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Program



9:00 – 10:00

Orlando B

PS01 | Priority Session 1

Marin Repustic

Legacy meets GenAI- personalizing nursing education with AI

Biljana Filipović

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Generative artificial intelligence is increasingly entering educational and clinical learning environments, creating both opportunities and concerns for the future of nursing education. Its emergence challenges educators, mentors, and clinical professionals to reconsider how learning can be personalized while preserving the values that have traditionally shaped nursing as a profession.

Nursing education has never been limited to the transmission of knowledge. It is a formative process through which learners develop clinical judgement, ethical responsibility, professional identity, communication skills, teamwork, and the ability to act safely in complex and uncertain situations. These dimensions are particularly important in perioperative nursing, where practice is fast, complex, high-risk, and deeply dependent on anticipation, coordination, and shared professional awareness.

GenAI may support this educational process by helping to create individualized learning pathways, adapt simulation scenarios to different levels of learner readiness, structure reflective practice, and reduce repetitive preparation work for mentors and clinical educators. Such support may contribute to more targeted and flexible learning, especially within continuing professional development and practice-based education. However, personalization must not be confused with lowering professional standards. Different learning pathways should continue to lead toward the same goal: safe, competent, and responsible nursing practice.

The responsible integration of GenAI also requires critical attention to its limitations and risks, including inaccurate or fabricated outputs, bias, confidentiality concerns, and overreliance. AI-generated content should be treated as a draft requiring professional validation, rather than as an authoritative decision. The role of the nurse educator and mentor therefore becomes more important, not less.

A human-led approach to AI-supported nursing education must place learning needs, ethical boundaries, guided clinical reasoning, adaptive feedback, critical reflection, and professional judgement at the centre. In this context, GenAI should be understood as augmented intelligence rather than artificial replacement. The goal is not faster answers, but better nurses.



14:00 – 15:00

Orlando B

PS02 | Priority Session 2

Jaana Perttunen

The state-of-art of perioperative nursing research in Europe

Kristiina Junttila

HUS Helsinki University Hospital, Nursing Research Center, Helsinki, Finland



9:00 – 10:00

Orlando B

PS03 | Priority Session 3

Ivanka Budiselić-Vidaić

Expertise in Action: Nursing - Surgeon Synergy in Transplant Surgery

Danko Mikulić

Clinical Hospital Merkur, Zagreb, Croatia

Transplantation is one of the great success stories of modern medicine and surgery with increasing numbers of transplants performed globally in the recent years. It is a complex process requiring smooth team work and depending on tightly coordinated collaboration of surgeons, nurses and transplant coordinators. The pathway begins with donor identification and family communication through organ retrieval, implantation surgery, and long-term follow-up. Nurses and surgeons interact during all steps of the donation-to implantation pathway. Role clarity and shared mental models are the foundations for safe practice and good outcomes. Apart from surgery, perioperative and ICU nurses partner with surgeons in all aspects of recipient care, graft protection, early complication recognition, and structured handovers. Evidence from the literature on nurse–physician collaboration and the role of transplant nurse specialists shows that optimal surgeons-nurses teamwork is associated with better decision-making, fewer errors, good outcomes and improved patient and donor-family experiences. Practical tools — communication checklists, clear protocols, and escalation algorithms—are used to strengthen nurse–surgeon collaboration in individual institutions. In conclusion, even though the implant operation is the central part of the whole process, surgeons-nurses interactions span much further and include a number of aspects before and after the operation itself.



14:00 – 15:00

Orlando B

PS04 | Priority Session 4

Cathrine Heen

Handle With Care: Rethinking Surgical Glove Safety in the Operating Room

Esther Espuñes Mestres, Peter Graves

Perioperative Nurse, University Lecturer, Barcelona, Spain; Independent Clinical Consultant, Texas, USA

Maintaining the sterility of the surgical field is a cornerstone of infection prevention and a critical strategy for reducing the incidence of surgical site infections (SSIs). Ensuring consistent adherence to sterile techniques requires not only surgical precision but also a multidisciplinary, evidencebased approach. Perioperative staff—particularly nurses—must remain updated of current international guidelines to uphold best practices throughout the preoperative, intraoperative, and postoperative phases.

A key element of sterile practice is the proper use of sterile surgical gowns and gloves, which are essential for safeguarding both patients and healthcare professionals. Despite advancements in glove technology, challenges such as undetected glove perforations continue to present significant risks. Moreover, repeated exposure to latex gloves has been associated with the development of latex allergies among healthcare workers, with prevalence rates ranging from 2% to 12% in Europe.

These hypersensitivity reactions can vary in severity from localized irritation to life-threatening anaphylaxis, representing a serious occupational health concern. Additionally, non-immune-mediated responses—such as irritant and allergic contact dermatitis—further contribute to occupational skin conditions. This presentation examines the critical role of sterile technique in surgical safety, emphasizes best practices for glove use in preventing SSIs, and highlights the importance of preventive strategies to minimize occupational risks associated with latex exposure and glove-related skin reactions in the operating room.



Perioperative Nursing Education in Europe: Current Status and Future Directions

Wivine Schellekens

EORNA Educational Committee, Brussels, Belgium

W. Schellekens (AFISO – Chair EORNA Educational Committee), E. Nuñez (AESOP), J. Jedlickova (CZORNA), J. Wichsowa (CZORNA), M.-M. Bergmann (EstORNA), S. Kolberg (SEORNA), M. Yavuz van Giersbergen (TCAHD), B. Cooreman (VVOV)

Across Europe, perioperative nursing education reflects a landscape of striking diversity. To better understand this variability, the EORNA Educational Committee conducted a survey in 2025 among 24 national associations, with 18 responses collected.

The findings reveal a fragmented picture. Exposure to the operating room during initial nursing education ranges from complete absence to substantial theoretical and clinical training. For many students, access to clinical placements remains limited or optional. While postgraduate perioperative programs are available in most countries, they are not consistently required for practice, and their structure, entry criteria, and recognition vary widely.

This heterogeneity raises important questions about the preparedness of nurses entering perioperative settings and the potential implications for patient safety and professional identity. Moving forward, greater alignment of educational standards and stronger collaboration across countries appear essential to support both workforce mobility and the development of perioperative nursing as a recognized specialty.



8:25 – 8:55

Orlando B

S01 | Session 1 | Clinical Practice

Anu Vatunen

62 A BIOMETRIC AND VISUALISED STUDY OF RESEARCH ON PERIOPERATIVE HYPOTHERMIA

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Background: Perioperative hypothermia is a common and preventable complication that increases morbidity and mortality in surgical patients. Despite the importance of interventions to prevent this condition, the development process and research trends of scientific publications on the subject have not been systematically analyzed.

Objective: This study aimed to perform a bibliometric and content analysis of studies on perioperative hypothermia.

Methods: The Web of Science database was used to collect research data. First, the Web of Science was searched using the keywords ‘unwanted hypothermia’, ‘accidental hypothermia’, ‘perioperative hypothermia’, ‘inadvertent perioperative hypothermia’, and ‘forced-air warming.’ Only English-language articles and systematic reviews published between 1980 and 2025 were selected. The search was limited to emergency medicine, critical care medicine, general internal medicine, surgery, anesthesiology, cardiac cardiovascular systems, peripheral vascular disease, nursing, orthopedics, geriatrics gerontology, gastroenterology hepatology, oncology, and obstetrics gynecology. Data were analyzed using VOSviewer and Bibliometrix programs.

Results: A total of 1.279 publications contributed by 5.260 authors were analyzed in this study. It was determined that the most Web of Science Categories on the subject was ‘Anesthesiology,’ which received a total of 13.758 citations, and received the most publications (93) and citations (2470) in 2024. In addition, it was determined that publications on this subject were made in 70 countries, and the most productive country in terms of the number of documents was the USA. The keywords most frequently mentioned by the authors in the publications were ‘hypothermia (430)’, ‘accidental hypothermia (121)’, ‘cardiac arrest (79), and ‘perioperative hypothermia (71).’ The countries with the most publications were the USA (367), Japan (97), and Germany (96), and the author with the most publications and citations was Sessler DI (29 and 4154).

Conclusion: Studies on perioperative hypothermia are increasing. This study draws attention to the most studied topics of perioperative hypothermia.



240 Examination of pain and factors affecting pain in patients who underwent abdominal surgery based on drain usage

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Background

Drains are tubes generally used during the operation for prophylactic and therapeutic purposes. Patients may experience pain due to the drain.

Objectives

Examining pain and factors affecting pain in patients who underwent abdominal surgery based on drain usage

Methods

The correlational study design was used in the research. The research was conducted with 201 patients in a hospital's General Surgery Clinic. The Research data were collected using the Descriptive and Clinical Information Form and Visual Analog Scale. The data were evaluated with multiple linear regression analysis.

Results

The average age of patients who underwent abdomen surgery was 50.29 ± 14.85 (min=18, max=85), and 72.2% had undergone laparoscopic surgery. It was determined that the patients' systolic blood pressure, diastolic blood pressure, pulse, and SpO₂ after drain removal were statistically significantly higher than their values before drain removal ($p < 0.05$). Patients' pain scores during the drain removal were higher than before removal ($t = -8.824$, $p < 0.001$). For pain levels before drain removal in patients being female ($\beta = -0.109$, $p = 0.048$), satisfaction with pain management ($\beta = -0.110$, $p = 0.039$), and pain levels in the last 24 hours associated with drain use ($\beta = 0.569$, $p = 0.000$) were identified as significant predictors. Similarly, for pain levels during drain removal, the level of fear related to drain removal ($\beta = 0.159$, $p = 0.011$) and pain levels before drain removal ($\beta = 0.517$, $p = 0.000$) were significant predictors.

Conclusion

It was found that pain levels before and during drain removal in patients were affected by gender, physical and psychological factors associated with the drain, and satisfaction with pain management, depending on drain usage. Regularly evaluating the pain related to drain usage in pain management, considering significant factors, and applying strategies to reduce the fear of drain removal may significantly improve general care.



8:25 – 8:55

Orlando A

S02 | Session 2 | Education

Thierry Ventre

155 AO Trauma delivers training for operating room personnel based on needs

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Background

Operating room personnel (ORP) are vital members of the surgical team. However, global shortages of trained ORP, coupled with increasing clinical demands and limited opportunities to leave their practice for continued education, represent a critical barrier to maintaining high standards in perioperative care.

AO Trauma, the world's largest global community in trauma and orthopedic surgery has long recognized the importance of targeted ORP education. Globally in the last 10 years, approximately 320 AO Trauma Courses Principles of Fracture Management for ORP were organized in the world and 7 of them were in Slovenia. AO Trauma educational activities for ORP have been implemented already since 1985 and delivered in Slovenian and English.

Objectives

To accommodate the need for more flexible, practice-integrated learning, AO Trauma has introduced since May 2015 AO In-Hospital for ORP. This is a modular based educational offering for AO faculty which facilitates the organization of short educational events at point-of-care. With over 500 workplace-based educational events globally and 34 of them organized in Slovenia, AO In-Hospital for ORP became a well-established educational initiative. The University Medical Centre Ljubljana, the General Hospital Novo Mesto, and the General Hospital Nova Gorica have a well installed program to support this hospital-based education.

AO In-Hospital for ORP emphasizes how combining comprehensive courses with modular, workplace-based training can overcome logistical and workforce constraints, ensuring equitable access to high-quality education.

Conclusion

Event evaluations show that 99% of the participants of the AO Trauma courses and the AO In-Hospital for ORP, would recommend these educational sessions to their peers. Through interviews it becomes clear that during courses the focus lays on knowledge transmission and skills training whereas behavioural change is greatly appreciated and made possible in the hospital-based educational sessions when teams come together to upscale their knowledge.



216 The Effect of Web Designed Education Performed Using Mobile Application on Self-Care Power, Self-Efficacy and Quality of Life Undergoing Knee Replacement Surgery

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Background

Providing web-designed education to patients after discharge following knee arthroplasty is essential for managing the risk of complications and ensuring patient safety, as it enables continuous access to information regarding postoperative home care after hospital discharge.

Objectives

The aim of this study is to determine the effect of a web-designed educational (WTE) program applied to patients who have undergone knee arthroplasty on self-care agency, self-efficacy, and quality of life.

Methods

This study employed a prospective, randomized controlled design and was registered on ClinicalTrials.gov under protocol ID NCT06306027. This study, conducted as a master's thesis, was supported by the Scientific and Technological Research Council of Türkiye (TUBİTAK) with project number 223S589. It was conducted at the Orthopedics and Traumatology Clinic of Konya City Hospital between January 2024 and October 2024, involving 67 patients (WTE group: n=33; control group: n=34). Patients in the control group received routine, unstructured discharge education as part of standard clinical care. In contrast, patients in the WTE group received the same discharge education, followed by a structured WTE program that was administered for one month starting on the 15th day after discharge. Data were collected using the Self-Care Power Scale (SCPS), the Self-Efficacy Scale (SES) and the Quality of Life Scale (SF-36)".

Results

The groups were homogeneous with respect to demographic and clinical variables. In the pre-test, no statistically significant differences were found between the WTE and control groups in the mean scores of the SCPS, SES and SF-36 ($p>0.05$). However, in the post-test, the WTE group showed a statistically significant increase in the mean total and subscale scores of all three instruments compared to the control group ($p<0.05$).

Conclusion

The WTE program was found to be effective in improving self-care agency, self-efficacy, and quality of life in patients following knee arthroplasty.



10:30 – 11:30

Orlando B

S03 | Session 3 | Clinical Practice

Merja Jutila

63 Investigation of Operating Theatre Pressure Injury Risk and Influencing Factors in Patients Undergoing Open Heart Surgery: A Single-Center Cross-Sectional Study

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Background Open heart surgery patients face high pressure injury risks due to prolonged immobility, anesthesia, and physiological changes. Studies in Turkey show a 24-25% incidence, mostly Stage I within 24 hours post-op. Nurses often lack knowledge, and prevention measures are insufficient.

Objectives This study was conducted to determine the risk of operating theatre pressure injury and the factors influencing this risk in patients undergoing open heart surgery.

Methods Ethical approval was obtained before starting the study (Approval No: 2022/110). The study was conducted as a cross-sectional study between January 15, 2023 and April 1, 2023. The sample of the study consisted of 147 patients who underwent open heart surgery at a university hospital in Şanlıurfa. The research data were collected using the Patient Identification Form and the 3S Operating Theatre Pressure Injury Risk Diagnosis Scale. Data were collected one day prior to and on the day of the surgery. SPSS 23.0 (IBM) was used for data analysis, and $p < 0.05$ was considered the threshold to be statistically significant. This study utilized the STROBE checklist for reporting purposes.

Results The average age of the patients was 61.51 ± 11.66 , with 63.1% being male and 40.6% having completed secondary education. Significant factors found to affect the risk of intraoperative pressure injury included a high body mass index ($p = 0.005$), prolonged surgery duration ($p = 0.001$), and moderate hypothermia ($p = 0.030$). Although the overall risk of pressure injury was found to be moderate, undergoing surgery for 6 hours or more ($p = 0.001$) and having a high BMI ($p = 0.005$) were determined to significantly increase this risk.

Conclusion This study showed that the risk of pressure injury in patients undergoing openheart surgery is influenced by body mass index, surgery duration, and hypothermia. Preventive measures should be enhanced, especially for patients with prolonged surgeries and high BMI.



69 Developing a Normothermia Care Bundle to Improve Perioperative Patient Outcomes: A Delphi Study

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Background

Inadvertent perioperative hypothermia (IPH), defined as a core temperature below 36 °C, remains a frequent complication despite existing practice guidelines (PGs), affecting up to 56% (Mendonça et.al. 2021) of surgical patients. Normothermia Care Bundles (NCBs)—sets of evidence-based interventions—have improved outcomes internationally but have not been studied in Finnish operating units.

Objectives

The aim was to identify and prioritize effective interventions for maintaining normothermia and to develop a context-specific NCB to support guideline implementation in Finnish operating units.

Methods

A three-round Delphi study (Keeney et.al. 2011) was conducted with 47 experts, including perioperative nurses, anesthesiologists, clinical nurse specialists, and educators from all five Finnish university hospitals and universities of applied sciences, as well as additional experts identified through a literature review. A pre-tested questionnaire was developed by aligning the Finnish PG (2022) with international guidelines. Data were analyzed using descriptive statistics and intraclass correlation (ICC).

Results

An evidence-based NCB was developed through expert consensus. Final data collection is ongoing, and full results will be published by the end of 2025.

Conclusion

This is the first study to develop an NCB tailored to Finnish operating units. The bundle offers a practical tool to support the prevention, identification, and management of IPH, with the potential to enhance patient safety and perioperative care quality.

References

- Keeney, S. Hasson, F. McKenna, H. 2011. The Delphi technique in nursing and health research. West Sussex. Wiley-Blackwell. ISBN 978-1-4051-8754-1.
- Mendonça, F. Ferreira, J.D.S. Guilardi, V.H.F. Guimarães, G.M.N. 2021. Prevalence of Inadvertent Perioperative Hypothermia and Associated Factors: A Cross-Sectional Study. *Therapeutic Hypothermia and Temperature Management*, 11(4), 208-215. <https://doi.org/10.1089/ther.2020.0038>



191 Global Trends in Evidence-Based Nursing Approaches to Total Joint Arthroplasty

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Background

Total knee and hip arthroplasty are among the most commonly performed surgeries globally, with nursing care playing a vital role in patient outcomes. Incorporating evidence-based practices (EBPs) into perioperative nursing is essential for improving recovery, minimizing complications, and ensuring high-quality care. Despite increasing scholarly interest, a comprehensive bibliometric overview remains lacking.

