem. The majority desires change, and many often experience symptoms such as headaches, concentration difficulties, dizziness, and sleep problems.

431 Investigation of The Effect of Operating Room Nurse's Working Order on Teamwork, Satisfaction and Motivation Levels

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Background: The aim of this study was to investigate whether the expertise of operating theatre nursing is not divided into any main discipline in the background and how this reflects on teamwork attitude, satisfaction and motivation levels.

Objectives: The operational dynamics of operating rooms in healthcare varies as central and unit operating rooms, leading to differences in nurses' duties and responsibilities. This study aims to assess how the aforementioned dynamics affect teamwork, satisfaction, and motivation levels of nurses.

Methods: Conducted between February and August 2023 in five hospitals in Izmir, the research followed a descriptive-comparative and cross-sectional design. In the study a sample of 176 nurses, 90 of which worked in a central operation room, whereas 86 were in a unit operating room were featured. Data collection utilized a Personal Information Form, Team STEPPS Teamwork Attitudes Questionnaire, and Adult Motivation Scale. SPSS 26.0 facilitated data analysis, employment percentage, frequency, mean, standart deviation, chi-square, t-test and correlation analysis.

Results: The analyses revealed higher scores among unit operating room nurses in teamwork attitudes, team structure, status monitoring, and mutual support sub-dimensions compared to central operating room nurses ($p < 0.05$). Satisfaction & motivation levels, and the motivation sub-dimension scores were also significantly higher for unit operating room nurses. A positive and significant relationship between teamwork and motivation scores and sub-dimensions of the unit operating room nurses is visible. Similarly, among central operating room nurses, a positive and moderately significant relationship existed between teamwork attitudes and motivation total scores, encompassing all sub-dimensions except mutual support.

Conclusion: It was observed that through the unit operating rooms, the teamwork attitudes, satisfaction and motivation had an increase, therefore it is advisable to establish unit operation rooms in order to observe better conditions.

ePosters

432 The Clinical Application of a Positive Psychology Intervention Program—PEACE in Patients after Left Ventricular Assist Device Implementation

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The present study examines the effectiveness of the PEACE (Positive Emotions After Acute Cardiac Events) program in patients with Left Ventricular Assist Device (LVAD). Positive Psychology is a field of big interest as its effectiveness and practical implementation offers benefits to the receivers. Positive Psychology is carried out through exercises, techniques and interventions in a variety of domains, like Health. Positive Psychology Interventions (PPIs) are training programs that aim to improve the individual's quality of life and well-being through the cultivation of positive components, such as gratitude and kindness (Meyers et al., 2013). PPIs not only enhance positive emotions, but also help reduce negative emotions such as anxiety, stress, and depression (Seligman et al., 2006). According to the literature, LVAD patients experience anxiety and depression. The research involved 14 participants aged 22 to 66 years and was collected from a hospital in Attica. Eight by telephone meetings were held during which they engaged in positive psychology exercises on gratitude, kindness, and character strengths. The results of the intervention showed that participants experienced a reduction in stress, depression and negative emotions and an increase in life satisfaction and positive emotions. There were no statistically significant changes in stress. Follow-up measures are important to dole out to test the long-term benefits of the intervention.

433 How do operating room nurses in Slovenia acquire knowledge compared to other members of the EORNA

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Background: It has been 40 years since the last formal education program for operating room nurses in Slovenia was completed. The program provided basic knowledge for future operating room nurses to work in operating theatres. During the long-standing absence of formal forms of education and intermediate unsuccessful attempts to introduce a specialization program, an operating room nurse in Slovenia continues to acquire knowledge and skills informally during work. In 2019, the European Operating Room Nurses Association (EORNA) conducted a study on educating operating room nurses in Europe. As a member of EORNA, Slovenia did not participate in this study for unknown reasons.

Objectives: This article presents education for operating room nurses in Slovenia following the example of the *Perioperative nursing Education in Europe survey* (Willems, 2019) and provide insight into the education of perioperative nurses in Slovenia compared to other members of the European Operating Room Nurses Association.

Main findings: In Slovenia, operating room nurses acquire knowledge with their work integration. Training differs across various hospitals. The minimal knowledge frame on a national level is not defined. The question arises about the quality of the education of operating room nurses.

Conclusion: Undoubtedly, today, at the time of the reform of the healthcare system in Slovenia, it is time to attend to the needs of operating room nurses in the clinical setting and to approach the development of an educational program in line with European recommendations and guidelines, and to provide quality and safe healthcare to patients.

434 Making the invisible visible - psychological safety in work by using feedback

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Background: At Hvidovre Hospital Orthopedic Operation Theatre, reflection, as a method, is implemented to create security and visibility in the department's existing culture and norms for newly hired colleagues.

During the past two years, the department has gained 6 new employees.

The concern was, how to link the colleagues to the department, in order to keep them attached to the department after completing their training. Statements from their formal 4-month interview with the mentor, showed that all the new employees had challenges in understanding the unspoken cultural norms and rules that existed in the department, even though they were already experienced nurses.

The department works with mentoring based on psychologist Christian Harpelund's theory of Onboarding, where reflection is part of the program in the intro period.

The mentor and the manager were inspired to create a reflection forum for the group together with professor Steen Wackerhausen's theory of reflection in practice.

He talks about the need to be aware of the field of practice's established conceptual resources, perspectives and room for action are put up for discussion.

The mentor and the manager set out to create a safe space where the group, with the mentor, could talk freely about challenges and experiences in everyday work to make visible the invisible in the ordinary with a critical eye.

Objectives: The purpose of the project is to gain knowledge if the group experience a greater degree of attachment to the department during their introduction period when reflection is used.