Objectives

This study aimed to evaluate the global and national nursing literature on evidence-based approaches to total knee and hip arthroplasty using bibliometric methods, identifying key research trends, collaboration networks, and thematic focuses.

Methods

A bibliometric analysis was conducted on July 15, 2025, via the Web of Science Core Collection. The search strategy included: “total knee arthroplasty” OR “total knee replacement” OR “hip arthroplasty” AND “nursing” AND “evidence-based.” From 72 initial records, 58 met inclusion criteria (English, nursing-related, EBP-focused). Data were analyzed using Web of Science tools and VOSviewer to map co-authorships, bibliographic coupling, co-citations, and keyword networks.

Results

The 58 publications received a total of 952 citations, averaging 16.41 citations per article, with an h-index of 17. A significant increase in both publications and citations has been observed since 2016. Schwartzkopf Ran was the most prolific author, contributing 3 articles. Co-authorship maps revealed tightly connected collaboration clusters, particularly around authors like Barnett, Adrian and Wilson, Jennie. Keyword co-occurrence highlighted two dominant themes: (1) surgical risk factors (e.g., obesity, complications, hip arthroplasty), and (2) evidence-based nursing practices (e.g., pain management, patient care). Co-citation analysis identified Kurtz (2007) and Liberati (2009) as foundational references in orthopedic outcomes and evidence synthesis, respectively.

Conclusion

Evidence-based nursing research in arthroplasty is expanding, with a focus on safety, pain management, and patient-centered care. Future efforts should encourage publication in high-impact journals, interdisciplinary collaboration, and broader systematic reviews to fill existing gaps and enhance clinical nursing science.



11 Adoption of Clinical Reasoning Support Strategies in the Post-anesthesia Context: Results of a Delphi Study with Experts

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Background

Clinical reasoning in perioperative nursing is challenged by unpredictability, complexity, and time-sensitive decisions. Supporting strategies can enhance nurses' decision-making, contributing to patient safety and care quality, especially in the Post-Anesthesia Care Unit (PACU).

Objectives

To identify and validate strategies that support clinical reasoning in the perioperative setting, evaluating their relevance, applicability, and acceptance among expert nurses.

Methods

A modified e-Delphi study was conducted in two rounds with Portuguese perioperative nurse experts. A total of 20 nurses participated in Round 1, and 14 completed Round 2. Strategies were assessed for Relevance and Applicability on a 5-point Likert scale. Consensus was defined as $\geq 75\%$ agreement. Strategies were classified as Rejected (R), Not Recommended (NR), or Accepted (A). Qualitative comments enriched data interpretation.

Results

All 14 proposed strategies were accepted after two rounds. The "Reflective Journal" was accepted after adapting its structure and integrating it with clinical supervision. "Multi-Criteria Decision Analysis" was viewed as methodologically sound but operationally complex. "NEXUS®" raised concerns about scope of nursing autonomy and interprofessional boundaries but was still accepted. The "Decision Tree for Restriction" was accepted with recommendations to adapt pre-hospital protocols for intra-hospital use. Expert feedback emphasized the need for strategies that are feasible within PACU dynamics, promote team reflection (e.g., debriefing), and consider available resources.

Conclusion

The panel reached consensus on the acceptance of all 14 strategies to support clinical reasoning in perioperative care. Strategies that promote structured reflection, interprofessional communication, and decision-making were highly valued. Future implementation should consider organizational support, time constraints, and integration into existing clinical workflows.



S04 | Session 4 | Environmental sustainability

Michael Elin

185 ASSESSMENT OF SURGICAL NURSES' KNOWLEDGE, ATTITUDES, AND PRACTICES REGARDING SUSTAINABILITY

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Background: Operating rooms generate high energy use and medical waste, emphasizing the need for surgical nurses to adopt sustainable practices. However, research on their sustainability-related knowledge, attitudes, and behaviors is limited, and the impact of demographic factors remains underexplored, hindering the integration of sustainability into nursing practice.

Objectives: The aim of this study is to determine surgical nurses' knowledge, attitudes, and behavior levels regarding sustainability and to evaluate the relationship between these variables and demographic characteristics.

Methods: This cross-sectional descriptive study included 456 nurses working in surgical clinics of public and private hospitals across seven regions of Türkiye. Regional diversity was considered to examine how health policies, patient profiles, and institutional structures influence sustainability perceptions. The required sample size was calculated using G*Power 3.1 with 95% power and 5% error margin, accounting for possible sample losses. Data were gathered via an online survey using the Nurse Introduction Form and the Nursing Sustainability Attitudes Survey. Statistical analyses were performed in Jamovi v2.6.26, considering normality and variance homogeneity.

Results: Participants had a mean age of 34.2 ± 6.8 years and 10.1 ± 5.4 years of experience. Most were female (82.7%) and worked in public hospitals (82%). The mean sustainability attitude score was 47.8 ± 8.5 . Low scores on items 8 and 9 indicated difficulty in addressing unsustainable practices. Attitude scores significantly varied by education and work type ($p < 0.05$), with higher scores among those with postgraduate education and over 10 years of experience. Gender and unit of employment showed no significant effect on sustainability attitudes.

Conclusion: Surgical nurses demonstrate general awareness and positive attitudes toward sustainability; however, these are not consistently reflected in practice. Limited knowledge and institutional barriers hinder implementation in areas like waste segregation and energy conservation. Findings emphasize the need for integrating sustainability into nursing education and in-service training.



201 Climate benefits of third-party device remanufacturing in perioperative care: a systematic review of life-cycle analyses

Daniel Vukelich

Association of Medical Device Reprocessors, Berlin, Germany

Background

The healthcare sector's environmental footprint, especially Scope 3 emissions from single-use medical devices (SUDs), is substantial. Commercial remanufacturing of SUDs (rSUDs) could mitigate this impact, but robust evidence is needed.

Objectives

To quantify greenhouse-gas (GHG) emission reductions when rSUDs replace original equipment manufactured SUDs, and to compare process-based life-cycle assessment (LCA) findings with routinely used environmentally extended input-output (EEIO) models.

Methods

We conducted a narrative review of peer-reviewed or ISO-conformant LCAs directly comparing rSUDs with equivalent SUDs. Inclusion required cradle-to-grave boundaries, transparent GHG reporting and third-party remanufacturing. Device category, modelling assumptions and GHG outcomes were extracted, and mean percentage change in GHGs calculated. Price differentials were converted to EEIO-based GHG factors (0.208 kg CO₂e per 2018 USD) for cross-model comparison.

Results

Four studies covering eight devices—electrophysiology catheters, operating-room energy instruments and patient-care consumables—met criteria. rSUDs reduced cradle-to-grave GHG emissions by 23–60% (mean 42%). Raw material extraction and manufacturing dominated SUD emissions, whereas electricity use and packaging were principal contributors for rSUDs. Sensitivity analyses showed renewable electricity and higher remanufacturing yields amplified benefits, while transport distance, mode and sterilisation method had minor influence. EEIO-derived savings diverged from process LCA values by -7% to +2200%, limiting suitability for product-level decisions.

Conclusion

Third-party remanufacturing of single-use medical devices delivers substantial GHG reductions and represents an immediately actionable strategy for environmentally sustainable perioperative practice. Healthcare organisations should embed rSUD procurement within decarbonisation plans and complement organisation-wide EEIO inventories with product-specific LCAs. Broader LCA coverage and optimised circular-economy practices could unlock further environmental gains. More research is needed to determine if the environmental benefits extend to additional types of devices.



237 Reusable versus Disposable Forced Air Warming : a comparative study of thermal performance as a first step toward more sustainable practices

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Background

Perioperative hypothermia increases the risk of surgical complications making effective patient warming essential. Disposable forced air warming blankets, while effective, contribute significantly to healthcare waste and environmental impact. Reusable alternatives may offer similar efficacy while reducing environmental footprint, but their thermal performance requires rigorous evaluation

Objectives

To assess the safety and effectiveness of reusable textile blankets as an alternative to disposable forced air warming blankets, as a first step toward developing more sustainable perioperative practices

Methods

An in vitro, prospective, head-to-head comparison of heating performance in full-body and upper-body designs, using three blanket types in a simulated operating-room scenario- disposable single use (DSU), light reusable cotton (LRC) and Heavy Reusable Cotton (HRC). A single forced-air-warmer was set to 38°C for all tests, -simulating normothermic (37°C) and hypothermic (25°C) patient conditions, measuring surface temperatures at six anatomically relevant points across the simulated body. Laboratory-based simulation in a controlled environment mimicking operating room conditions with ambient temperature maintained at 20±0.5°C. Surface temperature and temperature homogeneity were measured at six anatomically relevant points across the simulated body

Results

Heavy cotton blanket provided the highest and most homogenous surface temperature in full-body (36.7 ± 0.6°C) (DSU = 35.4± 1.1°C; LRC = 35.7± 1.7°C) designs (p<0.05) and upper-body (35.5± 0.5°C) (DSU = 35.4± 0.5°C; LRC = 34.9± 2.4°C) designs (p<0.05). Unsafe temperature elevations were not recorded for any of the test configurations. Statistical analysis revealed significant differences between blanket types (p<0.05), with Heavy Reusable Cotton consistently outperforming both disposable single-use and light-reusable cotton options in terms of temperature distribution

Conclusion

Carefully designed reusable blankets may provide a safe and environmentally friendly alternative to disposable forced-air-warming blankets, potentially reducing costs and environmental impact. Additional research examining infection control, durability through multiple laundering cycles, and comprehensive life cycle analysis would further validate these promising findings



222 Investigation of Individual and Institutional Ecological Knowledge and Behaviors of Nurses Working in Operating Rooms and Intensive Care Units

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Background

The healthcare sector accounts for significant environmental waste, with operating rooms and intensive care units notably increasing medical waste. Nurses working in these units are critical in reducing environmental impact through environmentally responsible practices.

Objectives

This study aims to determine the awareness of intensive care and operating room nurses regarding their social and work environment.

Methods

A descriptive and cross-sectional study was conducted between July 2024 and May 2025 with participants from 183 operating rooms and intensive care units nursing at northern Türkiye. “Nurse Awareness Scale,” “Nurse Professional Ecological Behavior Scale,” and “Personal Ecological Behavior Scale” were used as data collection tools.

Results

In the study, the mean perception score of the Nurse Awareness Scale (NAS-1) was found to be 27.88 (SD = 8.98), while the mean behavior score (NAS-2) was 34.73 (SD = 9.48). The mean perception score of the Nurse Professional Ecological Behavior Scale (NPEBS-1) was 15.86 (SD = 5.01), and the mean behavior (NPEBS-2) score was 16.36 (SD = 5.17). For the Personal Ecological Behavior Scale (PEBS-1), the mean perception score (PEBS-2) was 27.95 (SD = 7.38), and the mean behavior score was 28.61 (SD = 8.07). A moderate positive correlation was found between NAS-1 and NAS-2 scores ($r = 0.56$, $p < .00$), while a high positive correlation was observed between NPEBS-1 and NPEBS-2 scores ($r = 0.56$, $p < .00$). Additionally, a very strong positive correlation was identified between PEBS-1 and PEBS-2 scores ($r = 0.82$, $p < .00$).

Conclusion

The study reveals significant positive correlations between nurses' environmental awareness and behaviors. The strong correlation observed in personal ecological behaviors indicates that higher environmental awareness promotes responsible actions. These results underscore the importance of environmental awareness in advancing sustainable practices in healthcare.



10:30 – 11:30

Orlando A

S05 | Session 5 | Leadership / Management

Aina Hauge

305 Operating Room Nurse Well-Being In Focus: A Bibliometric Exploration of Research

Meryem Yavuz van Giersbergen

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Background

The well-being of nurses, especially those working in high-stress environments such as operating rooms (ORs), has become a growing focus in healthcare research. Understanding the evolution of academic interest in this area is essential for identifying knowledge gaps, dominant themes, and global research priorities.

Objectives

This study aimed to conduct a bibliometric analysis of the scientific literature on nurse well-being, with a specific focus on OR settings, to evaluate publication volume, geographic trends, thematic clusters, and research evolution over time.

Methods

A systematic search was performed across PubMed, Scopus, and Web of Science databases for peer-reviewed publications from 2009 to 2024. Keywords included “nurse well-being,” “operating room,” “burnout,” “stress,” “resilience,” and “mental health.” Bibliometric indicators such as publication frequency, keyword co-occurrence, country of origin, and thematic mapping were analyzed using VOSviewer and descriptive statistical techniques.

Results

A notable increase in publications was observed after 2020, likely driven by heightened awareness of nurse well-being following the COVID-19 pandemic. The most prolific countries were China, the United States, Iran, Australia, and Türkiye. Dominant themes identified included stress and burnout, mindfulness-based coping strategies, organizational support, leadership, and pandemic-related psychological impacts. Leading journals in this area were *International Journal of Nursing Studies*, *Journal of Clinical Nursing*, and *Nursing Outlook*.

Conclusion

This bibliometric analysis demonstrates increasing global attention to nurse well-being in OR contexts. While scholarly output has expanded, notable gaps remain, particularly regarding interventional and cross-cultural research. These findings can guide future research agendas and support policy and institutional strategies aimed at



fostering a resilient nursing workforce, particularly in high-pressure environments like the operating room.

Keywords:

Nurse Well-Being, Operating Room Nurses, Bibliometric Analysis, Burnout, Stress, Resilience

24 Burnout and resilience among operating room nurses - a job satisfaction survey

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Background

The operating room is an environment that is both challenging and demanding, thus may induce or elevate levels of occupational stress in operating room nurses. On top of that, the healthcare system is currently struggling to retain and attract operating room nurses.

This survey is enrolled in KEEPCARING, a visionary project funded by the European Union, dedicated to enhance wellbeing and resilience of healthcare professionals in EU hospital settings. The project focuses on reducing stress and preventing burnout among healthcare workers by developing innovative, co-created solutions.

Objectives

The objective of this survey is to investigate operating room nurses levels of burnout symptoms, job satisfaction, leadership influence, individual, team and organizational stressors in their work life. The aim is to achieve an overview of current challenges in their work life balance, and thereby creating a foundation of knowledge to better retain and attract operating room nurse staff, improve their wellbeing and resilience in future hospital settings.

Methods

Online individual survey

Results

Approximately 100 perioperative nurses have answered the survey, and the results of factors influencing their work-life balance will be presented at the conference.

Conclusion

The results of this study shows that challenges exists, operating room nurses experiences burnout symptoms, their leaders leaderships style influences their work environment, their work-life balance is challenged and the operating room is a stressfull working environment.

Future projects within the KEEPCARING project aims to build a healthier workforce, combining non-digital, digital and AI-driven approaches to address individual. team and organizational stressors.



194 Dark Personality Traits in Hellenic Healthcare: The Case of Specialized Units

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Background

Empirical studies indicate that leadership traits aligned with Machiavellian tendencies are deemed unsuitable within the healthcare sector. Healthcare managers bear the critical responsibility of safeguarding the stability of their organizations, whereas healthcare providers prioritize delivering high-quality care to patients.

Objectives

This study focused on exploring the dynamics of supervisor-subordinate relationships within specialized units, including operating rooms, anesthesiology, central sterilization departments, and intensive care units, as well as their influence on employee job satisfaction.

Methods

This research employed a prospective descriptive correlational design, conducted across three major hospitals located in Athens. The study sample comprised 294 hospital employees. A Data Recording Sheet was utilized to document demographic parameters and work-related attributes. Job satisfaction was measured using a Numeric Analogue Scale ranging from 0 to 10, where "0" indicated "complete dissatisfaction" and "10" denoted "maximum satisfaction," and the Minnesota Satisfaction Questionnaire. The exploration of Machiavellian tendencies was carried out using the MACH IV scale, which evaluates the interplay between personality characteristics, unethical behavior, and workplace stress, and the Dirty Dozen scale, designed to explore employee dark triad personality traits.

Results

The study included 18.5% male and 81.5% female participants, with 28.9% falling within the 31-40 age group. Higher levels of Machiavellianism were positively associated with greater satisfaction ($\rho=0.127$, $p = 0.027$) and increased narcissism ($\rho=0.256$, $p<0.001$). Meanwhile, satisfaction levels showed a negative correlation with the moral perspectives of healthcare professionals ($\rho= -0.113$, $p=0.048$).

Conclusion

This research explores the influence of Machiavellian leadership on employees in general, with particular attention to those exhibiting Machiavellian traits, while also analyzing the reciprocal interactions between these groups. The study's outcomes offer meaningful perspectives on managing the intricate relationships between Machiavellian leaders and their teams, aiming to foster a more balanced and constructive organizational environment.

210 Quality in Ambulatory Surgery: Nurses' Perspective

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Background

Ambulatory surgery (AS) is expanding globally, transforming healthcare delivery through increased efficiency and patient benefits. Despite its growth, limited data exists on the quality of care provided and how to assess it. Evaluating quality indicators sensitive to nursing interventions (QISNI) in AS is crucial, as they offer objective data to guide improvements in care.

Objectives

To characterize perioperative nurses' perception of QISNI in AS.

Methods

A questionnaire was developed to assess QISNI from nurses' perspectives. It demonstrated good psychometric properties, internal consistency of 0.88, and six dimensions. It was implemented in 2024 with 222 Portuguese perioperative nurses. The link was distributed through head nurses of Ambulatory Surgery Units (ASUs).

Results

The 26-item questionnaire uses two 4-point Likert scales (frequency and agreement). Most respondents were female (77%), with an average age of 45 years, 22.3 years of professional experience, and 8.9 years in AS. Item means ranged from 1.96 to 3.76, with standard deviations between 0.490 and 1.057, indicating some variability. Only 11 items scored above 3.00, revealing extensive improvement needs. Highest-rated items involved verbal postoperative instructions to patients/caregivers ($\bar{x}=3.76$ and $\bar{x}=3.70$), with low variability and consistent positive perceptions. Lowest-rated items concerned nurses' participation in policy decision-making ($\bar{x}=1.96$) and career progression opportunities ($\bar{x}=1.98$). Items with the most divergent responses concerned written and updated care plans ($\bar{x}=2.64$; $SD=1.057$) and use of nursing models ($\bar{x}=2.61$; $SD=0.976$). The most consistent response was regarding the low incidence of perioperative falls ($\bar{x}=3.75$; $SD=0.490$). The dimensions "Nursing care" ($\bar{x}=3.59$) and "Intraoperative safety" ($\bar{x}=3.57$) were positively rated. "Nurse involvement" ($\bar{x}=2.23$) and "Work organization" ($\bar{x}=2.63$) scored lowest. Others averaged 2.76, reflecting overall negative perceptions.

Conclusion

This research presents practical utility by diagnosing nurses' perspectives on the quality of AS care, supporting the development of improvement initiatives. In addition, we highlight the contribution of developing and validating an instrument.



11:30 – 12:30

Orlando B

S06 | Session 6 | Clinical Practice

Minna-Mai Bergmann

192 The Effect of Preoperative Anxiety on Postoperative Pain in Surgical Patients

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Background: Surgical stress and anxiety not only delay patient recovery during the preoperative period but also negatively impact postoperative pain. For postoperative recovery, nurses should implement measures to reduce preoperative anxiety as part of postoperative pain management measures. In this context, preoperative anxiety levels should be determined and their relationship with pain should be examined.

Objective: The research was conducted in order to determine the effect of preoperative anxiety on postoperative pain in surgical patients.

Methods: This descriptive cross-sectional research was conducted with 152 patients who will undergo surgery at the General Surgery Clinics of Çukurova University Balçalı Hospital. The "Patient Identification Information Form" and the "Surgical Anxiety Scale" were used as data collection tools in the study, and the pain level was measured with the "Numerical Pain Assessment Scale".

Results: When the Surgical Anxiety Scale scores were examined, the patient's anxiety in the preoperative period was found to be mild to moderate (26.76 ± 15.34), and it was found that the sub-dimension with the highest average was health-related anxiety (10.93 ± 6.43). The average of the highest pain intensity of the patients in the last 24 hours after surgery was 7.18 ± 2.35 with during mobilisation. When the pain levels of the first 24 hours after surgery were examined, a moderate and high correlation was found in the scale sub-dimensions of all hours and a positive direction in the total score ($p=,000$).

Conclusion: As a result, postoperative pain increased as preoperative anxiety increased. It is thought that postoperative pain control will be supported by reducing anxiety in the preoperative period. In this context, it is recommended to add patient-specific anxiety-reducing measures to the postoperative analgesia applications in patients with moderate and high anxiety levels during the preoperative period to the treatment and care for postoperative recovery.

Key words; Anxiety, Pain, Preoperative Anxiety, Postoperative Pain, Nursing.



158 Effects of Nursing Interventions for Pain Management After Thoracotomy: A Systematic Review Study

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Background

There is no systematic review in the literature evaluating the effects of nursing care, including pharmacological and non-pharmacological approaches, on thoracotomy pain management. Therefore, systematically identifying and comparing these interventions may provide valuable insights for clinical practice and support future research.

Objectives

This study aimed to determine the effects of nursing interventions for thoracotomy pain.

Methods

In this systematic review study, a total of eight electronic databases, including PubMed, CINAHL, Web of Science, Scopus, Cochrane Library, Ovid MEDLINE(R), TR-Dizin, and Dergi Park, were searched to find relevant studies published between 2003 and January 2024. These databases were searched for the following search terms, including "Nursing Care", "Nurse", "Thoracotomy", "Pain", and "Pain management", to identify the effectiveness of nursing interventions for thoracotomy pain. The PICOT-SD method was used to determine the compatibility of the pieces with the eligibility criteria.

Results

Nine articles with 521 participants in total are included in this systematic review. Education was the most frequently used intervention for the pain management of thoracotomy patients. Other interventions were cold application, Transcutaneous Electrical Nerve Stimulation (TENS), and chest tube dressing. Cold application and preoperative education decreased the thoracotomy patients' pain significantly. However, TENS caused a significant decrease in one study, and different dressing types did not cause statistically significant differences in pain.

Conclusion

This systematic review revealed that education, TENS, and cold application can help decrease thoracotomy pain, whereas the dressing type did not. Also, more nursing interventions about the pain management of thoracotomy patients are needed.



182 The Management of Intraoperative Normothermia in Pediatric Surgery: Efficacy of Thermal Blanket

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Background

Children are particularly vulnerable to develop perioperative hypothermia. Because children are at high risk of hypothermia in the perioperative period due to their size, it is vital to maintain normothermia during surgery. To avoid perioperative hypothermia, active/passive warming therapy should be applied to the body surface intraoperatively.

Objectives

The study was conducted to determine the efficacy of thermal blankets in the management of intraoperative normothermia in pediatric patients.

Methods

The study was planned with 110 patients (experiment group:55, control group:55) in randomized controlled experimental design. The study was carried out in the operating room of a hospital in Istanbul between May and June 2025. Data were collected with Patient Information Form, thermal comfort assessment form and Shivering Level Diagnosis Form. Ethical committee and institutional approvals were obtained. In the experimental group, disposable thermal blankets were placed between the surgical gowns and surgical drapes. Patients in the control group underwent routine procedures. The interventions started with the admission of the patients to the operating room and ended with their transfer to the recovery room.

Results

The mean age of the patients was 5.2±1.9 years, 60% were female, 81.6% were had a tonsillectomy surgery. There were differences in skin temperature, thermal comfort and shivering scores in the group covered with thermal blankets ($p<0.001$).

Conclusion

It was determined that thermal blankets were effective in providing thermal comfort in the management of intraoperative normothermia. It was seen that the use of thermal blankets in this process is a safe and cost-effective application.

106 Organ procurement from the perspective of Operating Theatre Nurses

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Background

During organ procurement, perioperative nurses provide patient care and safeguard the donor's dignity and rights. Caring for a donor in the operating theatre can be mentally and physically challenging. Previous research suggests



that organ procurement is traumatic for perioperative nurses. There is a paucity of literature describing how these nurses perceive organ procurement and deal with the challenges involved. Thus, a basic understanding of their perceptions and main concerns is warranted.

Objectives

To explore operating theatre nurses' experiences and perceptions of organ procurement.

Methods

Two Swedish studies were performed. The first used grounded theory and included 10 operating theatre nurses, nine of whom self-identified as female and one as male, with an average age of 51.8 years. The second phenomenographic study included 15 female operating theatre nurses with a mean age of 50.2 years. Both studies were conducted in university and regional hospitals, reflecting Sweden's diverse range of hospital settings and geographic areas.

Results

The main concern of operating theatre nurses is optimum organ procurement involving a social process comprising four stages: brace oneself, facilitate, procurement and completion. They prepare for the organ procurement, share their knowledge with the rest of the team and make technical preparations to enable efficient organ procurement. Finally, they bring the process to a close by ensuring a dignified farewell for relatives. Organ procurement is perceived as an ethical responsibility and moral duty that requires personal learning and team support. During the procedure, perioperative coordination and communication are considered vital.

Conclusion

Operating theatre nurses are involved in a distinct social process to ensure optimum organ procurement. The procedure is characterised by ethical tension involving the team members' ability to communicate and support each other.



S07 | Session 7 | Environmental sustainability

Caroline Higgins

202 One directive, ten rules: how regulatory fragmentation hinders environmental sustainability in European perioperative care

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Background

Extensive, peer-reviewed life-cycle assessment and economic research shows that remanufacturing single-use medical devices (SUDs) can significantly reduce greenhouse-gas emissions and hospital procurement costs, advancing EU goals for decarbonisation, affordability, supply-chain resilience, and the development of a circular economy. Yet, under Article 17 of the Medical Device Regulation (MDR), regulatory responsibility for remanufacturing rests with individual Member States, producing a patchwork of sometimes-conflicting rules on classification, liability, and logistics. European Commission reports evaluating the implementation of the MDR have revealed that this regulatory fragmentation is a major impediment to the success of remanufacturing and other sustainability initiatives.

Objectives

Comparing the attempts to roll out SUD remanufacturing programs in two EU countries, this case study examines how divergent national frameworks shape perioperative practice; and distils principles for regulatory harmonisation as a necessary basis for the development of a circular economy in European healthcare.

Conclusion

In Ireland, effective national regulations enabled a hospital and commercial remanufacturer to partner to collect, remanufacture, and safely redeploy SUDs within existing sterile-services workflows. In Italy, by contrast, early planning of a similar program stalled because overly complex and onerous regulations, particularly surrounding device collections, render safe and commercially-viable remanufacturing impractical. The comparison shows that even where clinical, procurement, and other hospital staff are eager to implement carbon- and cost-reducing programs, regulatory coherence is the decisive factor in their viability. EU-level harmonisation and standardization of device regulations would unlock remanufacturing and, by extension, considerable environmental and economic benefits across perioperative care.



130 Bibliometric analysis of scientific publications on environmental sustainability in operating rooms

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Background

Climate change is nowadays recognized as a serious global health threat rather than an environmental one. Due to high energy use, anesthetic gas emission and medical waste generation, operating rooms are among the units that contribute the most to environmental degradation in healthcare systems.

Objectives To identify the main research trends, country-author collaborations, influential publications and thematic structures in the field by conducting a comprehensive bibliometric analysis of scientific publications on environmental sustainability in operating rooms.

Methods A bibliometric analysis was performed using the Web of Science Core Collection. The dataset was obtained by searching English-language articles using keywords such as “operating room,” “environmental sustainability,” “green surgery,” and related terms. A total of 162 eligible articles published between 1998 and 2025 were included. Data were analyzed using quantitative bibliometric techniques and visualized through VOSviewer software.

Results The analysis covers 162 publications with a significant increase in the last decade. The most productive country is the United States and the most productive journal is Surgical Endoscopy and Other Interventional Techniques. The most cited study was cataract surgery and life cycle assessment by Thiel et al. (2017) with 173 citations. Co-citation and authorship analyses showed that McGain, Sherman and Eckelman play central roles in the field. Three main thematic clusters were identified: (1) environmental impacts of surgical processes, (2) carbon footprint and life cycle assessments, (3) global sustainability and methodological frameworks. The average number of citations per publication is 13.84.

Conclusion The findings suggest that academic interest in sustainable OR practices to reduce carbon footprint, improve waste management and implement life cycle assessments will increase. Future studies will adopt a more holistic approach to sustainability that includes ethical, economic and political dimensions. Interdisciplinary collaborations and policy-level contributions will be decisive in the development of green practices in surgical settings.

289 Evaluation of Newly Graduated Nurses' Knowledge, Attitudes, and Behaviors Regarding Perioperative Environmental Sustainability

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Background: Today, healthcare services have significant environmental impacts due to high levels of waste generation and energy consumption. In resource-intensive areas such as operating rooms, implementing environmentally sustainable practices is of great importance. Nurses can play an active role in this process by contributing to the implementation of eco-friendly practices.



Objectives: This study aims to evaluate the knowledge, attitudes, and behaviors of newly graduated nurses regarding perioperative environmental sustainability.

Methods: This descriptive and cross-sectional study was conducted with 105 newly graduated nurses from the Central Anatolia region of Turkey. Data were collected using a “Personal Information Form” and the “Perioperative Environmental Sustainability Knowledge, Attitude, and Behavior Scale,” both developed by the researchers based on the relevant literature.

Results: The mean age of the participants was 22.34 ± 0.83 years. The majority were not members of environmental organizations (87.6%), had not participated in scientific research (85.7%), and stated that environmental sustainability education was insufficient (75.2%). However, 65.7% reported that they were able to incorporate sustainability principles into their nursing practices. The average scores obtained from the scale developed by the researchers were as follows: knowledge sub-dimension (6 items (min=6, max=30)) 20.95 ± 4.05 , attitude sub-dimension (7 items (min=7, max=35)) 27.80 ± 3.71 , behavior sub-dimension (7 items (min=7, max=35)) 27.50 ± 3.89 . The total scale score ranged from 20 to 100, with a mean score of 76.26 ± 9.78 . The reliability coefficient of the scale was 0.911.

Conclusion: Newly graduated nurses were found to have a good level of knowledge and a sensitive attitude and behavior regarding perioperative environmental sustainability. However, it is suggested that integrating environmental sustainability into undergraduate nursing curricula and providing more comprehensive training may enhance knowledge levels and raise awareness, thereby positively influencing attitudes and behaviors.

Recognizing Leadership in Sustainable Perioperative Care: EORNA-Ansell Sustainability Project Fund Winner Reveal

Recognizing of outstanding initiatives that aim to drive meaningful change in sustainable perioperative care, culminating in the announcement of the inaugural Sustainability Project Fund winner.



11:30 – 12:30

Orlando A

S08 | Session 8 | Patient Care and Anesthesia

Dimitris Poulis

321 Determination of Fear and Anxiety Levels in Neurosurgical Patients Scheduled for Day Surgery

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Background

Day surgery is a surgical approach in which patients are operated on and discharged on the same day. In this process, the fear and anxiety experienced by patients are significant factors that can affect surgical outcomes and patient satisfaction. Therefore, understanding and supporting the emotional needs of patients in the preoperative period is of great importance.

Objectives

The aim of this study is to determine the levels of preoperative fear and anxiety in neurosurgical patients scheduled for day surgery.

Methods

A descriptive, cross-sectional, and prospective study was conducted with 145 outpatients scheduled for elective neurosurgical day surgery. Patients were classified as ASA I-II-III according to the American Society of Anesthesiologists. The sample size was determined using a known population formula. Data were collected between April 15, 2024, and May 30, 2025, using a demographic form, the Surgical Fear Questionnaire (SFQ; 8 items, 2 subscales), and the Surgical Anxiety Questionnaire (SAQ; 17 items, 3 subscales). Ethical approval was obtained prior to data collection. Data were analyzed using SPSS version 25.

Results

The mean age of participants was 55.29 ± 10.35 years, and 65.5% were female. The most common procedures were epidural injection (54.5%) and median nerve decompression (22.1%). The mean SFQ score was 22.59 ± 14.90 , and the mean SAQ score was 15.89 ± 11.41 . The most commonly reported fears were health deterioration (mean: 3.6/10) and incomplete recovery (mean: 4.1/10). A weak but significant negative correlation was found between age and recovery-related anxiety ($r = -.201$, $p = 0.015$).



Conclusion

The study found that patients experienced significant fear and anxiety related to surgery, with concerns about not fully recovering and health deterioration being the most prominent. In addition, as age increased, anxiety related to recovery decreased. These findings highlight the importance of providing psychological support before surgery.

115 The Relationship Between Perception of Feeling Safe and Postoperative Recovery in Patients Undergoing Surgery with Regional Anesthesia: A Descriptive Study

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Background

Patients' emotional and psychological experiences during surgery can significantly affect their recovery. Especially in regional anaesthesia where patients are conscious, providing a feeling of safety is important for both intraoperative comfort and postoperative recovery.

Objectives

This study aimed to examine the relationship between patients' perception of feeling safe during surgery and postoperative recovery in individuals undergoing surgery under regional anesthesia.

Methods

This descriptive and correlational study was conducted between February 1 and June 30, 2025, in a public hospital in Istanbul. A total of 308 patients who underwent elective surgery with regional anesthesia were included. Data were collected using the "Patient Information Form," "Feeling Safe During Surgery Scale," and "Postoperative Recovery Index." Data were analyzed using descriptive statistics, Mann-Whitney U test, Kruskal-Wallis H test, and Spearman correlation analysis.

Results

Patients reported a high level of feeling safe during the surgical process ($M=115.72\pm 10.50$), while their postoperative recovery was generally at a moderate difficulty level ($M=1.69\pm 0.36$). A low-level negative significant correlation was found between feeling safe and postoperative recovery scores ($r= -0.157$, $p<0.001$). The domain with the greatest difficulty was physical activity.

Conclusion

Feeling safe during surgery under regional anesthesia positively affects the postoperative recovery process. Therefore, enhancing perioperative nursing practices—especially preoperative patient education and supportive communication—may improve patient perceptions of safety and contribute to better recovery outcomes, particularly for those undergoing surgery for the first time.



31 A comparison of acupuncture vs placebo for post discharge nausea and vomiting prophylaxis: Randomized placebo-controlled, patient and observer blinded trial

Gerda D.M. Kristensen, Sine S. Krogstrup, Carina N. Sørensen, Mathias H. Andersen, Rasmus Petersen, Andra Pachai, Jakob Oxlund, Mette Riber

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Background

Along with the rise in ambulatory surgery and accelerated hospital admission, post operative nausea and vomiting (PONV) and discharge nausea and vomiting (PDNV) are gaining greater attention. PDNV has shown incidence rate from 10% to 37%, and higher in patients with multiple risk factors. PDNV is a common cause of readmission and economic burden.