Methods: After the introduction period and two reflection forums a semi-structured group interview were conducted, containing openminded questions

Results: We are about to go through the results. They will be ready for presentation at the EORNA conference 2024. Provisional results shows that the employees feel psychologically safe and increased attachment to the department

435 Development programme

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Background: When a patient goes through surgery, a highly specialized multidisciplinary surgical team are essential. If one member of the team is missing, the operation cannot be carried out. Data shows that in the future we will have a lack of operating nurses. We therefore need to find new ways to develop other professional groups who can contribute to fulfill the need of highly performing surgical teams.

Objectives: We want to create a development program of skills and competencies for staff with other skills such as surgical technicians and social and health assistants who have their daily routine in the operating room.

Methods: The development program lasts 6 months. It consists of daily training in sterile assisting with supervision by a mentor, workshops including theory, hands on instrumental learning and competency card. Our program is inspired from psychological security based on Bjarne Wahlgrens theory on transfer to creates the best conditions.

Results: In a period of 6 months in 2023 we included 3 employees to the program. The employees, 2 social and health assistants and 1 surgical technician, have stated, that they experienced a safe learning environment where they are able to train their knowledge, skills, and competences to a higher level of performance in the surgical team. They find it motivating to be allowed to develop and become experienced and being able to contribute more to the team in the operating room.

Conclusion: During the test period we experience more flexibility in the nursing team and less vulnerable programs in everyday life with less canceled operations. We find a more professional based critical approach to our nursing practice in the multidisciplinary team collaboration, and we see motivated nursing teams delivering a high level of patient safety and nursing.

ePosters

436 Perception of quality of life in patients undergoing DIEP (Deep inferior epigastric perforator) breast reconstruction versus silicone implant with biological mesh

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Background: According to the WHO, 2,3 million women are diagnosed with breast cancer.

The usual treatment, depending on which stage the cancer is, is the mastectomy. This kind of surgery creates an important psychosocial impact on these patients. That's why breast reconstruction is frequent.

There are two types of breast reconstruction: the use of a silicone implant along with a biological mesh, and the autologous reconstruction (DIEP: Deep Inferior Epigastric Perforator), in which a section of fat, skin and vessels from the abdomen is dissected and removed to the breast-reconstructed area.

Objectives: To know and compare the perception of quality of life referred to breast reconstruction using a silicone implant with biological mesh, versus the use of the DIEP technique.

Methods: Retrospective, descriptive-analytical and observational study. The main variable was the quality of life of these patients, measured with the BREAST-Q questionnaire. Patients undergoing silicone implant with biological mesh type breast reconstruction or DIEP secondary to a mastectomy, during the period 2020-2021 at the Sant Pau's Hospital, were included in this study.

Data management and analysis have been carried out with the SPSS program, 25.0 version. A value of $p < 0,05$ was considered significant.

Results: Data from 50 patients were collected and analysed. 25 patients with silicone implant and biological mesh and DIEP reconstruction. The average age was 54. The 64% were unilateral reconstructions and the 34% of patients presented post-surgical complications. The hospital stay was 6 days.

DIEP patients presented a higher degree of psychological well-being with 83 (64-100) score compared with patients with silicone implant and biological mesh, who presented a score of 60 (48-77).

Conclusion: In our work, patients with a DIEP breast-reconstruction present a better quality of life perception in comparison to patients with a silicon implant and biological mesh reconstruction.

438 Management and impact of surgical smoke on team health in the intraoperative process: literature review

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Background: Thousands of patients go through surgeries every year, in which most of them electrocautery and other technologies are used generating smoke plume. This surgical smoke is composed of different size particles and also potentially harmful components. Everyday exposure involves health risks and hazards for the surgical team as well as patients. Smoke evacuators exist in order to prevent them and using personal protective equipment (PPE) is recommended.

Objectives: To describe hazards of surgical smoke and its intraoperative management

Methods: In November 2023 a review was made of the literature in the following data bases: PubMed, SciELO and Cochrane Library. Moreover some articles included in an evidence table from the Association of periOperative Registered Nurses (AORN) were reviewed

Results: After including the articles that met the screening criteria, 36 articles were finally selected for being reviewed. Results were divided in four groups: components of surgical smoke, risks and hazards of the exposure, knowledge and awareness of the problem, strategies and recommendations for surgical smoke mitigation

Discussion: It has evidenced that surgical smoke from electrosurgical units causes biologic, chemical and physical harms to exposed personnel. Furthermore there are mitigation strategies to avoid them and so decrease associated diseases.

Conclusion: New mitigation strategies for smoke evacuation are required to create compliance together with promoting use of HEPA filters and PPE and adequate smoking evacuators. Some laws should be implemented.

439 SUPRASTOMAL COLLAPSE OF TRACHEOSTOMIZED FIVE-YEAR OLD GIRL WITH DOWN SYNDROME

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Background: Suprastomal collapse is the collapse of the anterior tracheal wall in the inlet of the trachea above the stroma. This situation leads to airway obstruction during respiration.

Objectives: The surgical options of treating the suprastomal collapse and the presentation of the way we treated our patient.

Results: The patient is a five-year-old girl with down syndrome with the antecedent successful cardiovascular surgery at the age of 6 and 18 months. Two years later she was admitted to the intensive care unit for nearly two months due to pneumococcal respiratory infection for which she had underwent tracheostomy. Because of the severity of the infection, she had at the beginning twenty-four hours need of oxygenation. By the age of four years old she suffered of repeated respiratory infections with multiple hospitalizations, the latest with parainfluenza virus for which she needed High Flow Tracheal Oxygenation. Two months later she succeeded to remain without additional oxygen therapy and the stoma was always padded. The extubating process started with twenty-four hours oximetry, with the tube closed, which was normal. Shortly after she began to have hemorrhagic discharge from the stoma during the tracheal bathing. She underwent a bronchoscopy where she was diagnosed with suprastomal collapse. She was referred to our center for further treatment. We conducted a new bronchoscopy, and the prior findings were confirmed. With the use of cold instruments, we removed the excessive collapsed mucosa. The tracheostomy remained for another two days and after that the girl was decannulated.