Objectives

This randomized, placebo-controlled, patient and observer blinded trial (RCT) was conducted to determine whether acupuncture at the points of P6, ST 36 and Lv3 are effective in preventing PDNV compared to placebo acupuncture.

Methods

Patients (n=129) scheduled for arthroscopic knee surgery and ACL reconstruction were randomly assigned to two groups, receiving either acupuncture (n=69) or placebo acupuncture (n=60). The intervention was conducted at the PACU after surgery.

Results

The incidence rate of PDNV was the main outcome measure, which showed no statistically significant difference between the groups (overall average; 6.17% had PNDV after acupuncture, 13.33% placebo, p=0.09). The difference was more pronounced for female patients (24% had PDNV after acupuncture, 50% placebo, p=0.03).

Conclusion

The RCT demonstrated a trend towards a reduction in frequency of PONV and PDNV, when comparing acupuncture vs. placebo acupuncture. However, there were no statistically significant difference between the groups. A subgroup analysis of females receiving acupuncture vs. placebo acupuncture showed a significant reduction of the incidence of PDNV.

270 A systematic review of nurse anesthetists' role in on-table extubation of pediatric cardiac patients

Maria Lioliou¹, Eirini Patroudaki¹, Maria Kaprana², Christina Krithari², Fotios Giamouridis², Rengina M. Katsimari², Anastasia Nikolaou², Eirini Kitsiou³, Chrysa Panagiotou⁴

¹ Onassis Hospital, Nurse anesthetist, Athens, Greece; ² Onassis Hospital, OR nurse, Athens, Greece; ³ Onassis Hospital, transplant coordinator, Athens, Greece; ⁴ Onassis Hospital, Director of Nursing Service, Athens, Greece

Background

On-table extubation (OTE) of pediatric patients after surgery for congenital cardiac diseases is receiving renewed



interest in accordance with positive international experience; experienced nurse anesthetists contribute greatly in such procedures.

Objectives

To identify the role and significance of nurse anesthetists during OTE of pediatric cardiac patients.

Methods

This was a systematic review using the PRISMA guidelines. Relevant databases in the fields of health and nursing (MEDLINE, CINAHL, EMBASE, Cochrane Library, Google Scholar) were searched for articles in English, Greek, French, and German published between 2000 and 2025. Studies focusing exclusively on adults or including adults and children without discrete data were excluded, as were pharmacological/medicinal studies and books. Full-text articles were retrieved if study abstracts were deemed relevant. Keywords used were: on-table extubation, pediatric, cardiac, anaesthetist, nursing, nurse, pharmacology and boolean operators.

Results

Six studies fulfilling our criteria were identified; two further articles were retrieved from reference lists for a total of eight studies. Of these, three were doctoral theses, two were reviews, one was a pilot of a randomized controlled trial and one was a web-based survey of pediatric cardiac anesthesiologists; finally, one study reported results of a non-randomized protocol on OTE. Quantitative synthesis of results was not possible due to heterogeneity and a small number of studies. Qualitative narrative synthesis provided little information on the exact role of nurse anesthetists, with the exception of doctoral theses that acknowledged their importance and underlined their pivotal role in controlling factors potentially delaying extubation. Studies reported employment of experienced trained nurses in postoperative anesthetic care units; still, there was no information as to their exact role.

Conclusion

There is a notable lack of evidence regarding the role of nurse anesthetists in OTE procedures of pediatric cardiac surgery. Further research is needed to explore their integration within the multidisciplinary care framework.



15:30 – 16:45

Koločep

S09 | Session 9 | Education

Wivine Schellekens

14 Enhancing Patient Safety in the Operating Room: Reporting Adverse Events and Near Misses

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Background

Reporting adverse events and near misses is a key component in improving patient safety. In high-pressure and fast-paced environments such as operating rooms, staff may hesitate to report incidents due to fear of blame or punishment. Creating a supportive and transparent culture can turn reporting into a powerful tool for risk reduction, learning, and continuous improvement.

Objectives

This study aimed to evaluate whether promoting a safety culture among operating room nursing teams would increase the frequency and quality of reporting adverse events and near misses. It also explored whether staff would feel safe and supported when reporting mistakes, without fear of negative consequences

Methods

Between 2022 and 2024, an educational intervention was implemented for OR teams. Activities included regular training sessions and refreshers, quarterly presentations of departmental incident data, case reviews for team learning, and two major unit-based projects focusing on near-miss reporting related to inadequate preoperative patient preparation. The initiative encouraged open discussion of mistakes, offered psychological support through trained “second victim” advocates, and included participation in risk management workshops. Staff received updates and quizzes through departmental WhatsApp groups. Data were analyzed from computerized and manual reporting systems.



Results

A significant increase in reporting was observed over time. Reports included:

- 2021: 87 adverse events, 135 near misses
- 2022: 157 adverse events, 133 near misses
- 2023: 112 adverse events, 170 near misses
- 2024: 96 adverse events, 137 near misses

During the period, 20 training sessions were conducted, 20 events were presented in staff meetings, and 10 sessions were led by the risk management unit. Twelve staff members completed external risk and safety workshops. Most staff reported feeling safe to report incidents.

Conclusion

Encouraging reporting strengthens patient safety and fosters a culture of transparency and learning. Continued education, supportive frameworks, and trust-building are essential for sustainable improvement.

43 Techno-Pressure in the Operating Room: Technostress as a Risk Factor for Patient Safety Attitudes

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Background

The use of technological systems in the operating room has become essential to patient safety, yet these systems can also be sources of stress for healthcare professionals. Technostress, defined as stress arising from the use of technology, may impact safety attitudes among operating room healthcare professionals.

Objectives

The aim of this study was to examine the effects of healthcare professionals working in operating rooms' perceptions of technostress creators, their personal and professional characteristics, and their attitudes toward safety.

Methods

The study was conducted using a cross-sectional and correlational design. Data were collected from 153 physicians and nurses working in operating rooms via an online survey. The "Participant Information Form," "Technostress Creators Scale for Healthcare Professionals," and "Safety Attitudes Questionnaire-Operating Room" were used to collect data. Data were analyzed using SPSS 25 software.

Results

The subscales of techno-overload and techno-invasion were found to be negatively and significantly correlated with



all subscales of safety attitudes ($p < .01$). Techno-complexity, on the other hand, showed a positive and significant correlation ($p < .01$). According to multiple regression analysis, techno-overload, techno-complexity, technology-related stress levels during surgery, and operating room experience explain 50.4% of the variance in safety attitude scores ($p < .001$).

Conclusion

Stress experienced with technological systems in the operating room is an important factor affecting patient safety attitudes. In particular, technology-related workload and intervention pressure increase negative attitudes, while complexity can provide a positive cognitive contribution at a certain level. Therefore, it is recommended that technology adaptation training and supportive strategies be developed for healthcare professionals.

245 Building consensus on Perioperative Safety Indicators: A Swedish Delphi Study

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Background

Eliminating avoidable harm in healthcare remains a global challenge. In Sweden, surgical complications account for 30% of events causing permanent patient harm. Monitoring how the care is provided, the actual care given, and its outcome in perioperative setting is essential for improving patient safety. However, this is hindered by the lack of standardised information structures and consensus on practical monitoring methods.

Objectives

To identify, define, and reach consensus on perioperative patient safety indicators within a Swedish context.

Methods

A modified Delphi study was conducted with 22 experienced operating room nurse specialists to reach consensus on perioperative patient safety indicators. Participants rated the importance of various statements related to patient safety during the perioperative phase. Data were collected online between November 2022 and April 2023 using a questionnaire developed from a preceding study.

Results

Consensus was achieved on 73 out of 103 statements across the three-rounded Delphi, encompassing both process (74%) and structure (26%) indicators. Key areas of consensus included the significance of professional competence, effective communication, and teamwork in promoting perioperative patient safety.

Conclusion

This study highlights the complex challenges of ensuring patient safety in the operating room and underscores the value of a balanced approach that integrates both structure and process indicators. The results demonstrate how the integration of clinical experience with current, evidence-based knowledge among operating room nurses can contribute to safer surgical care. This integrated approach not only improves patient outcomes and supports sustainable practices but also promotes effective collaboration and cultivates a culture of continuous learning and



professional development. The study offers practical guidance and a structured framework for evaluating perioperative care processes, providing valuable insights for clinical practice.

72 How to Prepare for a Fire in the Operating Room

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Background

[A fire in the operating room (OR) can have serious consequences for the patient, staff, and the organization. Previous studies have shown that misconceptions hinder fire prevention. It is often assumed that fires do not occur in modern hospitals, and if one does occur, it could not have been prevented. There is also a belief that fires do not happen in our hospital, but if one did, the entire staff would know how to respond. However, fires can be prevented by training staff to recognize and mitigate risks and to act appropriately in the event of a fire.]

Objectives

[The goal was to ensure that OR staff are prepared to respond to a fire by organizing a “Fire in the Operating Room” training day. The training day aimed to provide both theoretical knowledge and hands-on sessions for responding to fire emergencies. The training day was structured so that in the morning, staff received theoretical instruction on fires, their causes, prevention, and appropriate actions during a fire. Afterward, the staff was divided into smaller groups. These groups participated in safety walkthroughs in the OR, a OR fire drill, and a fire safety orienteering activity. The simulation exercise tested the applicability of a national protocol in our OR's. During the fire safety orienteering, staff located checkpoints based on a safety system floor plan. At each checkpoint, they received additional information, for example, about initial fire extinguishing equipment. In the afternoon, staff were invited to provide anonymous feedback on the training content and the effectiveness of the fire protocol.]

Conclusion

[Based on the feedback, the training day was a success. It provided knowledge, skills, and confidence to act in a fire situation. It was also observed that the national protocol action card requires adjustments to be fully effective in our OR's.]

323 Evaluation of YouTube Videos Regarding Post Cardiovascular Surgery Discharge Patient Education

Eva Kajti, Çağla Toprak

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Background

In today's rapidly evolving and changing world, sedentary lifestyles, air pollution, consumption of processed foods and beverages, and the use of tobacco and alcohol have contributed to cardiovascular diseases (CVDs) becoming the leading cause of mortality. Studies have shown a notable global increase in cases ranging from acute myocardial



infarction to heart failure, a trend that is also evident in Türkiye. The World Heart Federation estimates that by 2030, every year over 23 million deaths will be linked to CVDs. These high rates of disease requires a wide range of treatments and among the most frequently performed treatments for CVDs are open-heart surgeries, which are preferred due to their potential to provide a longer and better quality of life compared to medical therapy.

Objectives

The aim of this study was to evaluate the quality of videos on discharge education after cardiovascular surgery on YouTube.

Methods

The research was performed on October 21, 2022, by using the English keywords "cardiovascular surgery" and "discharge education" on YouTube. Activities of Daily Living parameters were used as evaluation criteria related to video content of discharge education. These criteria are the accepted and used in the literature. The Global Quality Score (GQS) was used to evaluate the quality of the videos, and the Quality Criteria for Consumer Health Information (DISCERN) was used to evaluate their reliability.

Results

The GQS score average was 3.11 ± 0.875 , however, 27.0% of the videos were found to be generally poor. 32.4% of the videos were evaluated as good/excellent quality. However, there were no videos containing misleading or incorrect information.

Conclusion

Although no videos containing misleading or incorrect information were encountered, there is a lack of standardization in patient discharge education regarding the content of YouTube videos.



15:30 – 16:45

Orlando B

S10 | Session 10 | Technology and Innovation

Ólafur Guðbjörn Skúlason

26 Robotic Radical Prostatectomy (Senhance vs da Vinci) – Our Experience

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Background

Since the advent of robotic surgery, its use in urology-especially for prostate cancer-has expanded rapidly. Growing utilisation of different robotic platforms demands a comparative assessment of their clinical and operational performance. At the Department of Urology, University Hospital Centre Zagreb, the first robotic-assisted radical prostatectomy (RARP) was performed with the Senhance system in 2019; the da Vinci system was introduced in 2024.

Objectives

The aim of this study was to compare clinical outcomes (operative time, length of hospital stay) and the experiences of operating-room team members (surgeons and scrub nurses) when performing radical prostatectomy with the Senhance and da Vinci robotic systems.

Methods

All RARP procedures from May 2019 to April 2025 were reviewed retrospectively. Quantitative variables were compared using the Mann–Whitney U test; subjective impressions of surgeons and scrub nurses were collected through structured interviews and analysed thematically.

Results

A total of 1,004 RARP procedures were analysed (Senhance = 854; da Vinci = 150). Operative time: Senhance median 190 min (range 120–315) vs da Vinci 135 min (75–400); $p < 0.001$. Length of stay: Senhance median 4 days (3–20) vs da Vinci 3 days (2–13); $p < 0.001$. Scrub nurses reported that working with Senhance was more dynamic and technically demanding, while their role with da Vinci was simpler and more standardised. Surgeons rated da Vinci as more ergonomic and precise, whereas Senhance required greater manual coordination.

Conclusion

The da Vinci platform provides significantly shorter operative times and hospital stays, indicating higher clinical



efficiency and ergonomic benefit for surgeons. Conversely, the Senhance system affords scrub nurses a greater degree of technical engagement. Operating teams should tailor workflow and staffing to the specific demands of each robotic system to maximise safety and surgical efficiency.

316 Perspectives of Perioperative Nurses on Artificial Intelligence, Machine Learning, and Scrub Nurse Robots. A Survey in Thessaloniki, Greece.

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Background

The use of Artificial Intelligence tools is rapidly increasing in clinical medicine. Machine learning is a branch of artificial intelligence that focuses on the ability of computers and machines to emulate the way humans learn. Machine learning and robotics technologies are being increasingly utilized in the healthcare sector to improve the quality and efficiency of surgical procedures. The aim is for robotic scrub nurse systems to address the gaps arising from shortages in nursing staff by undertaking responsibilities such as surgical instrument handling.

Objectives

The survey has two purposes. The first goal was to adapt the Artificial Intelligence Anxiety Scale into Greek and the other aim was to explore perioperative nurses perceptions toward the implementation of artificial intelligence technologies in operating theaters.

Methods

A quantitative survey was conducted at hospitals of Thessaloniki in May 2024. The data were obtained using the Artificial Intelligence Anxiety Scale, which was adapted into Greek by the author. Artificial Intelligence Knowledge Questionnaire was used to measure the participating nurses level of knowledge related to artificial intelligence and robotic nurses. Statistical package SPSS 27 was implemented for the statistical processing. ANOVA test and independent samples for equality of means test (t-test) were the statistical techniques used. The sample of this research included 283 perioperative nurses.

Results

Most of the respondents, were unaware of the advantages and most common challenges to artificial intelligence applications in the health sector. The majority of the participating nurses stated that they did not think that robots would replace nurses. Lack of training given to perioperative nurses for artificial intelligence affects increasing the anxiety level of nurses toward AI.

Conclusion

Participating nurses experienced limitations regarding current information and learning opportunities on AI and robotic surgery. Perioperative nurses should be provided with training programs on AI technologies and robotic nurses.



25 The Impact of Virtual Reality (VR) Use on Pain Levels and Patient Satisfaction After Knee Arthroscopy Surgery

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Background

In recent years, virtual reality (VR) has emerged as a non-pharmacological tool for reducing pain and anxiety during medical procedures. Previous studies have shown the effectiveness of VR in various surgical and ambulatory procedures. The primary aim of this project was to examine the impact of VR on pain and patient satisfaction after knee arthroscopy surgery.

Methods

- **Study Design:** A pre/post intervention assessment using the Plan-Do-Study-Act (PDSA) model.
- **Population:** 40 patients at the Nazareth English Hospital (mean age 40.7 years).
- **Inclusion Criteria:** Age 16+, undergoing knee arthroscopy under general anesthesia.
- **Intervention:** VR headset used for 15 minutes in the post-anesthesia care unit (PACU).
- **Measures:** Pain intensity (VAS, PROMIS), vital signs, and patient satisfaction (custom questionnaire).

Results

Most participants reported a reduction in pain intensity after VR use:

- 45% reported moderate pain improvement.
- 22.5% reported significant pain improvement.
- 90% of participants recommended VR use post-surgery.
- Patient satisfaction ranged from moderate to high for all participants.
- Factors associated with high satisfaction included significant pain relief, high comfort level, and strong distraction/engagement.
- Most participants did not report any clinical symptoms related to VR use.

Conclusion

- VR is an effective non-pharmacological tool for reducing pain and improving the recovery experience after surgery.
- There is room to integrate this technology more broadly into clinical and nursing practice.
- Continued research into VR implementation in other procedures and populations is encouraged.

280 Perceptions of teamwork and learning - Operating room nurses perceptions when working in paediatric OR-units.

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Background

Effective teamwork is essential in surgery (Vincent, 2010); however, adverse events may occur when team members misinterpret or fail to communicate effectively, creating stress and risking patient safety. Health professionals need right attitudes, skills, and knowledge (Dornan, 2011) and must implement a transparent, coordinated approach to adapt to changing conditions and pressures (Irving et al., 2024).

Social interactions in clinical settings help establish reference frameworks, enhancing learning (Mezirow, 2009). Research suggests that teamwork requires a broad definition, considering assumptions about its nature, study methods, and limitations (Anderson et al., 2021). Advanced medical technologies are critical in ensuring patient safety (Lee et al., 2022; Sevdalis et al., 2012), yet their complexity also raises the potential for human error.