Conclusion: Bronchoscopy is used to diagnose suprastomal collapse. Treatment options, among others, include excision with cold instruments, endoscopic excision, tracheal resection, and anastomoses.

440 SURGERY FOR MALE STRESS URINARY INCONTINENCE. ATOMS DEVICE

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Background: Cancer is one of the leading causes of morbidity and mortality in the world. Prostate tumours are the fifth most common tumour in the world and the leading cause of death in men.

Survival has increased in recent years due to the variety of available treatments depending on the stage of the cancer, with radical, open or laparoscopic surgery being possible.

One of the complications after radical prostatectomy is stress urinary incontinence. One of the newest treatment options is the use of slings. One such system is the ATOMs (adjustable transobturator male system).

Objectives:

- To explain the surgical technique of placing the ATOMs system.
- To report on the number of re-interventions due to extrusion of the system.

Methods: Observational study carried out at the HUCC from 2020 to the present. A total of 14 patients underwent ATOMs surgery.

Results: 14 patients underwent ATOMs surgery, 6 of which were reoperated due to extrusion of the system.

Conclusion:

- Safe and suitable device for post-prostatectomy male incontinent patients.
- Good treatment for the correction and control of mild to medium post-surgical urinary incontinence.
- Improvement in voiding frequency.
- We do not have a significant number of cases to establish clear results of effectiveness.
- Progress on the learning curve for professionals.
- One of the limitations of the study is the lack of physical follow-up of the patients who underwent surgery.

ePosters

441 Distraction During Surgery and Their Impact on Surgical Team Members

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Background: Interruptions in the surgical environment have been accepted as a very important factor that prolongs the operation time and affects patient safety.

Objectives: The objective of this study was to explore distractions in the surgical process and their implications on healthcare professionals working in the operating room.

Methods: The research employed a descriptive and qualitative approach and was conducted at a Training and Research Hospital in the Southeastern Anatolia region of Turkey. The sample comprised 30 participants from the surgical team, including surgeons, nurses, and anesthesia teams. Data collection involved conducting in-depth interviews with participants, utilizing open-ended questions, and recording the responses with a voice recorder. The analysis was carried out through thematic and content analysis methods, following the guidelines of the COREQ 32 directive.

Results: The findings of the study unveiled four major themes related to distractions in the operating room: “distractions in the operating room,” “effects of distractions,” “effects on the social lives of employees,” and “requests and suggestions for solutions.” Participants identified various distractions, such as unnecessary staff movements, off-case conversations, a noisy environment, equipment shortages, and malfunctions, as well as physical issues within the operating environment. Furthermore, they cited the impact of these distractions on their psychological state, increased risk of errors, and decreased concentration among healthcare professionals.

The study conclusively demonstrated that distractions significantly influence the surgical team, the overall surgical process, and ultimately, patient safety. To address these challenges, participants proposed valuable recommendations, including the effective organization of the surgical process, the necessity for qualified personnel, and the resolution of equipment and physical environment issues.

Conclusion: This research provides valuable insights into the perceptions and experiences of the surgical team concerning distractions during surgery. Moreover, it underscores the utmost importance of addressing these distractions to enhance patient safety and optimize surgical outcomes.

442 Psychological Resilience and Fear of Covid-19 Among Surgical Nurses: A Descriptive Cross-Sectional Study

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Background: Identifying the psychosocial challenges that surgical nurses face in the pandemic due to fear of Covid-19 can significantly improve nurses' resilience, patient safety and quality of care.

Objectives: Our aim is to investigate the effect of psychological resilience on fear of Covid-19 in surgical nurses.

Methods: This descriptive cross-sectional study was conducted between March 2021 and July 2021. A total of 115 nurses from the surgical clinics of the Training and Research Hospital (45) and the University Hospital (120) in Diyarbakır province participated in the study. Data was collected via “Google Forms”. Sociodemographic Information Form, Covid-19 Fear Scale (Ahorsu et al., 2020), and Adult Resilience Scale (Friborg et al., 2003) were included. The second scale consists of six sub-dimensions and 33 items: “Self-Perception, Future Perception, Structural Style, Social Competence, Family Cohesion and Social Resources”.

Results: Participants living separately from normal family members scored higher on the Covid-19 Fear Scale (mean = 19.41) than those living with family (mean = 15.88) and those living alone (mean = 10.50) ($p = 0.016 < 0.05$). In addition, individuals living alone had lower scores in the Family Cohesion subdimension (mean=15.25) than those living with their family (mean=19.43). A weak, positive correlation was observed between age and fear of Covid-19 ($p = 0.048 < 0.05$). There was also a weak, negative relationship between fear of Covid-19 and the Perception of the Future sub-dimension score on the Adult Resilience Scale.

Conclusion: The findings show that individuals living separately from their normal family members during the Covid-19

process experience higher levels of virus fear than those living with their families or living alone. In addition, it has been observed that living alone is associated with reduced family cohesion. Additionally, fear of Covid-19 tends to increase with age and is negatively linked to perceptions of the future.

444 Investigation of the Postgraduate Theses That Related to Deep Vein Thrombosis in the Field of Nursing in Türkiye

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Background: Deep Vein Thrombosis (DVT) is an important complication seen in surgical patients. Surgical nurses take an active role in managing the DVT prevention and treatment process.

Objectives: This study aims to determine the postgraduate theses that are related to DVT in the field of nursing in Türkiye.

Methods: A retrospective, and descriptive study data were accessed on 25 January 2024 from the Council of Higher Education Thesis Center Database in Türkiye. Inclusion criteria of theses; full-text access and search terms include “deep vein thrombosis”, “thrombosis” or “venous thromboembolism”. 10 theses were included in the study. “Thesis Evaluation Form” was used to collect the data. The data were evaluated with descriptive statistical methods.

Results: It reached 8 master’s and 2 doctoral theses between 2011 and 2023 at the end of the scanning. The number of samples in these was 40-750. The study design of theses was descriptive (n=5), experimental (n=3), and semi-experimental (n=2). Theses were investigated risk factors, nurses’ knowledge levels, the effect of patient education, and antiembolic sock length on preventing DVT.

Conclusion: It has been determined that a limited number of thesis studies have been conducted on the subject of deep vein thrombosis in Türkiye. Also, most of the thesis designs were descriptive studies. It is recommended to conduct randomized controlled trials with high evidence.

445 Efficacy of the nurse interview in the face of preoperative anxiety and information in patients undergoing surgical intervention at HM Montepíncipe.

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Background: Anxiety is approached from a nursing perspective, emphasizing the urgent need for further research, as concluded in a systematic review and meta-analysis. The focus is on the methodology of nursing interviews and the importance of professional and humane interventions. The prevalence and adaptive nature of anxiety are epidemiologically explored, with a specific emphasis on preoperative anxiety in patients scheduled for surgeries.

Principio del formulario

Final del formulario

Objectives:

The objectives are outlined as follows:

- Evaluate the effectiveness of nursing visits through preoperative interviews to reduce anxiety and improve information.
- Examine the correlation between preoperative anxiety and postoperative pain, as well as the use of analgesics.
- Investigate the relationship between preoperative anxiety and the standard anesthesia dosage.

Methods: The proposed methodology involves the prospective comparison of two cohorts (A and B), where Cohort A represents the current status of surgical patients, and Cohort B implements a new nursing interview protocol. Scales such as APAIS and STAI-e will be used to assess anxiety and information. The timeframe for each study is a maximum of 6 months.

The research project is divided into three phases. The first includes a systematic review and meta-analysis. The second is the initial investigation (Cohort A) analyzing patients with the existing interview protocol. The third (Cohort B) will use

ePosters

a new interview protocol focused on psychological needs. The final phase involves a comparative analysis between the historical and prospective studies with the new protocol.

Conclusion: In conclusion, the need for more research is evident, as emphasized by the systematic review. The current research not only measures preoperative anxiety but also explores its relationships with postoperative pain and anesthesia dosage, aiming to enhance the nursing intervention model for an improved patient experience.

Principio del formulario

Final del formulario

446 Retention of surgical nurse

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Background: In Denmark as in the rest of Europe there is shortage of nurses especially in public healthcare. The prognosis for the years to come is not looking any better, and in 2030 the estimated lack of nurses in Denmark is 8000. Much research has focused on why the nurses leave public employment, but not much focus has been on why nurses stay in their present workplace.

Objectives: To gain insight into why OR nurses stay in their current (public) workplace despite a promise of better pay and better work/life balance in the private healthcare. The ultimate objective was to discover ways or suggestions on how to retain and recruit OR nurses.

Methods: A qualitative and anonymous questionnaire distributed to the OR nurses in 3 OR wards in 3 different hospitals in The Capital Region of Denmark. 2 of the 3 OR wards have an intake of trauma patients and works in both day and night shifts, whereas the last OR ward is day surgery only and no trauma patients.

Results: Out of 111 questionnaires, 87 were returned and correctly completed. The results indicate that regardless of OR experience, the nurses all rank high professionalism as a reason to stay. The result also showed that the nurses with the fewest and the most years of OR experience indicate more varied reasons to stay whereas the “middle group” mainly stay because of reasons related to the specific OR profession.

Conclusion: All though pay assumingly is a reason to leave the public healthcare, this study indicates that when focusing on why OR nurses stay, the pay doesn't seem to be a priority. Instead, OR nurse management could focus their retainment and recruiting efforts on continuous professional education of the OR nurses and on obtaining/maintaining a positive interdisciplinary work environment.

452 Programs for the induction and training of new nursing staff in the Surgical Unit

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Background: Working as operating room nurse in Spain does not require mandatory specialization or specific postgraduate training. This may compromise patient safety. Some authors recommend complementary training. The reality is new staff are not familiar with the duties of the Surgical Unit. In the last ten years we have created training programs to facilitate the process of learning and adaptation.

Objective: Present the built-in planning for the training of new nurses in our Surgical Unit.

Methods: Working groups have been formed by operating room nurses on a voluntary, collaborative and time-sequence basis; dedicated to developing training and mentoring programs aimed at new staff nurses.

Uploaded into the Virtual Campus of *Salud-Castilla-León*, supported by the training department. The programmes of 100 hours each, have a presential part in the operating room to put into practice what has been learned online.

Listed as:

- QUIROforma: four weeks of induction program, prior to effective incorporation to the post.
- QUIROmentor: to learn in depth into the different surgical specialities during the two years after joining: 1.Anesthesia, 2.Laparoscopy, 3.Trauma_Prosthesis, 4.Otorhinolaryngology 5.Arthroscopy.

Results: Programs accredited by the Health Professions Continuing Education Commission. Recognition, the effort to teach and learn, through merits in the professional career to: authors, online tutors, presental mentors and students, with remuneration at four levels.

Lower level of professional burnout is shown by the participants in the construction of the programs, perceiving a higher level of perioperative competence in the new staff who increased by 61 points the Perioperative Competence Perception Scale. Satisfaction surveys are in the 8-10 out of 10 range.

Conclusion: These results highlight the impact of training the new nurses in the Surgical Unit and encourage us to continue the dynamics of teaching with the aid of new training programs in the future.

457 Rapid recovery protocol in total knee prosthesis

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¹

The main objective of this work is to present the protocol that we apply in our center that ensures the highest quality in the provision of care to the patient who must undergo the total knee prosthesis intervention.

The knee is made up of three bones (femur, tibia and patella) which are covered at their ends with articular cartilage for friction during movement, allowing us to move and walk with ease.

A knee prosthesis is the replacement of the joint with synthetic parts through a surgical intervention. They are implants that are placed in the damaged structure and replace its function, allowing the patient to move the joint again, eliminating any pain they may have.