Objectives

To uncover operating room nurses' perceptions of team work and learning processes in the paediatric perioperative setting.

Methods

Phenomenographic method was applied to capture how different operating room nurses (ORN) perceive and understand various aspects of teamwork and learning.

Results

The results reveal two primary approaches to perception and learning within the operating room team: *the team-oriented* and *person-oriented* approaches. The *team-oriented* learning prioritises the team itself, focusing on collective discussions—what is said, what actions to take, and how tasks are performed. Knowledge in this approach appears to stem from shared experiences and interactions within the team. The *person-oriented* learning on the other hand, directs the team's focus toward the individual patient undergoing surgery. Here, knowledge is gathered from a range of text-based resources, providing comprehensive, specific information about the patient. This could be considered a more academic or advanced approach to learning.

Conclusion

Diverse ways of understanding teamwork and learning in the team or together with the team might have impact on quality of care and preparedness for adverse events. The outcome of this study important for team learning development.

306 Ethical challenges in the perioperative treatment of a ruptured abdominal aortic aneurysm: a case study in Bogotá, Colombia

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Background

Ruptured abdominal aortic aneurysms (AAAs) are one of the most lethal vascular emergencies, with a perioperative mortality rate of up to 90%. Surgical treatment of abdominal aortic aneurysms (AAA) is associated with complex clinical and ethical dilemmas, especially in regions with limited resources such as Colombia. Social inequalities, limited access to care, and systemic barriers influence perioperative decisions and outcomes. Previous studies have highlighted inequalities in hospital infrastructure, limited knowledge for early detection, absence of protocols for managing this type of pathology, and lack of specialized vascular surgery units. This delays timely interventions and raises ethical concerns about equity, effectiveness, and justice in medical care.



Objectives

Analyze the ethical conflicts and social determinants that influence the decision-making process in the surgical treatment of AAA in a tertiary hospital in Bogotá.

Conclusion

This case illustrates the recurring ethical tensions in AAA management in Colombia. First, surgical urgency often conflicts with patient autonomy in contexts of low health literacy, compromising truly informed consent. Second, institutional constraints, such as a lack of intensive care beds and surgical supplies, lead to triage decisions influenced not only by clinical need but also by resource availability. Third, healthcare professionals experience moral distress when weighing the individual benefit of the patient against systemic constraints, particularly when caring for vulnerable populations. This case highlights the importance of developing context-sensitive perioperative protocols. These include culturally appropriate communication strategies, access to ethics consultation, and systematic recognition of the social determinants of health. These measures are essential to promoting more fair, equitable, and patient-centered perioperative care in Colombia and similar healthcare settings.



15:30 – 16:45

Orlando A

S11 | Session 11 | Healthy Workplaces

Annika Sandelin

149 Using Pressure Mapping Technology to Advocate for Sustainable Products in the CVOR

Heather Swan²

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Background - Our Healthcare system is committed to sustainability by integrating evidenced-based clinical decisions that reduce waste, improve efficiency, and enhance long-term patient outcomes. The operating rooms are actively seeking ways to combine the best available research evidence with clinical expertise and patient preferences. Surgical patient positioning has traditionally been driven by the surgeon, with the goal of optimizing conditions for the best surgical outcomes. Recently, proposed changes in our operating rooms have focused on transitioning from single-use patient positioning items to reusable alternatives. The primary challenge for our pressure injury prevention team has been to identify multi-patient use products that maintain our low rates of patient injury.

Objectives - External literature and reviews of pressure mapping comparisons were critically appraised to inform product selection. In addition, internal pressure mapping conducted by team members, with data measurements collected and analyzed to compare the performance of disposable and reusable positioning products.

Methods - External Pressure mapping was utilized to critical compare current disposable positioning products with reusable alternatives. Surface characteristics that contribute to efficient pressure redistribution were systematically appraised and evaluated to identify the most suitable products for maintaining patient safety and comfort.

Results - The use of evidenced-based data from pressure mapping enabled the operating rooms to identify the most cost effective and sustainable patient safety-focused products while maintaining optimal surgical positioning.

Conclusions - Our use of evidence-based data helped the facility to transition to safe, sustainable products while maintaining our low hospital acquired pressure injuries.

Question - Did you consider randomizing the trial of the Aquari Mattress?



74 The Relationship Between Noise Levels in the Operating Room On The Attention Control and Perceived Stress Of Nurses: A Pilot Study

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Background

The World Health Organization recommends that the maximum background noise level in hospitals should not exceed 30-35 dB. It is known that noise disrupts the concentration of healthcare professionals and causes cognitive interruption.

Objectives

This study aims to evaluate the effects of noise levels in the operating room on the attention control and perceived stress of operating room nurses.

Methods

This descriptive-design study was conducted on 47 operating room nurses. Data were collected from operating room nurses before and after the first surgery of the day using the “Perceived Stress Scale” and “Attention Control Scale.” In addition, during the same case, the decibel levels of the operating room environment were recorded with a total of 611 measurements before anesthesia, during, and after the operation. SPSS 22.0 was used in the analysis of the data, and significance was accepted as $p < 0.05$ at a 95% confidence interval.

Results

It was found that there was no statistically significant relationship between the pre- and post-operative attention control levels and perceived stress levels of operating room nurses, but noise levels increased during the operation, especially during patient transfer (over 70 dB). It was also determined that there were 66.57 ± 5.33 dB average and 87 dB maximum noise measurements in the operating rooms.

Conclusion

It was concluded that nurses with higher professional experience can manage distractions and stress caused by noise. However, it was determined that the noise in the operating room environment reached decibel levels that could distract the team during critical surgical moments and jeopardize patient safety. Therefore, it is recommended to implement noise control strategies.

8 Enhancing Perioperative Care: AI Deployment and Governance

Zach Swartz, Lisa Spruce

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Background

As health care and technology advances, it's imperative that perioperative teams stay informed of evidence-based



practices for integrating technology, including artificial intelligence, that influences patient outcomes and perioperative team safety.

Objectives

Health care facilities, perioperative leaders and nurses will be knowledgeable of their role and responsibilities as part of the interdisciplinary team when developing, evaluating, and deploying health AI in the perioperative setting. This includes development of a governance structure, creation of an interdisciplinary team, development of policies and procedures related to health AI, and educational and competency verification activities for users of health AI.

Methods

A systematic review of the current literature related to artificial intelligence in the perioperative environment was conducted in February 2025 following PRISMA guidelines. Following critical appraisal and synthesis of the evidence, clinical practice guidelines will be drafted to guide perioperative teams in the integration of health AI.

Results

911 articles were retrieved. After rapid review of the titles and abstracts, full text of 443 articles were obtained and appraised by two authors (ZS, LS). The authors are currently conducting the evidence synthesis and drafting of the Guideline, planned for publication in early 2026.

Conclusion

The new AORN Guideline for the Deployment and Governance of Artificial Intelligence, will provide guidance to perioperative team members for developing a framework for the deployment and governance structures of health AI in the perioperative setting across the lifecycle of use: design, development, validation, deployment in the clinical setting, and quality assurance monitoring throughout use. As health care and technology advances, it's imperative that perioperative teams stay informed of evidence-based practices for integrating technology that influences patient outcomes and perioperative team safety. This presentation provides an overview of the current state of research on artificial intelligence, best practices identify and mitigate bias, protect patient privacy, and safeguard against cybersecurity threats.

138 Understanding the perpetration of disruptive intraoperative behavior: Looking beyond averages with perpetration mapping, patterning, and pairing

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Background

Managing disruptive clinician behaviors requires robust information about perpetration, yet previous analyses tend to simply rank the responsible professions by average perpetration frequency, which overlooks underlying interpersonal dynamics.

Objectives

To comprehensively describe perpetration using novel metrics, including perpetration culture, patterns and perpetration-victimization pairings.

Methods

We retrospectively analyzed data from a multinational survey examining disruptive behavior. Respondents reported how often they saw five professions carry out or experience disruption, and the proportion of individuals per



profession who acted disruptively (ubiquity). Three novel metrics were used. 1) Perpetration culture was described using what we call “perpetration mapping”. This involved plotting each profession’s ubiquity against its perpetration frequency, dividing the resulting grid into sections that we labeled descriptively (e.g., most people acting disruptively >-1/day=“Ever-present and widespread”), and reporting the proportion of observations in each section. 2) To identify common distributions of disruptive behavior observed across clinicians (e.g., “only physicians act disruptively”), we used latent profile analysis (LPA) on perpetration frequency proportions 3) To understand who acts disruptively toward whom, we examined the correlations between perpetration and victimization questions (i.e., pairings).

Results

5,895 responses were analyzed. The perpetration map showed that most clinicians were in an environment where disruptions were rare and distributed amongst 1-2 clinicians. The best fitting LPA identified 6 perpetration patterns: “Everyone except trainees” (n=958), “Everyone except techs and trainees” (n=781), “Equal spread amongst professions” (n=2518), “Nurse-surgeon mix” (n=290), “Surgeon-only” (n=266), and “Everyone except techs” (n=827). All perpetration-victimization pairings were significant and positive ($p < 0.001$). However, the largest pairings were surgeon-nurse ($\rho = 0.73$), technician-technician ($\rho = 0.68$), and nurse-nurse ($\rho = 0.63$).

Conclusion

The predominant OR culture involves rare and narrow disruptive behavior within each profession, and the predominant pattern involves equal perpetration by all professions. Victimization pairings reveal a mixture of vertical and horizontal disruption. These insights, coupled with context-specific data, can guide targeted interventions.

85 Ethical skills and the chain of custody through the perioperative process: Fundamentals of responsibility, accountability, and evaluation

Geraldine Hider, Donald Hoepfer

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Background

Ethical competency supports the integrity of the perioperative process. The conceptual design of the chain of custody is under-studied, yet it is of paramount importance to promote patient safety, compliance with standards of care, the prevention of errors, infection control, and retain objects. As perioperative staff understand their roles within the chain of custody, moral distress, burnout, and anxiety are reduced. The chain of custody affirms role-based ethics in which responsibilities are defined by one’s role.

To illustrate chain of custody, the presenters developed a Responsibility/Accountability/Evaluation model. The concepts of the model draw from a multi-disciplinary approach to clarify ethical uncertainty and emotional bias. The model reflects a practical application process. Use of the model aids in identifying responsibility and accountability, avoiding blame, facilitating collaborative communication and conflict resolution.

Objectives

1. Discern how the ethical concept of the chain of custody functions and how to restore it when it is broken.
2. Identify critical processes perioperative nurses have within the chain of custody.
3. Develop a Responsibility/Accountability/Evaluation model to clarify roles in the chain of custody.

Methods

Outcomes were measured using a qualitative case study method involving focus groups, interviews, and surveys.



Nurses applied the model to various case studies. Having been instructed in the Responsibility/Accountability/Evaluation Model, nurses identified their own moral reactions, demonstrated increased awareness of their roles and the roles of others in the perioperative setting, and demonstrated increased capacity to discuss reasons for their actions in ethical decision-making.

Results

Nurses demonstrated increased ethical competency in identifying their responsibilities in the chain of custody. Nurses demonstrated greater awareness of the collaborative process and the interplay of roles of the perioperative team.

Conclusion

The Responsibility/Accountability/Evaluation model reaches administrative, strategic, and interpersonal levels of ethical competency. Ethical competency enhances role-awareness and clarity of task and collaboration within the chain of custody.



16:45 – 18:00

Orlando A

S12 | Session 12 | Patient Safety

May Karam

40 Intraoperative Device-Related Pressure Injuries in Patients Undergoing Prolonged Surgery

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Background

Pressure injuries (PIs) are a significant complication in surgical patients due to both intrinsic and extrinsic risk factors. Device-related pressure injuries (DRPIs), a subtype of PIs associated with medical devices used intraoperatively, are frequently underrecognized. Prolonged surgical procedures notably increase DRPI risk by extending tissue exposure to pressure, friction, and altered skin conditions. However, limited evidence exists regarding DRPIs in prolonged surgeries.

Objectives

This study aimed to determine the incidence and risk factors of DRPIs in surgeries lasting ≥ 3 hours.

Methods

A descriptive, prospective, single-center study was conducted in a tertiary hospital in Istanbul. The study included patients aged ≥ 18 years undergoing elective surgery with an operative time ≥ 3 hours. Data were collected using a patient information form, the Braden Scale, and the 3S Intraoperative Risk Assessment Scale. Ethical approval was obtained from the Medical Research Evaluation Commission.

Results

Among 367 patients, the overall DRPI incidence was 30%, with 98.8% classified as stage 1. DRPIs were more frequent in urology surgeries (52.9%; $p < 0.001$), patients aged > 48 years ($p = 0.001$), BMI ≥ 25 kg/m² ($p = 0.036$), operative time ≥ 250 minutes ($p = 0.012$), and cases involving ≥ 13 medical devices ($p < 0.001$). Independent predictors of DRPI included non-plastic surgeries ($p = 0.017$), intraoperative position changes ($p = 0.019$), and a 3S scale score ≥ 15 ($p = 0.008$).

Conclusion

This study confirmed that DRPIs represent a significant intraoperative patient safety concern, particularly in prolonged



surgeries. Both patient-related factors (advanced age, elevated BMI, impaired skin condition) and surgery-related variables (procedure type, duration, intraoperative repositioning, bleeding volume, and number of medical devices) were identified as significant determinants of DRPI development. The findings underscore the need for continuous intraoperative risk assessment, use of procedure-specific assessment tools, and implementation of evidence-based, surgery-specific prevention strategies to reduce DRPI incidence.

13 Avoiding Abbreviations in Informed Consent Forms: Enhancing Clarity and Patient Understanding

Layla T. Khalilia, Biana Y. Kats

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Background

Informed consent is a vital process that enables patients to make well-informed decisions based on clear and comprehensive medical information. However, the use of abbreviations in consent forms can hinder patient comprehension and lead to ethical and legal complications. A 2018 German study, “*The Quality of Informed Consent Forms*” highlighted significant issues such as overly complex language, missing information, excessive length, and lack of consistency across institutions. *lease replace your content here*

Objectives

To improve informed consent by eliminating abbreviations and ensuring that all content is clear, accessible, and easily understood by patientse *replace your content here]*

Methods

In March 2025, a random audit of 81 surgical and anesthesia consent forms was conducted. Of these, 49 forms (about 60%) contained abbreviations and were deemed non-compliant. To address this, several steps were taken:

- **Staff Training & Leadership Involvement:** Medical and nursing teams received training on clear documentation, with active participation from department heads.

- **Double Verification:** Each form must be reviewed by two staff members (e.g., a physician and a nurse) before the patient proceeds to surgery.

- **Patient Involvement:** Patients are encouraged to read the forms and ask questions to clarify any concerns.

- **Pre-Procedure Check:** Operating room nurses perform a final review of the consent forms before the procedure.

- **Error Reporting:** If errors are found, they must be corrected immediately, and the incident logged as a "near miss" for quality improvement.

Results

These actions are expected to enhance the accuracy and clarity of consent forms. By removing abbreviations and strengthening quality checks, patients will receive more understandable information. Three training sessions will be completed by May 2025, with a follow-up audit from June to September



Conclusion

To ensure valid and ethical consent, healthcare providers must use standardized, abbreviation-free language, continue staff education, and conduct regular quality audits

292 Predictive factors of postoperative complications in general surgery: A systematic review protocol

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Background

[Postoperative complications in general surgery remain a major cause of increased morbidity, mortality, and healthcare costs. Despite advances in surgical care and clinical informatics, there is a lack of consistent evidence on which clinical, demographic, or nursing-related factors most strongly predict these complications.]

Objectives

[To identify and synthesize predictive factors associated with postoperative complications in adult patients undergoing general surgery, including factors derived from perioperative nursing practice.]

Methods

[This systematic review follows the JBI methodology. A comprehensive literature search is being conducted in MEDLINE, CINAHL, Scopus, Embase and the Cochrane Library. Eligible studies include observational designs (cohort and case-control) and predictive modeling studies involving adults (≥ 18 years) undergoing general surgery. Two reviewers are independently screening, appraising methodological quality using JBI tools, and extracting data from included studies. The primary outcome is the occurrence of postoperative complications (e.g., infection, bleeding, reoperation, readmission). Data synthesis will be narrative, and a meta-analysis will be performed if data homogeneity permits.]

Results

[The review is currently underway. Preliminary screening suggests that studies frequently report patient comorbidities, ASA physical status, surgical urgency and length of operation as key predictive factors. However, few studies include variables derived from nursing care, such as nursing diagnoses or clinical assessments.]

Conclusion

[This review is expected to consolidate current evidence on predictors of postoperative complications in general surgery and highlight gaps in the inclusion of nursing-relevant variables. The results will inform the design of a predictive model aligned with perioperative nursing practice and support more person-centered, data-informed decision-making in surgical care.]



58 The effect of operating room teamwork on patient outcomes: a systematic review

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Background

Teamwork is defined as the ability of a group to efficiently coordinate actions to achieve common goals. In the operating room (OR), teamwork is recognized as a crucial factor influencing safety and outcomes for surgical patients. While specific aspects of teamwork have been previously reviewed, no comprehensive synthesis has examined its overall influence on measurable patient outcomes.

Objectives

This review aimed to assess the impact of teamwork in the OR on measurable patient outcomes, including mortality, morbidity, adverse events (AEs), and time-related indicators.