Rapid recovery surgery, or fast-track, has appeared in recent decades as a combination of optimizing surgical results, increasing patient satisfaction and reducing costs. In this sense, it seeks immediate post-surgical mobilization, relying on a multidisciplinary approach, multimodal intervention and analgesia, a limitation in the use of opiates and active participation of the patient in their own recovery.

These programs are designed in a multidisciplinary way by the different professionals who interact at some point with the person who will be operated on. The working groups include surgeons, anesthesiologists, nurses, rehabilitators and physiotherapists.

This work has been carried out following the structure of the manuals and procedures that exist in our hospital.

460 Management of Gigantomastia in Adolescence - Effective Utilization of Modified Pitanguy Reduction Mammoplasty in a Complex Case of a 12-Year-Old

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Background: Juvenile gigantomastia, an uncommon condition of significant breast enlargement in adolescence, poses challenges for diagnosis and treatment. The cause of this disorder is not well understood, and different surgical methods create debates on the best way to manage it. In this case, a 12-year-old girl from the Philippines, weighing 45 kilos, presented with progressive bilateral and symmetric gigantomastia over ten months. Otherwise healthy, she had no familial history of gigantomastia, showed normal blood count and hormonal tests, and tested negative for pregnancy. Due to the profound physical and psychological effects, the patient underwent a modified Pitanguy reduction mammoplasty.

Objectives: This study explores the effectiveness of modified Pitanguy reduction mammoplasty in addressing juvenile gigantomastia. The method, tailored to individual cases, ensures the preservation of the nipple-areolar complex and breast tissue, promoting postoperative sensibility and facilitating potential future breastfeeding.

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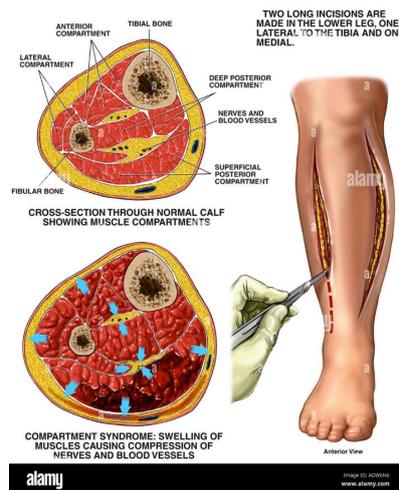
Conclusion: The surgical procedure effectively treated the extensive bilateral and symmetric gigantomastia in the patient. Preservation of the nipple-areolar complex and essential breast tissue resulted in favorable cosmetic outcomes. The removal of 7.7 kilos of breast tissue without requiring a blood transfusion contributed to the satisfaction observed 12 months postoperatively.

This case underscores the effectiveness of the modified Pitanguy method in managing gigantomastia, emphasizing both aesthetic and functional advantages. The positive results, achieved without the need for hormonal therapy, highlight the significance of this surgical approach in the realm of personalized patient care. Further research is essential to validate and refine such techniques, advancing our understanding and enhancing the management of gigantomastia.

461 Preventing well leg compartment syndrome among patients in the lithotomy position— Operating room nurses' perspectives: A qualitative study

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The aim was to describe operating room nurses' experiences of well leg compartment syndrome and how they work perioperative to prevent it from occurring during the lithotomy position.

Focus group interviews were performed with 10 operating room (OR) nurses. The interviews were semi-structured and analysed by qualitative content analysis. The study complied with the Consolidated Criteria for Reporting Qualitative Research (COREQ).

Our result describes OR nurses' experiences of WLCS and how they work perioperative to prevent it from occurring during the lithotomy position.

Main theme: The operating room nurses shoulder duty and responsibility, independently and in the team, but they need more structural support and knowledge	
Themes	Subthemes
Follow routines whenever possible	Ensure the use of the WHO checklist for safe surgery Follow and question guidelines Experience that routines about the time in the lithotomy position vary or are missing
Take responsibility for positioning	Take the time to position the patient in the lithotomy position Choose leg supports that are better for the patient in the given time Use materials and equipment that reduce the risk of pressure
Balance between flexibility and strict routines	Try to handle changing conditions wisely during surgery Deviate from the lithotomy position during certain operations
Develop and participate in teamwork	Ensure that the team around the patient works efficiently Share experiences with colleagues
Recognize the need for expanded knowledge	Too limited knowledge of factors causing complications after the lithotomy position Awareness of the risks related to certain procedures

Conclusion: If attention to the lithotomy position would be better acknowledged in the checklist and included the whole team, it would probably solve some of the problems, since teamwork has been described as important for problem-solving. <http://doi.org/10.1002/nop2.1971>

466 Wet surgical instrument boxes: an attack on patient safety +

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Background: Two incidents were reported, related to the presence of moisture in sterile surgical instruments

Objectives: Evaluate the factors involved in the presence of humidity in containers of sterilized material.

Methods: The following actions were carried out: Review of indicators of the sterilization process, verification of the weight of the containers, evaluation of the correct loading of the sterilizer, review of the packaging method, revision the documentation of preventive maintenance of the 2 autoclaves and technical review of the 2 autoclaves involved in the incidents.

Results: After the evaluation of the incidents, the following results were found:

Incident 1: compliant items: indicators of the sterilization process, weight of containers ≤ 10 Kg, evaluation of the correct loading of the sterilizer and preventive maintenance of the autoclave; packaging method: internal biological barrier plus rigid container with reusable filter (500 cycles), the commercial house does not provide a certificate of the number of sterilization cycles of the reusable filter and the technical review by company, the incident was caused by a low vacuum level caused by a specific drop in pressure in the water line.

Incident 2: compliant items: Weight of containers ≤ 10 Kg, Indicators of the sterilization process, evaluation of the correct loading of the sterilizer, technical review of the company; Non-conforming items: instrument packaging method.

Conclusion: After studying the incident, the following improvement actions were proposed: 1) request traceability of reusable filters or incorporate containers with single-use filters. 2) Periodically monitor and record pressures of the autoclaves. 3) Consider renewing the autoclaves, for a period of use > 15 years. 4) Modify the wrapping of perforated containers: 1 layer of absorbent paper under the container and wrap with a 200-gauge biological barrier layer and a second 400-gauge layer. 5) Continuing training for operating room and sterilization staff.

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470 The importance of reporting adverse events in an operating room

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Background: Bearing in mind that “To err is human, to cover up is inexcusable and not to learn from mistakes is unforgivable”, as stated by the WHO Patient Safety representative, Sir Liam Donaldson, the importance of reporting adverse events is highlighted as a strategy to promote a culture of safety for nursing care in all contexts and particularly in the operating theatre. Ugur (2016) is of the opinion that operating theaters, as care units, are one of the areas of health where it is described that failures are frequent. Due to the nature and complexity of the care provided here, the great diversity and number of health professionals who work as a team, conditions are created for adverse events to occur. Analyzing the notifications from the operating theatre, it is clear that it's underreported and there is still a vast field of opportunities to notify.

Therefore, we defined a project to implement a set of actions, which aim to promote an increase of notification of adverse events in the Operating theatre.

Objectives: Increase the number of adverse event notifications reported, in operating theatre, by 50% over a period of 12 months, as a result of the project implementation;

Methods: Different methodologies were adopted to promote the reporting of adverse events, namely training, focus groups, dynamic framework and adaptation of the reporting platform.

Results: Until December 2023, we recorded a 25% increase in the notification of adverse events. Implemented a dynamic framework to disseminate data and messages to promote adverse events notification. Access to the notification platform outside the hospital is now allowed.

Conclusion: Using the proposed methodology, it was interesting to understand the context and develop strategies that contribute to promoting the notification of adverse events, with the goal of creating value and to promote a patient safety culture.

471 Nursing care in pediatric epidural haematoma

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Background: Epidural haematoma is a blood collection between the duramater and the skull. Intracranial hypertension is produced by the haematoma and if it progresses can lead to brain herniation and death. It requires emergency surgical treatment.

Patient's life depends on the quality of care.

Objectives: Developing a guide which describes pediatric surgical specific care, necessary materials, equipment and arrangement in theatre. This should result in new staff easier training, more standardized care and better patient safety.

Methods:

- Having a close contact with neurosurgeons, anaesthesiologists and specialized nursing staff to clarify the indications, specific materials and equipment arrangement.
- Current hospitals documentation on the topic review.
- Literature review.

Results: Based on the information obtained, we have produced a pediatric epidural haematoma drainage guide. This results in better quality of care, a unified action criteria and allows for subsequent reassessment.

Conclusion: Neurosurgical pediatric procedures require special equipment. Nursing staff must know about it in order to minimize errors and respond in the most effective way possible in an emergency.

Implementing epidural haematoma drainage guide facilitates new staff training, minimizes surgical timing, standardizing nursing practices and guarantees safety at work.

474 Script concordance test as a web-based training tool for perioperative postgraduate nursing students

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Background: The virtual training strategy based on the script concordance test is an emerging tool for the assessment of clinical reasoning under uncertain circumstances.

Objectives: To explore the perceived usability of SCT as a digital educational strategy among perioperative postgraduate nursing students.

Methods: The online training based on script concordance is a tool that consists of presenting clinical cases observed in clinical practice, where data are either complex and/or incomplete, and proposes hypothetical approaches to intervene. Methodology: Qualitative descriptive. Data collection by e-questionnaire.

Results: Of the 32 respondents, 9.3 per cent were familiar with the TCS. All of them said that it was a helpful tool, suitable for the real world in clinical practice and reflects the situations encountered in clinical practice during their training.

Conclusion: The students considered that the TCS could be useful for ongoing training, the (in)formal discussion of clinical cases and standardisation of practices.

475 Patient education and innovation: role of the nurse in outpatient surgery

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Background: Preoperative anxiety is a phenomenon observed in patients before a surgical process (1,2), and has a close relationship with possible post-surgical complications (3). One of the causes is the lack of information about the procedure, instructions on preparation and post-surgical care. New technological methods such as Virtual Reality (VR) are used to help assimilate information and better understand the procedure, which could reduce anxiety and improve satisfaction. VR is a useful health tool that has the potential to revolutionize the way education is provided to patients and families in outpatient surgery (4,5).

3 KEY WORDS: Virtual Reality, surgery, patient education

Objectives: Know the use of virtual reality as a tool to educate the patient in the surgical care process in an outpatient surgery unit.

Methods: Systematic review in three databases (PubMed, Cochrane, SciELO) following a search strategy: "virtual reality" AND Surgery AND "patient education" OR "patient preparation". Publications in English and Spanish after 2015 were considered. A search, evaluation and data extraction of articles was carried out to identify the benefits of using virtual reality as an educational tool for the surgical patient.

Results: A total of 16 studies have been reviewed, including clinical trials and observational studies. The results determine that VR is an effective tool to improve the understanding of information and preparation of patients before surgery, as well as to promote a positive experience and reduce negative emotions before a surgical process (6, 7). It has also been used in the pediatric population, observing a decrease in anxiety and better compliance with anesthetic induction (8).

Conclusion: The potential of VR in surgery is related to better acquisition of information. Despite this, the novelty of this tool in training patients before surgery is not yet widely developed; Future research is suggested to continue improving its clinical applicability.

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476 Improving Patient Safety in Geriatric Surgical Care: A Comprehensive Overview

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Background: The increasing elderly population is a global phenomenon that causes changes in the epidemiology of the surgical patient. Outpatient major surgery unit has represented an advance, allowing more aggressive procedures at extreme ages (1,2).

This demographic evolution requires a complete comprehensive assessment given the greater risk of postoperative complications associated with physiological changes, comorbidities and polypharmacy. It is essential that evidence-based practices are implemented to optimize safety and perceived quality (3,4).