Methods

Following PRISMA guidelines, a systematic review was conducted using MEDLINE, CINAHL, and SCOPUS. Studies were included if they evaluated the relationship between teamwork and patient outcomes in OR. Data were extracted on study design, teamwork interventions, outcome measures and methodological characteristics. Study quality was assessed using the Joanna Briggs Institute appraisal tools.

Results

Twenty-three studies involving over 825,000 procedures and 5,000 professionals were included. Study designs were heterogeneous, mostly observational, with fewer interventional. Overall quality was moderate to high. A general consensus linked higher-quality teamwork to better outcomes, with a consistent effect on morbidity. Findings on mortality, AEs, and time-related outcomes were more variable, likely due to multifactorial influences including patient condition, surgical complexity, operator training, and the rarity of certain events, which may potentially overshadow the effect of teamwork alone. Key elements identified as essential to effective team functioning included a strong safety culture, advanced non-technical skills, consistent team composition, and designated team roles.

Conclusion

Effective teamwork in the OR is linked to improved patient outcomes, particularly on morbidity, though its impact remains context-dependent. Team familiarity, communication protocols, and structured training emerge as critical and modifiable components for enhancing surgical performance. Further high-quality, context-sensitive studies are needed to standardize metrics, define high-quality teams, and clarify complex causal relationships.



65 Pressure injuries Following Carcinologic Resection of Head and Neck With Flap Reconstruction: What Is the incidence and What are the Preventable Risk Factors?

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Background

Patients undergoing head and neck cancer surgery with flap reconstruction (FR) are at high risk for postoperative (PO) pressure injuries (PIs), due to clinical frailty, nutritional status, and long operative times. Despite the potential frequency of these complications, specific data remain limited. To better understand this issue, we conducted a single-center retrospective study at a French cancer center to evaluate PI incidence and identify associated risk factors in this vulnerable population, aiming to improve prevention strategies.

Objectives

the primary objective was to determine the incidence of PIs within the 10 PO days in patients undergoing ENT tumor resection with simultaneous FR; A secondary objective was to identify risk factors associated with PIs development.

Methods

This is a single-center retrospective study included patients who underwent head and neck tumor resection with either pedicled flap (PF) or free flap (FF) reconstruction between December 2022 and December 2023. Only procedures exceeding three hours were included.

Results

Among 145 included patients, 135 had FF and 10 PF reconstructions. Thirty-eight patients (26%) developed PIs. The median PO day of PIs development was 2, quartiles [1-3]. Factors associated with more PIs were smoking (61% vs 42% of patients with and without PIs respectively, $p=0.05$), longer surgery (mean time 566 min vs 517min, $p=0.05$), lower PO Braden score (mean score 15.4 vs 16.7, $p=0.01$). Forearm flap was significantly associated with fewer PIs (8% vs 25% of patients with and without PIs respectively, $p=0.02$).

Conclusion

This study confirms a high incidence of PO PIs in head and neck surgery with reconstruction. Interestingly, patients who underwent forearm flap developed fewer PIs, suggesting the importance of during surgery. Therefore, prospective studies evaluating therapies that impact positioning are needed to improve practices and reduce their occurrence.



16:45 – 18:00

Koločep

S13 | Session 13 | Education

Fabio Ferraiuolo

47 The impact of the simulation on operating room nurses' training in the operating environment: a scoping review

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Background

In recent years, clinical simulation has become increasingly central in the training of healthcare professionals, especially operating room (OR) nurses. Training in high-risk environments such as the OR through advanced technologies is a promising strategy to enhance both professional skills and patient safety.

Objectives

The aim of this scoping review was to investigate the impact of simulation-based education—including high-fidelity simulation (HFS), virtual reality (VR), augmented reality, serious games, mobile applications, and computer-based simulations—on the training of OR nurses within the operating environment.

Methods

A scoping review was conducted following the Joanna Briggs Institute (JBI) methodology. Studies were identified from PubMed, Scopus, CINAHL, Inspec, and ERIC databases. Inclusion criteria comprised primary studies involving experienced OR nurses and simulations performed in real or virtual operating environments. Data were extracted using a standardized tool and analyzed using the Kirkpatrick model of educational outcomes.

Results

Out of 808 initial records, 14 studies were included. The simulation tools addressed both technical skills (TS) and non-technical skills (NTS), leading to notable improvements in clinical confidence, communication, decision-making, and procedural knowledge. The most common methods involved high-fidelity mannequins and 3D virtual reality scenarios. However, most studies only assessed short-term learning outcomes (Kirkpatrick Level II) without measuring long-term impact on clinical performance or patient outcomes.

Conclusion

Evidence suggests that both HFS and VR positively affect the training of OR nurses, particularly in developing key technical and behavioral competencies. Nonetheless, future research should aim to assess the real-world transfer of acquired skills and their long-term effects on patient safety and surgical outcomes.



242 The impact of artificial intelligence-supported preoperative education on fear and anxiety levels in total mastectomy patients: A randomized controlled trial

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Background

Total mastectomy patients often experience intense fear and anxiety before surgery, which can negatively impact surgical outcomes and recovery. AI-supported educational tools can complement traditional education methods by addressing diverse individual needs more effectively and enhancing psychological preparation in the preoperative period.

Objectives

This study aimed to evaluate the impact of AI-supported preoperative education on surgical fear and anxiety levels in patients undergoing total mastectomy.

Methods

Single-blinded, randomized controlled trial was conducted between October 2024-July 2025 in the surgical ward. The study was registered at ClinicalTrials.gov (NCT06796166). Ethical approval was obtained from the Institutional Review Board of Acibadem University (Approval No:2024-13/548, Date:05.09.2024). Written consent was obtained from all participants. The sample size (n=40) was calculated using G*Power and participants were randomly assigned to the intervention (n=20) and control (n=20) groups using block randomization. The intervention group received AI-based preoperative education by ChatGPT's voice conversation mode, while the control group received preoperative education by a nurse. Data were collected using the Patient Information Form, State-Trait Anxiety Inventory and Surgical Fear Questionnaire. Statistical analyses included dependent and independent samples t-tests, chi-square tests and calculation of effect size using Cohen's d with SPSS 26.

Results

The study found that the experimental and control groups were homogeneous in terms of demographic characteristics. State anxiety levels decreased significantly in the experimental group and this decrease was more pronounced than in the control group (p=0.035). No significant differences were found between the groups in terms of trait anxiety and surgical fear levels (p>0.05). Communication effectiveness of the education was rated higher by control group (p=0.040). Correlation analysis revealed significant relationships among state trait anxiety and surgical fear (p<0,05).

Conclusion

It was determined that artificial intelligence-supported preoperative education was effective in reducing state anxiety in patients scheduled for total mastectomy. However, it had no significant effect on surgical fear.



175 Silent Cuts, Shared Solutions: Using OT Knowledge to Tackle Sharps Injuries

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Background:

Perioperative staff, who routinely handle scalpels and suture needles, face the greatest risk of sharps injuries in hospitals. Yet, underreporting remains widespread. It is estimated that up to 50% of sharps injuries in healthcare settings go unreported. This lack of reporting compromises data accuracy, delays safety improvements, and leaves staff vulnerable to preventable injuries and infection exposures. This issue of underreporting is identified in the Document, EORNA *Best Practice for Perioperative Care*.

Objectives:

To explore the individual and organisational factors contributing to underreporting of sharps injuries among perioperative staff, and identify evidence-based strategies that promote a culture of safety & compliance. To design a simple checklist to improve reporting rates of staff injuries in the OT.

Methods:

This presentation undertook an observational analysis of sharps injury underreporting patterns and their consequences, using case examples, including a delayed-reporting incident that resulted in necrotising fasciitis. It reviewed the literature from other industries to identify systemic and behavioural barriers to reporting and examines practical interventions to improve reporting rates.

Results:

The study identifies the underlying individual & organisational factors leading to the underreporting issue. As a practical response to this often-overlooked issue, we developed a simple, accessible checklist to increase reporting in perioperative settings.

Conclusion:

Sharps injuries continue to be underreported across perioperative settings. Contributing factors include fear of blame, ignorance, workflow pressures, and unclear reporting systems. These gaps delay prevention efforts, increase clinical risk, and obscure the true burden of harm. Empowering staff through clear protocols, access to safety-engineered devices, and leadership support has been shown to improve reporting and drive sustainable change.

Underreporting is not just a data issue—it is a safety issue. Drawing attention to the value of injury reporting is a critical step in building safer theatres.

19 Training of operating room nurses: staff survey and development of a manual at the North Estonia Medical Centre

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Background

Staff turnover in hospitals puts patients at risk, the use of a structured training manual increases the retention of new nurses and supports the development of competencies as an operating room (OR) nurse. It's also necessary for supervisors. The OR has historically been an intensive and challenging learning environment.

Objectives

The aim was to describe the experiences and views of the staff and to develop a manual to support the training of OR nurses at the North Estonia Medical Centre (NEMC).

Methods

A development project was led to develop a training manual for OR nurses, nurses working in the institution were interviewed (novice and experienced OR nurses). The surveys were qualitative. The surveys took place before (10 novice OR nurses and 11 supervisors) and after the development of the training manual (19 of the original respondents). The project period was Oct 2022 to Jan 2024.

Results

As a result of the literature review and the survey, an 87-page, spiral-bound A5 book was made. It contains a comprehensive overview of working at the NEMC and a table to be filled out as a checklist on the time stages of training, references to mandatory and recommended guidelines, information on basic instruments, patient draping and suture materials. Manual was piloted for a week and feedback was collected, it was found to be a necessary and useful tool. Most respondents (89.5%) prefer to use the manual in book form. Manual was approved by the NEMC as the official guide for training OR nurses.

Conclusion

Operating teams are dynamic, with a shared responsibility for patient safety. Adding new staff can add stress to an already intense workload. There is a shortage of OR nurses and training is only provided on the job. An effective training manual can help reduce conflict, increase teamwork and retention. Training for an OR nurse should last six months to a year.

46 Launching Multidisciplinary Simulation Training at the Operating Department

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Background

[Simulation training is an established learning method in healthcare. It is particularly used for practicing emergency situations in emergency departments, operating rooms (OR), and intensive care units. Simulations help improve patient safety, as participants can practice communication during emergencies and make mistakes without harming actual patients. In addition to maintaining staff competence, full-scale simulation training can also be utilized in the orientation of new employees.]

Objectives

[Emergency situations had not previously been practiced through simulation training in the OR. In spring 2023 planning of emergency cesarean simulation training for the OR in collaboration with the Delivery Room and Neonatal



Intensive Care Unit started. The goal was to organize large-scale simulation exercises involving all three units in autumn 2023.]

Main Findings

[A need for operating team action cards was quickly identified—these would assist in practicing emergency cesarean sections and serve as checklists in real situations. Since the operating department had not previously used such action cards, their development started from scratch. Once the emergency cesarean protocol and action cards were completed, they were presented to the staff. Based on the feedback received, the materials were further refined.

A total of eight emergency cesarean section simulations were conducted over four days in autumn 2023. Feedback was collected from participants after each simulation scenario. The feedback was generally positive. The simulations were perceived as good mind refreshers and confidence boosters. Some suggestions for changes to the case and protocol were made.]

Conclusion

[The staff considered the simulations to be a good and educational way to practice the emergency cesarean section protocol. Large-scale simulations help refine interdepartmental collaboration. Based on the simulations, the emergency cesarean protocol was further refined. Simulations continued in autumn 2024 and plans are made for the simulations in autumn 2025.]



16:45 – 18:00

Orlando B

S14 | Session 14 | Infection Control and Prevention

Filiz Ogce

358 Effect of Vibration and Cold Application on Chest Tube Removal Pain and Anxiety After Coronary Artery Bypass Graft Surgery

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Background

[Removal of chest tubes after coronary artery bypass graft(CABG)surgery causes severe pain and anxiety,which can negatively affect the recovery process.In this context,the integration of non-pharmacological interventions into nursing care is an important requirement in multidisciplinary pain and anxiety management.]

Objectives

[This study was conducted with a single-blind randomized controlled experimental design to determine the effects of vibration and a combination of vibration and cold application on the pain and anxiety associated with chest tube removal after CABGsurgery.]

Methods

[The study population consisted of patients admitted to a Cardiovascular Surgery Training and Research Hospital between September2024andJune2025.The sample consisted of93patients who met the research criteria.After obtaining the ethical and legal permissions, patients who met the study inclusion criteria were randomly assigned to the vibration group(n=31),vibration and cold application group(n=31),and control group(n=31).Pain levels were measured using the Visual Analog Scale,and anxiety levels were assessed using the State Anxiety Inventory(STAI-I).Assessments were taken six times:twice before chest tube removal, once during removal, and three times afterward.]

Results

[The descriptive and clinical characteristics of the participating patients were similar($p>0.05$).Vibration was significantly effective in reducing pain and anxiety levels associated with chest tube removal($p<0.001$).The intervention, which included cold combined with vibration, not only reduced pain and anxiety levels but also



contributed to a more stable course of vital signs. The vibration group scored higher in satisfaction with the intervention ($p=0.006$).

Conclusion

[Vibration is an effective, safe, and feasible nursing intervention for reducing pain and anxiety associated with chest tube removal. Adding cold to vibration strengthened the effectiveness of the intervention; the high effectiveness of vibration alone in reducing pain and anxiety, and the higher levels of intervention satisfaction, showed that it is a strong intervention option. It is recommended that vibration be integrated into nursing care for managing pain and anxiety after chest tube removal, with cold application added under appropriate clinical conditions to enhance effectiveness.]

377 The Effect Of Intraoperative Heating On Postoperative Pain And Comfort Levels In Laparoscopic Cholecystectomy

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Background

Despite the numerous benefits of laparoscopic cholecystectomy, postoperative pain remains a significant concern. Hypothermia is common during the perioperative period, and it has been reported that approximately 70% of patients undergoing non-cardiac surgery may develop a low body temperature during the perioperative period.

Objectives

This study was conducted to investigate the effects of active heating applied during the intraoperative period on postoperative pain and comfort levels in individuals undergoing laparoscopic cholecystectomy.

Methods

A total of 63 individuals who underwent laparoscopic cholecystectomy and agreed to participate in the study were included in this randomized controlled study. Forced-air type active heating was applied to the enterprise group from the moment they were taken to the operating room. Vital signs and body core temperatures were measured at 15-minute intervals throughout the intraoperative process in both groups. Preoperative and postoperative vital signs were also monitored at 15-minute intervals. Pain assessment of the patients was performed with the visual acuity scale at 2, 4, 6 and 24 hours postoperatively. Postoperative comfort assessment of the patients was also performed with the perianesthesia comfort scale.

Results

When the two groups were compared, it was found that the visual acuity scale scores at rest for the abdomen and incision regions were significantly lower in the experimental group at all time points ($p<0.05$). Likewise, the mean comfort score of the experimental group was statistically higher than the control group ($p<0.05$).

Conclusion

Intraoperative active warming application reduces postoperative pain levels and increases patient comfort. Therefore, it should be considered as an effective application in surgical nursing care processes.



7 Preventive disinfection of Operating Rooms with UVC light

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Background

This paper presents the protocol of preventive UVC disinfection between two surgical procedures. Protocol is based on using of UVC device for two minutes disinfections of central zone of Operating Room. The UVC radiation was measured at all points in the central area of the Operating Room there is the highest probability of infection transmission. We estimated the minimum time period required to achieve the most effective dose of UVC radiation needed for log₂ reduction of microorganisms.

Objectives

The primary objective of this study is to determine the time period required for the UVC disinfection device to deliver a sufficient dose of ultraviolet C (UVC) radiation (25mJ/cm²) to key areas of the OR central part, ensuring effective disinfection between surgeries.

Methods

This is one prospective observational study conducted in three Operating Rooms, the UVC device has been used for disinfection of the main surgical area between two consecutive surgeries. Three types of measuring were applied: A UVC meter with Bluetooth connectivity, a calibrated professional UVC meter and additional UVC indicator stickers. The UVC meter and stickers were strategically placed to measure the dose received by critical surfaces and equipment.

Results

Results of the measuring in three OR shows that two minutes exposure to UV-C light has been enough to achieve adequate dose that exceeded 25mJ/cm² what is the base for at least 2-log reduction of microbial load.

Conclusion

The results of this study demonstrate that the use of UVC technology for disinfection of OR can significantly reduce the presence of microorganisms on surfaces. 2-log reduction, equivalent to a 99% decrease the microbial load, confirms the effectiveness of UVC radiation as a supplementary measure to standard cleaning and disinfection protocols.

264 Effectiveness of Surgical Skin Antisepsis on the Subcutaneous Microbiota: Literature Review and Proposal for Post-Incisional Antisepsis to Reduce the Risk of Surgical Site Infection.

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Background

Surgical site infections (SSIs) remain a major challenge despite adherence to preoperative antisepsis and antibiotic prophylaxis. A significant proportion of SSIs originate from the patient's own deep skin flora, particularly in sebaceous-rich areas.



Objectives

To assess the limitations of current preoperative antisepsis in eradicating deep skin bacteria and to explore the potential benefits of post-incisional antisepsis in reducing intraoperative contamination.

Methods

A literature review was conducted, analyzing studies on bacterial persistence in deep skin layers, the effectiveness of standard antiseptics, and the outcomes of post-incisional antiseptic interventions in various surgical specialties.

Results

Preoperative antisepsis effectively reduces surface bacteria but fails to eliminate microorganisms in sebaceous glands and hair follicles. Studies show rapid bacterial repopulation within 60 minutes post-antisepsis and contamination of surgical sites immediately after incision. *Cutibacterium acnes*, a common pathogen in orthopedic and neurosurgical infections, was frequently detected in deep tissues despite antiseptic preparation. Post-incisional antisepsis, particularly with povidone-iodine, significantly reduced bacterial contamination of surgical gloves, retractors, and subcutaneous tissues. Additionally, antibiotic prophylaxis was often ineffective against these deep-residing bacteria, with 59% of pathogens showing resistance.

Conclusion

Current antiseptic and antibiotic protocols are insufficient to fully prevent intraoperative contamination from deep skin flora. Post-incisional antisepsis appears to be a promising adjunct, especially in neurosurgery, orthopedics, and cardiovascular surgery, where the risk of endogenous bacterial contamination is high. Further clinical studies are needed to validate its efficacy in reducing SSIs and to optimize antiseptic strategies tailored to surgical contexts.

57 Impact of physical activity on the level of bioparticles in the operating room environment

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Background

Airborne bacteria-carrying particles in the operating room are a known risk factor for implant infections. The particles come mostly from the people in the operating room. Levels of bioparticles in the air can be measured in real time with the Bio Aerosol Monitoring System, BAMS.

Objectives

Was to investigate how physical activity affects the level of fluorescent bioparticles (FBP) in the operating room.

Methods

Ten participants completed the experiment. Three physical activity levels were defined: 1 no activity – sitting still, 2 medium activity – arm movements, 3 high activity – arm movements and walking. Each activity was performed individually by each participant for 3 minutes and repeated 5 times with a 5-minute break in between. The mean level of FBP/15dm³ was recorded for each participant for each activity, after which the mean value for all participants for each activity was calculated. Comparisons between mean FBP/15dm³ for different activities were calculated using a



t-test. The relationship between mean FBP/15dm³ at different activity levels for individual participants was calculated using Pearson correlation coefficient.

Results

When analysing particle sizes >3um , the mean FBP/15dm³ at high activity was 9.1 (95% CI 5.4-12.7), at medium activity 1.9 (95% CI 1.0-2.9) and at no activity 0.6 (95% CI 0.2-0.9). The Pearson correlation coefficient for high and medium activity was 0.72 (95% CI 0.67 - 0.93), and for medium activity and no activity 0.47 (95% CI - 0.23-0.85).

Conclusion

Higher levels of physical activity in the operating room lead to higher levels of fluorescent bioparticles in the air. There are individual variations in the amount of bioparticles released from the body. These variations also exist at different levels of activity, but are less obvious during no activity - such as sitting still.



8:25 – 8:55

Orlando B

S15 | Session 15 | Patient Care and Anesthesia

Konstantinos Konstantinos

193 Factors Influencing the Communication Gap: Surgical Nurses' Perceptions, Attitudes, and Experiences with Deaf and Hard-of-Hearing Patients

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Background

Effective communication between healthcare professionals and deaf or hard-of-hearing (DHH) patients remains a significant challenge, often leading to gaps in care and patient dissatisfaction.

Objectives

To examine the factors influencing the communication gap by exploring surgical nurses' perceptions, attitudes, and experiences with Deaf and hard-of-hearing patients

Methods

The study was designed as a descriptive, cross-sectional, multicenter investigation. The sample included 159 surgical nurses from three centers. The data were collected using a descriptive characteristics form, the Perception Scale for Disabled Individuals, and the Disability Attitudes in Health Care Scales. The influencing factors were determined using an independent t-test, one-way ANOVA, and correlation tests.

Results

A weak negative correlation was observed between the awareness sub-dimension and both age and years of professional experience as well as between the social environment sub-dimension and age. A weak positive correlation was found between the inclusion sub-dimension of the Disability Attitudes in Health Care Scale and the adoption sub-dimension of the Perception Scale for Disabled Individuals, as well as with individual support and total scale scores. Additionally, a weak positive correlation was identified between the adoption sub-dimension of the Perception Scale for Disabled Individuals and total score of the Disability Attitudes in Health Care Scale ($r=0.192$).

Conclusion

In the study, it was determined that surgical nurses who had an adoptive, supportive perception towards DHH individuals had a more positive attitude towards DHH individuals. Enhancing surgical nurses' perceptions and



attitudes toward DHH individuals can improve communication and perioperative care. Specialized training programs may foster more inclusive, patient-centered care.

114 Factors Influencing the Development of Pressure Injuries in Surgical Patients Pressure Injuries in Surgical Patients

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Background

Operating room-acquired pressure injuries are those that develop in anatomical locations associated with the patient's surgical position and typically manifest within 48-72 hours postoperatively.

Objectives

This study aims to explore the factors associated with the development of pressure injuries in surgical patients.

Methods

The data of this study were obtained in the operating theatre of a research hospital between September 2023-June 2024. Perioperative patient assessment form, 3S Intraoperative Pressure Injury Risk Assessment Scale (3S IPIRAS) and pressure injury staging and recording form were used to obtain the data. Descriptive tests, chi-square, t-test, one-way ANOVA, and multiple linear regression were used for statistical analysis.

Results

A statistically significant difference was found between gender, alcohol use, chronic disease, intraoperative vasopressor use, body mass index (BMI), and type of surgery and mean scale scores ($p < 0.05$). It was found that the age, gender, smoking, alcohol consumption, BMI, presence of chronic diseases, type of surgery, preoperative Braden risk score, and duration of surgery variables explained 43% of mean scale scores ($p < 0.001$, $F = 13.960$).

Conclusion

The study identified key factors influencing pressure injury development in surgical patients. These results emphasize the critical role of perioperative nurses in implementing tailored, evidence-based prevention strategies to enhance patient safety and reduce complications.



8:25 – 8:55

Orlando A

S16 | Session 16 | Education

Marie Afzelius

342 Investigating Continuous and Varying Preceptors as a Learning Preference within the Operating Room for Novice Nurses

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Background

Previous studies demonstrate the importance of fostering a safe and supportive learning environment for novice nurses beginning to work in a new nursing environment (Burcu & Nurhan, 2021; Ekstedt et al., 2019; Gupreet et al., 2020). Specifically, Ekstedt et al. (2019) shed light on how a novice nurse having either varying or continuous preceptors has the potential to significantly impact nurses' abilities to learn within their given nursing environment.

Methods

Using survey questionnaires, we are assessing whether continuous or varying preceptors affects novice nurses learning ability and sense of belonging and support within the Toronto Western Hospital OR. We predict based on feedback over the years within the OR that having 1-2 continuous preceptors, rather than a variable preceptor each day, novice nurses may feel a sense of safety in their learning, a factor of notable importance to their sense of belonging and ability to learn, supported by previous studies with nurses navigating novice environments (Burcu & Nurhan, 2021; Ekstedt et al., 2019; Gupreet et al., 2020).

Results

With a goal of improving the nursing culture of learning within an Operating Room (OR), we investigated whether novice nurses within the OR preferred continuous or varying preceptors while onboarding. We aimed to understand whether having a continuous or varying preceptor as a novice nurse affected their ability to learn in the OR regarding both technical skills, such as instrument passing, and non-technical skills, such as teamwork, or whether novice nurses do not have a preference. Additionally, we aimed to understand whether varying or continuous preceptors had an effect on novice nurses in regards to feeling safe and supported in the OR environment.

Conclusion

As this study is ongoing, the findings will be assessed as novice nurses rotate through the OR through the Winter and Spring of 2025 into 2026.



243 Enhancing Surgical Nursing Competence: A Regional Four Day Education Programme with Integrated Assessment

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Background

The evolving complexity of surgical care requires nurses to demonstrate advanced perioperative knowledge, critical thinking and clinical decision making skills. A regional needs analysis, supported by feedback from theatre and surgical ward staff, identified variation in surgical nursing knowledge and a gap between theory and practice. In response, the Perioperative Managed Clinical and Academic Network (MCAN), in collaboration with regional Centres for Nursing and Midwifery Education (CNMEs) and HSE West/Northwest acute sites, developed a structured four day surgical education programme. The curriculum was co designed with clinical experts, incorporating evidence based content on perioperative care, postoperative complications, discharge planning and quality and risk management. A formal assessment on day four was embedded to evaluate knowledge acquisition and promote reflective learning.

Objective

The programme aims to:

1. Provide a standardised, evidence based surgical nursing curriculum across acute and perioperative settings.
2. Enhance nurses' confidence, competence and decision making in surgical care.
3. Evaluate knowledge gain and learning outcomes through integrated assessment.
4. Generate evaluation data to inform the potential scaling of the programme nationally.

Conclusion

The programme will be delivered in September 2025, targeting a cohort of over 50 surgical and theatre nurses. A mixed method evaluation will be conducted, combining pre/post programme knowledge assessments with participant feedback and qualitative thematic analysis of reflective evaluations. Engagement metrics and satisfaction scores will be analysed to assess programme effectiveness. It is expected that the programme will demonstrate measurable improvements in surgical nursing knowledge and confidence, with positive feedback highlighting the value of structured, regionally coordinated education. Data from the programme will be available for the conference in May 2026, with findings informing iterative refinement of the curriculum and support the case for national implementation. This case study contributes to the international discourse on perioperative education by presenting a collaborative, research-informed approach to standardising surgical nursing competence.

10:30 – 11:30

Orlando A



233 Swedish recommendations for preparing surgical instrument before surgery

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Background

The Quality Council within the Swedish Operating Room Nurses Association is author of evidence-based Guidelines and Recommendations with the aim to promote high quality and safe perioperative nursing care.

Postoperative infections are today the third most common form of healthcare-associated infections, which means costs for healthcare and suffering for patients.

Checking and preparing surgical instruments before surgery could be an infection prevention measure carried out by an operating room nurse.

Preparation of sterile surgical equipment can be done in the operating room or in a preparation room where they will be covered with surgical drapes that will reduce bacterial contamination of the surgical equipment before the patient is brought into the operating room.

Preparing surgical equipment in good time leads to efficient use of the operating room which reduce stress for operating room staff.

Objectives

Describe the work process of producing guidelines and the Swedish recommendations for preparing surgical instrument before surgery.

Methods

The work process for producing guidelines is based on an evidence-based model. Data was collected through systematic reviews of literature, local routines and standards collected through members in SEORNA, advice from experts in perioperative nursing, published adverse events, and reviews of international guidelines

Results

The use of sterile covers to protect sterile surgical equipment from bacterial air contamination while waiting for operations to start is common practice in Sweden although there has not previously been a recommendation on time limit

Conclusion

The guideline has been updated based on recent Swedish studies showing that prepared surgical instruments protected by sterile drapes can be stored in an operating room with approved ventilation for 15 hours. The evidence-based guidelines serve as a foundation to maintain patient safety and high-quality perioperative nursing care. Operating room nurses have evidence-based guidelines to rely on in their daily work.



157 Patients' experience of being awake during operations - a literature review

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Background

[The number of surgeries increases yearly This progression has resulted in some surgeries, which previously required general anesthesia, now being performed with local anesthesia. This means that the patient is fully awake and fully susceptible to various stimuli during surgery. The role of the operating nurse may expand in certain cases to include more patient-centered care, as neither the anesthetic nurse nor the anesthesiologist is often present.]

Objectives

[The aim was to explore the patient's experience of undergoing surgery under local anesthesia.

Methods

[A qualitative content analysis was used to conduct the systematic literature review. Nine scientific articles were selected and analyzed]

Results

[Patients who undergo surgery while awake has a significant need for respectful and clear communication in order to decrease anxiety and fear. A lack of communication in regard to the details of the procedure can create uncertainty and increased stress, while patient-centered information and continuous updates can provide a sense of control and participation. Communication between professionals also effects the patient, who is highly sensitive to every word and movement in the operating room. To manage stress, patients develop strategies such as creating a mental "bubble" or using external stimuli like music to distract themselves and thereby gain a sense of control and security during the procedure.]

Conclusion

[By being present the operating nurse can help alleviate stress and anxiety. This can help the patient to feel important and involved in their care, providing a sense of control and wellbeing.

5 Evaluating Clinical Reasoning in Uncertain Contexts Using the Post-anesthesia Nursing Script Concordance Test: A Multi-method Methodological Study

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Background

Clinical reasoning is a cornerstone of nursing practice, especially in high-stakes, dynamic environments. Script



Theory offers a lens for understanding how nurses use stored knowledge patterns—or “scripts”—to make sense of clinical cues and navigate uncertainty. Although Script Concordance Tests (SCTs) have shown value in nursing education, their application in continuing professional development within specialized domains such as post-anesthesia care remains underexplored.

Objectives

This study aimed to design the Post-anesthesia Nursing Script Concordance Test (PaNSCT) and evaluate its psychometric properties and practical relevance.

Methods

A multi-method design was used across three phases. Phase I involved test development and construct validation. Phase II analyzed the reliability, appropriateness, and acceptability of the PaNSCT using performance data and qualitative feedback from two groups: clinical experts and perioperative nurses. Phase III addressed sustainability, including intellectual property protection. Statistical analyses included descriptive metrics, Pearson correlations, Cronbach’s alpha, and qualitative content analysis.

Results

The finalized PaNSCT featured 20 scenarios and 60 items aligned with post-anesthesia care. Expert review confirmed construct validity with minor adjustments. The tool demonstrated high internal consistency (Cronbach’s alpha = 0.92) and distinguished expert (mean score = 44.8±4.7) from nurse performance (39.9±6.1, $p = 0.01$). Nurse scores positively correlated with PACU experience ($r = 0.58$, $p = 0.009$), while no significant correlations were noted among experts. Qualitative feedback emphasized the tool’s training potential and the importance of SCT orientation before application. The PaNSCT reliably assessed clinical reasoning in uncertain perioperative situations. Higher scores among experts and experienced PACU nurses underscore the role of contextual expertise and specialization.

Conclusion

The PaNSCT is a promising tool for enhancing clinical reasoning in post-anesthesia nursing practice.

220 Preoperative and postoperative physical and mechanical rehabilitation interventions in hallux valgus: A systematic review

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Background

Approximately one-third of the adult population is affected by hallux valgus (HV). Surgical interventions are successful in reducing deformity; however, postoperative complications are common. There is growing evidence for prehabilitation and rehabilitation strategies in orthopaedic surgeries. However, the effectiveness of such strategies in HV surgery is currently unknown.

Objectives

This systematic review aimed to synthesise and determine the quality of evidence for the effectiveness of physical and mechanical prehabilitation and postoperative rehabilitation interventions for improving outcomes following HV surgery.

Methods

Electronic databases: MEDLINE, Cochrane, CINAHL, Scopus, EMBASE and AMED were searched from inception



until 27th March 2024, following the PRISMA guidelines. Randomised controlled trials were included to determine the effectiveness of pre-operative and post-operative physical and mechanical therapies for improving outcomes in adults undergoing HV surgery. The evidence from individual studies was narratively synthesised, and data were not pooled due to the heterogeneity of interventions, methods, and outcomes measures.

Results

A total of 7,535 titles and abstracts were screened, and 61 full-text papers were reviewed. Five studies met the eligibility criteria and were included in this review. No randomised controlled trials examined the effectiveness of eligible pre-operative physical or mechanical interventions. Postoperative early weight-bearing, dynamic metatarsal splinting, and transcutaneous ultrasound appeared to improve patient outcomes, while rigid-soled footwear improved patient satisfaction.

Conclusion

There is currently no evidence to support the effectiveness of pre-operative physical and mechanical interventions for improving outcomes in HV surgery, and limited evidence supports the postoperative interventions. Future trials should consider incorporating validated outcome measures.



10:30 – 11:30

Koločep

S18 | Session 18 | Education

Ingrida Taujanskienė

293 Large Language Model Tools in Undergraduate Nursing Education: Implications for Perioperative Practice

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Background: Over the last years, artificial intelligence (AI) and LLM technologies have emerged as rapidly evolving tools across nursing education, offering potential for simulation, personalized feedback, and clinical reasoning support. Recent studies report that nursing education is currently the primary domain for LLM adoption, with reviews discussing educational uses (Hobensack et al., 2024; Kleib et al., 2024). Although the broader nursing education literature on LLM is growing and shows promise in knowledge acquisition, engagement and self-efficacy (Bozkurt et al., 2025; Cucci et al., 2025), the evidence on their application specifically within perioperative nursing education remains limited. Understanding how these tools are currently used and how they may support learning in perioperative contexts including infection prevention, is therefore both timely and necessary.

Objectives: This scoping review aimed to explore how AI/LLM technologies are currently used as educational tools in undergraduate nursing education and identify the opportunities, limitations and implementation challenges associated with their use and with particular relevance to perioperative nursing education.

Methods: A scoping review was conducted following the Arksey and O'Malley framework, refined by Levac et al. (2010) and JBI guidelines and reported in accordance with PRISMA-ScR. A systematic search of the literature was performed in MEDLINE, Embase, CINAHL and Scopus. Studies were eligible if they involved undergraduate nursing students and described the use of AI/LLM tools in nursing education.

Results: Ninety-two studies met the eligibility criteria with the majority published in 2025 and most originating from Asia. ChatGPT was the most used tool (48.9%). Five thematic categories of use were identified: academic learning support, specific subject teaching, simulation learning, reflection and professional identity, and educator and curriculum support. Reported benefits included improved knowledge, self-efficacy, engagement and simulation performance. Key concerns included inaccurate outputs or hallucinations, academic integrity risks, over-reliance and data privacy. Most studies emphasized the need for structured, ethically guided implementation. Notably, a secondary search on perioperative SSI prevention education delivered only five eligible studies over a decade,



confirming a substantial gap in this specific area and reinforcing the relevance of exploring LLM tools as potential approaches to address it.