3 KEY WORDS: Elderly, Perioperative care, outpatient surgery.

Objectives: To analyze the geriatric patient safety in surgical care during the perioperative process. Describe the key factors that contribute to this security and the strategies aimed at reducing risks and improving results.

Methods: Review of the literature in different databases (PubMed, Scopus, SciELO, etc.) on the scientific evidence found in previous studies in relation to the management of geriatric patients in outpatient surgery. Selection criteria such as perioperative care and frail elderly were included. An exhaustive search, evaluation and analysis of articles was carried out.

Results: A total of 14 studies were reviewed, including observational studies and systematic reviews, 7 provided a high level of scientific evidence. They highlighted the importance of a thorough preoperative assessment: comorbidities, frailty, functional and cognitive capacity (5,6). The importance of quality nursing care (7) and the multidisciplinary team was also highlighted (8). Good intraoperative management through temperature regulation and fluid optimization was emphasized (9). A multimodal approach to pain control, early mobility, thrombosis prevention, and close postoperative follow-up improve outcomes (10).

Conclusion: The elderly patient in outpatient surgery has its own characteristics that require special considerations to guarantee comprehensive care adapted to their needs, reducing additional risk factors. It is important to take into account their fragility and recovery capacity when selecting them for major surgery, through adequate multidisciplinary coordination and adapted strategies.

478 ASD (Atrial Septal defect) Closure : Surgery or Cath Lab?

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Objectives: Congenital heart disease (CHD) patients represent an important population within cardiac disease, of which atrial septal defect (ASD) is one of the most common diagnoses. Management of ASD encompasses a range of open-heart surgery and minimally invasive approaches, including transcatheter device

Methods: The study included patients referred for transcatheter ASD closure and open heart surgery closure during period 2016-2022 in our hospital. The sample of the study consisted of 123 patients with ASD (secundum) from «Agia Sofia» Children's hospital during the period of January 2016 - February 2022. Data were collected from patients records and files.

Results: One hundred twenty three patients (median weight 24,3 kg, 2-9,5 years, 65% female) were included in the study. Transcatheter defect closure was successful in 82 of them (median weight 24,Kg, QP/QS 1,58). In 42 patients the ASD closure was performed via open heart surgery (median weight 24,3Kg, median bypass time 45mins, median cross clamp time 22 mins).

Conclusion: Transcatheter closure is a widespread technique used to treat secundum atrial septal defects (ASDs). When compared to surgery, it provides a less invasive approach with quicker recovery and reduced physical and psychological impact. Nowadays, almost 85-90% of all secundum ASD can be closed by using a transcatheter approach. However, several limitations may have a significant impact on the feasibility and success of percutaneous ASD closure. Limitations can be grouped as: (I) anatomical; (II) device-related; (III) associated defects and natural history associated issues; (IV) physiological; (V) complications. We should be aware of potential limits of percutaneous ASD closure.

480 The Effect of Foot Bath Applied After Laparoscopic Cholecystectomy Surgery on Flatulence, Pain, and Patient Satisfaction: A Randomized Controlled Trial Protocol

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Background: Pneumoperitoneum is frequently performed in laparoscopic cholecystectomy operations and intestinal peristalsis slows down especially after abdominal operations. Due to this, problems in passing gas can be seen. The patient's pain may be exacerbated due to inability to pass gas.

Objectives: This study aims to determine the effect of foot bath applied after laparoscopic cholecystectomy surgery on flatulence, pain, and patient satisfaction.

Methods: This study was planned as a randomized controlled single-blind experimental study. The study will be conducted in a general surgery clinic in Türkiye with 146 patients. Patients will be assigned to the experimental and control groups by "block stratification and randomization methods". By using the random numbers table in the computer program www.randomize.org, 73 patients in the experimental group and 73 patients in the control group will be decided. The data of the study will be collected by Personal Information Form, Burping and Pain Follow-up Form, Visual Analog Scale (VAS), and Newcastle Satisfaction with Nursing Scales (NSNS). Personal information form, gas expulsion and pain assessment forms will be applied to the experimental and control group patients. Patients in the experimental group will receive twice hot water foot baths after surgery. Patient care satisfaction scale will be applied after the discharge decision in the experimental and control group patients.

Results: This is no result because a clinical trial protocol and not beginning to research.

Conclusion: With this study, it is aimed to reflect the hot water foot bath application after laparoscopic cholecystectomy into practice in institutions and to contribute to the increase of patients' satisfaction with nursing care by shortening the flatulence, decreasing pain experiences and increasing patient comfort.

483 Development of e-learning materials for learning anatomy and physiology necessary for surgical nursing

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Background: Knowledge of anatomy and physiology is essential to the development of safe, high-quality operating room nursing care.

However, much of the surgical nursing expertise is learned through on-the-job training (OJT), which limits the amount of time spent learning the anatomy and physiology required for surgical nursing.

Objectives: Develop e-learning materials that enable operating room nurses to efficiently and effectively learn the anatomy and physiology required for surgical nursing.

Methods: Based on Merrill's ID first principles, an e-learning story was created using a clinical case study of perioperative nursing. As the educational material story progresses, quizzes requiring clinical judgment are given, and the structure is designed so that students learn to make correct clinical judgments while answering the quizzes.

In this way, learners will be able to visualize in advance the situations they will experience in the clinical setting, and will be able to use the learning outcomes in the clinical setting.

A survey of two novice nurses and two senior nurses in the operating room were used to test the educational materials and to conduct interviews, and the results were analyzed.

Results: The novice nurses repeatedly tried out the material and evaluated that they had opportunities to apply the knowledge they learned from the material to clinical situations.

Senior nurses appreciated the tool because it allowed them to teach uniform and safe anatomy and physiology without holding study sessions, thus helping to reduce the burden required for education.

Conclusion: The material was designed for convenience and set at an appropriate amount of material and level of difficulty, allowing for repetitive learning.

We believe that we were able to apply what we learned in our clinical practice by creating a teaching scenario based on a clinical case.

The results suggest that this material is useful as an educational support tool.

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486 Intra-Operative Wound Irrigation with Povidone-iodine: a review.

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Background: During open procedures, it is common practice for surgeons to use fluids irrigations, both intra abdominal, and before the closure of the incision. This practice is generally used to clear tissues from residues or biological fluids and to decrease the risk of Surgical Site Infections (SSI). The most frequently used Intra-Operative Wound Irrigation (IOWI) is saline solution or saline solution with antiseptic agents/antibiotics. Povidone-iodine (PI) is recommended for the prevention of SSI for his bactericidal ability against a large array of pathogens. While most of the literature refer to its use topically, there are no official recommendations of its use in IOWI and there are general doubts about its potential cytotoxicity.

Objectives: The aim of this literature review is to find scientific evidence supporting the clinical practice of IOWI-PI.

Methods: The foreground question was formulated using the PICO method, and the review was conducted using the advanced search engine in the PubMed/Medline database. We used a combination of two keywords,; "Iodine Irrigation" and "Infection". We have selected only clinical, randomized controlled trials from 2013 to 2024.

Results: We obtained a total of 724 items. We included 30 studies in the review. The results are summarized qualitatively in a table: 14 studies adhere to the inclusion criteria. The most analyzed studies showed no significant benefits of rate of SSIs comparing IOWI treatment with PI and saline solution and treatment without irrigation. No studies investigated the potential cytotoxicity risk associated with the IOWI-PI.

Conclusion: There are no standard guidelines for IOWI (fluid type, additives, contact time, washing volume) for best practice to guide operating room nurses and surgeons. According to the review and the World Health Organization (WHO) Guidelines for SSIs, the use of IO-PI needs to be developed and specific studies and recommendations need updating to define a clinical standard.

491 Teamwork in patient positioning

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Background: Positioning of surgical patients is crucial to avoid or minimize positioning injuries. At Rigshospitalet orthopedic surgical department the mobile CT scanner AIRO is used, which comes with a special positioning aid. The CT scanner is used perioperatively for patients with severe spinal deformities who are positioned on the corresponding aid. It is essential that patients are positioned correctly, and that the entire patient's spine can be scanned. At the same time, there must be space for various equipment on the bed. It is a complex positioning, and many factors must come together for everything to work.

Objectives: The aim of the study is to implement a working document as a tool for positioning patients. The tool can be used by nurses who are not experienced in using AIRO, as well as nurses who need to train a colleague in using AIRO. In the development of the tool, anaesthetist nurses, operating room nurses, surgeons, porters, and neurophysiology assistants were involved. It is a one-pager with several points of attention when positioning in the specified aid. After the patient is positioned, a positioning check is performed, where a nurse reads out, and the entire team systematically goes through it.

Conclusion: The working document is currently in the testing phase. The goal for this implementation is to avoid inappropriate positions where the entire patient's spine cannot be scanned, and there is no room for the surgical team to stand around the bed. With this checklist there will also be a focus on the positioning to prevent any bearing damage. Furthermore the expectations for the working document is to support the coordination in the team and simultaneously ensure patient safety and assist in staff training.

500 Intraoperative time out - Safe Surgery through a Multidisciplinary Timeout

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Background: Surgical team's decision-making in the intraoperative setting, including structured and systematic communication, is vital for ensuring patient safety and quality care. Hence, during critical surgeries, the complex and dynamic environment with possible time pressure, may further challenge well-functioned communication and the use of intraoperative timeout. Yet, the extent to which intraoperative timeout is used and widely implemented is incompletely understood

Objectives: To explore the prevalence and applicability of using an intraoperative timeout during peroperative surgeries.

Methods: We conducted a cross-sectional survey of operating room nurses' use and knowledge about intraoperative timeout. In a collaborative working group of surgeons and operating room nurses, we performed an anonymous survey. Following pilot testing the survey, we distributed it among experienced operating room nurses from various surgical specialties, involved in the treatment of acute and unstable surgical patients. Data were collected from operating room nurses' during the annual congress for operating room nurses' in Denmark. Descriptive statistical analysis was conducted.

Results: We had a response rate of 85% (n = 111). We identified four key areas related to the perioperative nurses' experience of the communication structure: (1) 76% reported no additional timeouts during procedures, (2) 79% observed changes in surgical strategy during operations, (3) 31% noted the team's response to strategy changes, and (4) 46% felt unable to suggest changes to senior surgeons.

Conclusion: The study identified a tendency in Denmark to lack standardized intraoperative timeout for acute patients. Further research is needed to explore communication in the operating room and identify evidence-based needs.

505 Safe positioning at operation table, hip operation (posterior positioning)

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Background: Posterior positioning in hip replacement refers to the surgical approach used to expose the hip joint during the procedure. The posterior approach is one of the most commonly used techniques, allowing excellent visualization of the acetabulum and femoral shaft. It is particularly popular for revision joint replacement surgery and cases where only the femoral component needs to be replaced. Posterior positioning in hip replacement surgery has both benefits and risks. Using a mini-posterior approach with a monoblock dual-mobility implant can achieve early hip stability. However, the posterior approach may have a higher dislocation rate in certain patient populations, such as demented or elderly bedridden patients who lie in a flexed and adducted position.

Objectives: This review aims to give a comprehensive picture of the benefits and risks of posterior positioning in hip replacement, based on the latest scientific data.

Conclusion: Posterior positioning in hip replacement surgery has benefits such as stability and patient satisfaction, but it also carries risks of dislocation and complications. Preserving the piriformis muscle in the posterior approach for hemiarthroplasty can significantly reduce the risk of dislocation and reoperation rates. When it comes to higher dislocation rates in certain patient population, proposed are modifications that aim to combine the advantages of the posterior approach with greater stability and they have been shown to provide better outcomes. There is a need for further research into the possible benefits and risks of using posterior positioning.

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