Conclusion: AI/LLM tools are increasingly and diversely applied across undergraduate nursing education, demonstrating educational promise particularly in simulation, personalised feedback, and clinical reasoning. Evidence specifically addressing perioperative nursing education remains scarce, as reflected by the very limited literature on SSI prevention learning identified through this review. These technologies hold potential to address existing perioperative educational gaps, their application however, must be guided by clear institutional policies, ethical frameworks, faculty development and training in AI literacy. Future research should focus specifically on the development and rigorous evaluation of LLM interventions and their application within perioperative nursing education.

Bozkurt, S. A., Aydoğan, S., Dursun Ergezen, F., & Türkoğlu, A. (2025). A systematic review and sequential explanatory synthesis: Artificial intelligence in healthcare education, a case of nursing. In *International Nursing Review* (Vol. 72, Number 2). John Wiley and Sons Inc. <https://doi.org/10.1111/inr.70018>

Cucci, F., Marasciulo, D., Romani, M., Soldano, G., Cascio, D., De Nunzio, G., Caldararo, C., Rubbi, I., Vitale, E., Lupo, R., & Conte, L. (2025). The Contribution of Artificial Intelligence in Nursing Education: A Scoping Review of the Literature. *Nursing Reports (Pavia, Italy)*, 15(8). <https://doi.org/10.3390/nursrep15080283>

Hobensack, M., von Gerich, H., Vyas, P., Withall, J., Peltonen, L. M., Block, L. J., Davies, S., Chan, R., Van Bulck, L., Cho, H., Paquin, R., Mitchell, J., Topaz, M., & Song, J. (2024). A rapid review on current and potential uses of large language models in nursing. In *International Journal of Nursing Studies* (Vol. 154). Elsevier Ltd. <https://doi.org/10.1016/j.ijnurstu.2024.104753>

Kleib, M., Darko, E. M., Akingbade, O., Kennedy, M., Majekodunmi, P., Nickel, E., & Vogelsang, L. (2024). Current trends and future implications in the utilization of ChatGPT in nursing: A rapid review. *International Journal of Nursing Studies Advances*, 7, 100252. <https://doi.org/10.1016/j.ijnsa.2024.100252>

337 Operating room nursing in pediatric cardiac surgery at a Greek tertiary care setting: a team beyond the scalpel.

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Background

Pediatric cardiac surgery (PCS) has progressed considerably in Greece. At our tertiary referral hospital, this evolution has strengthened the role of operating room (OR) nurses caring for children with congenital heart diseases.

Objectives

To assess changes and nursing-led initiatives aimed at improving quality of OR care for pediatric cardiac patients and to reflect on surgical volume and procedure complexity in our center, emphasizing the growing need for specialized OR nursing.

Methods

A mixed methods design was employed. A survey and follow-up focus group were conducted to explore OR nurses' perceptions on PCS training and perioperative care; a retrospective descriptive analysis of PCS cases (1/2022–4/2025) provided context on surgical workload. A 10-item questionnaire was used for the survey, assessing



demographics, work experience, PCS management and training; structured open-ended questions regarding the latter topics were used for the focus group. Phenomenological approach and thematic analysis were used for data analysis.

Results

During the study period, 440 operations were performed on 398 pediatric patients (median age: 20.5 months) of which 18.6% neonates, 24.6% infants, 36.2% preschoolers, 20.6% children aged 7–12 years. The most frequent diagnoses were atrial (25.7%) and ventricular septal defects (13.1%), tetralogy of Fallot (6.4%), and aortic coarctation (4.8%). Thirteen OR nurses participated in the survey (31% male; median age 51 years; mean PCS experience 19 years); a subgroup contributed to the focus group. Main themes were collaboration and teamwork, education and training, and new nurses' integration in PCS. The introduction of preoperative briefings, use of nurse-authored educational notes, and the need for structured introduction of new colleagues were emphasized.

Conclusion

OR nurses in our tertiary center play a vital role in PCS through teamwork, preparation and professional commitment. They actively promote continuous training and mentorship for new staff, contributing to high-quality care and optimal surgical outcomes for pediatric patients.

108 Health Literacy as a Predictor of Surgical Readiness and Recovery: Evidence from Türkiye

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Background

Health literacy (HL) plays a vital role in preparing patients for surgery and influencing their recovery outcomes. It affects patients' ability to understand medical information, adhere to care instructions, and actively participate in decision-making. In Türkiye, the growing body of research on HL in surgical populations has not yet been systematically reviewed.

Objectives

This review aims to synthesize existing literature on health literacy among surgical patients in Türkiye, focusing on how HL influences surgical readiness and postoperative recovery.

Methods

A comprehensive literature review was conducted across national and international databases (ULAKBİM, TR Dizin, PubMed) for the years 2020–2025. Inclusion criteria comprised studies conducted in Türkiye involving adult surgical patients and utilizing validated HL measurement tools. Both peer-reviewed articles and graduate theses were included.

Results

Eighteen studies were reviewed, including 12 articles and 6 theses. The study populations covered a range of surgical fields, including general, orthopedic, bariatric, prostate, abdominal, and neurosurgical procedures. Commonly used HL instruments included the Health Literacy Scale (SOYÖ), the Turkish Health Literacy Scale-32 (TSOY-32), and the HLS-EU-Q16/Q47. Most patients demonstrated inadequate to moderate levels of health literacy.

Low HL was consistently linked to:

- Increased preoperative anxiety and surgical fear
- Poor comprehension of surgical instructions



- Decreased adherence to postoperative care
- Impaired pain management and mobility outcomes

One intervention study reported that HL-based educational approaches improved postoperative recovery. Sociodemographic factors such as age, education level, and marital status were frequently associated with HL levels.

Conclusion

Health literacy is a significant predictor of surgical readiness and recovery among patients in Türkiye. Tailoring preoperative education and postoperative care to patients' HL levels can enhance safety, reduce complications, and support better health outcomes. Integrating HL-sensitive strategies into surgical nursing practice is essential for patient-centered care.

301 Building a comprehensive Framework of Technical Professional Specialist and Transversal Competencies for Operating Room Nurses according to the European and Italian Qualifications Framework

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Background

Operating room nurses play a crucial role in ensuring well-being, health and safety for the person cared for, and high-quality perioperative and perianesthesiological care. However, the absence of standardized frameworks describing technical professional and transversal competencies limits the full realization of the professionalization process and public recognition of this qualification at the European and Italian level.

Objectives

To construct a comprehensive framework of specialized technical professional and transversal competencies of operating room nurses, consistent with the descriptors of the European and Italian Qualifications Frameworks (EQF/NQF).

Methods A multi-method qualitative study was conducted between 2021 and 2023 in a public hospital and university in Northern Italy. Forty-six participants (operating room nurses, postgraduate students, nurse managers) were involved. Data collection methods included: "at-home" ethnography, double interviews, participant observation or shadowing, hierarchical task analysis. The analysis followed triangulation strategies, content analysis, and task deconstruction techniques. Narratives were particularly valuable to comprehend the lived experiences and emotions of operating room nurses. The data collected served as the basis for the iterative development and refinement of the competencies framework over subsequent years.

Results Seventeen specialized technical professional competencies were identified and grouped into six areas of activity. These were linked to 19 expected learning outcomes, 152 specific activities/tasks, 222 knowledge components, and 218 skills. Additionally, fifteen transversal competencies emerged, articulated into 50 sub-



competencies and 153 related tasks, describing the behavioral, cognitive, and relational dimensions of practice.

Conclusion

Aligned with EQF/NQF descriptors and developed iteratively beyond the initial study period, the framework supports the mapping, assessment, development, and monitoring of competencies, as well as the identification, validation, and certification of prior learning within national systems. It promotes curriculum reform based on clearly defined professional outcomes and facilitates competence-based curriculum design, thereby fostering competency recognition and portability as envisioned by the European Higher Education Area.



10:30 – 11:30

Orlando B

S19 | Session 19 | Healthy Workplaces

Manuel J. Gião Valente

44 Nomophobia in the Operating Room and Its Impact on Teamwork, Awareness, and Distraction

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Background

In ORs, frequent distractions negatively affect concentration, teamwork, situational awareness, and ultimately, patient safety.

Objectives

To adapt the Distraction Due to Mobile Phone Use scale for use in Turkey, and to examine the effect of nomophobia levels on teamwork, awareness, and distraction.

Methods

This study was both methodological and a cross-sectional. Between December 2023 and November 2024, two studies were conducted with OR staff: a methodological study with 85 staff, and a cross-sectional study with 167 staff. Sociodemographic and Occupational Characteristics Form, the Distraction Due to Mobile Phone Use Scale, Leiden Operating Theatre and Intensive Care Safety Scale - Teamwork and Awareness Subscale, and Nomophobia Questionnaire (NMP-Q) were used for data collection. Content validity index, confirmatory factor analysis, Cronbach's alpha and item-total score correlation, and Multiple linear regression analysis was applied.

Results

For the Distraction Due to Mobile Phone Use scale Cronbach's alpha was 0.825, X^2/df ratio was 2.526, the GFI 0.902, the CFI 0.932, the SRMR 0.080, and the RMSEA 0.078. The mean age of the OR staff was 28.4 ± 4.9 years, and 53.5% of these staff were nurses. Of these employees, 29.3% had mild, 44.9% had moderate and 25.7% had severe nomophobia. Compared to a staff with mild nomophobia, having moderate nomophobia causes a 1.829-point increase in teamwork and awareness scores, while a staff with severe nomophobia experiences a 2.261-point increase. Having moderate nomophobia caused an increase of 1.941 in mobile phone-related distraction scores, whereas having severe nomophobia caused an increase of 4.410.

Conclusion

The Distraction Due to Mobile Phone Use scale is a reliable and valid tool. Those with moderate or severe



nomophobia experienced higher levels of "teamwork and awareness" and "distraction" than those with mild nomophobia.

354 Why don't clinicians report disruptive behaviour? Dissatisfaction with management's response and group-based variation in perceived barriers

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Background: Disruptive intraoperative behaviour ranges from incivility to abuse, and harms clinicians and patients. Previously, we demonstrated that clinicians underreport disruptive behaviour and are dissatisfied with how management responds. However, the perceived timeliness and effectiveness of responses have not been individually assessed. Furthermore, groups of clinicians facing different barriers to reporting remain unidentified.

Objectives: To describe how often disruptive behaviour is reported and to evaluate satisfaction with management's response. The exploratory objective was to identify groups of clinicians facing different barriers to reporting.

Methods: This is an interim analysis of an ongoing study. A questionnaire was distributed by four perioperative associations in Canada, the British Isles, and New Zealand. A sub-study examined reporting prevalence, satisfaction with management's response, and barriers to reporting. Latent class analysis (LCA) identified groups of clinicians facing different barriers.

Results: 352 clinicians were included. 94.5% (95% CI 91.3-96.4) did not report all disruptive behaviour they observed (i.e., under-reported), and 14.6% (95% CI 11.2-18.7) never reported. 52.5% found it difficult to report, 44.9% found management's response untimely, and 55.2% found it ineffective. The most common barriers were: 1) the belief that managers won't act; 2) fear of retaliation; and 3) lack of anonymity. LCA revealed five groups of clinicians reporting different barriers related to fear, uncertainty about process, confidence in management, and use of informal mitigating actions: 1) "hardened skeptics" (n=55), 2) "off-the-record fixers" (n=30), 3) "fearful insiders" (n=148), 4) "paralysed novices" (n=13), and 5) "strategic reporters" (n=106, facing fewer barriers).

Conclusion: Substantial under-reporting still occurs, and one in two clinicians remain displeased with the timeliness and effectiveness of management's response. Groups perceive different barriers to reporting. Managers can identify these groups in their settings, and design interventions addressing the barriers identified by clinicians. Studying environments with abundant strategic reporters may reveal organisational practices that encourage reporting.

174 An Expanded Checklist for an Inclusive Culture: Embedding Staff Safety Through Shared Expertise

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StaffAndPatientSafety.org, Learning and Advocacy, West End, Australia

Background



The World Health Organization's (WHO) Surgical Safety Checklist (SSC), introduced in 2007, has reduced major complication rates by 36% across eight countries. Its accessibility, adaptability, and focus on patient outcomes make it a cornerstone for patient safety. However, our qualitative study has identified a critical gap: Staff Safety.

Worldwide, healthcare consistently records the highest serious injury claims, higher than construction and manufacturing industries. Perioperative environments are high-risk workplaces. Sharps injuries in OTs continue to rise by 6.5% despite declining by 31.6% elsewhere in the hospitals. These risks affect nurses daily.

Objectives

To explore how the SSC can be expanded to bridge the divide between patient & staff safety, and how perioperative nurses can introduce this improvement through their shared expertise and insight.

Methods

Data was gathered from perioperative nurses at the Australian College of Perioperative Nurses (ACORN) conference, the Association of periOperative Registered Nurses (AORN) conference - US, and a webinar hosted by the Association for Perioperative Practice (AfPP) in the UK. Through polls, discussions, and interviews, participants reviewed the WHO Surgical Safety Checklist and the Comprehensive Surgical Checklist, identifying key gaps. Drawing on this frontline feedback and international research, we put forward practical, evidence-based additions to the checklist to better address staff-specific risks such as sharps injuries and surgical plume.

Results

The main risks identified to be included in the SCC to improve staff safety were surgical smoke/plume, sharps injuries, splashes, and staff member fatigue.

Conclusion

Early engagement shows strong nurse-led support for an inclusive & expanded checklist. The process itself prompted more open safety dialogue, improved situational awareness, and strengthened the team dynamic—hallmarks of a proactive safety culture.

A safer OT starts with shared responsibility. By embedding staff safety into the SSC, we create; *One Safe Team, One Safe Culture for All*, where no member is left behind.

298 When the trauma patients do not survive, how does it affect the perioperative surgical nurses in the operating ward?

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Background

Surgical nurses participating in trauma teams are, at times, exposed to strong sensory impressions and emotions when encountering trauma patients who do not survive. Standing with other people's lives in your hands and witnessing that the help you provide is not sufficient can be a tough experience. There is little focus and research on surgical nurses' experiences of these events, and there is therefore a need to shed light on this.

Objectives

To investigate how the individual surgical nurse experiences and processes events where the trauma patient does not survive.

Methods

A qualitative hermeneutic approach and method has been chosen, eight semi-structured in-depth interviews with



operating room nurses from three different university hospitals in Norway. All interviews gave rich information and were analyzed with thematic analysis. All the authors were involved in the whole process of conducting the study and analyzing the data.

Results

Feelings such as depression and seriousness occur after difficult events. Identifying with the patient and relatives is particularly strong. Emotional distance is essential for acting professionally. Peer support plays an important role in the processing process. Clinical experience and understanding of the situation are also of great importance. There is no set form of debriefing after these events. The possibility of talking to colleagues is difficult because the pressure on time in the operating ward. A lower threshold for seeking help, and a form of debriefing put into a system, is desirable.

Conclusion

Despite strong emotions and sensory impressions, no one reports any mental or physical problems afterwards. If one can talk about the incident with good colleagues, this is often sufficient to process it. Although experience and the need for processing are individual, everyone recognizes the need for defusing and/or debriefing and wants a system that enables some kind of debrief afterwards these events.



11:30 – 12:30

Orlando B

S20 | Session 20 | Patient Safety

Stephanie Straet

176 Perceptions of Operating Room Healthcare Professionals on Distractions: A Cross-Sectional Analysis

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Background

Recognizing and reducing distractions and risks in the operating room is crucial to ensuring the safety and well-being of patients and healthcare professionals.

Objectives

The aim of this study was to assess operating room healthcare workers' perceptions of various intraoperative distractions and to identify potential differences in perceptions among professional roles within the surgical team.

Methods

An analytical descriptive cross-sectional study was conducted. Data were collected using the Turkish version of the Distraction in Surgery Index (DiSI). Reliability was assessed using Cronbach's alpha coefficients. A total of 270 participants completed the questionnaire, including surgeons (31.9%), nurses (29.6%), anesthetist technicians (23.0%), and anesthetists (15.6%). Statistical analyses included independent t-tests, one-way ANOVA, and post-hoc Bonferroni tests to compare perception differences between occupational groups. A significance level of $p < 0.05$ was considered statistically significant.

Results

The internal consistency of the DiSI subscales, measured using Cronbach's alpha, demonstrated acceptable to excellent reliability: individual skills, performance, and personality ($\alpha = 0.71$); operating room environment ($\alpha = 0.77$); communication ($\alpha = 0.66$); situational awareness ($\alpha = 0.90$); patient-related interruptions ($\alpha = 0.91$); and team and organizational interruptions ($\alpha = 0.83$). In the descriptive analyses, the most frequently reported sources of distraction were the operating room environment, team and organizational dynamics, and individual characteristics (skills and personality), while the least frequently reported source of distraction was patient-related interruptions. In comparative



analyses, anesthetists reported consistently higher sensitivity to interruptions in various subdimensions compared to surgeons and nurses ($p < 0.05$).

Conclusion

This study provides important insights into how healthcare workers in the operating room perceive various distractions. The development of structured protocols, strengthening communication, and increasing awareness of distraction management, particularly for high-risk roles such as anesthetist technicians, can contribute to safer and more efficient operating room environments.

109 Postoperative Mobilization Experiences of Colorectal Surgery Patients: A Qualitative Study

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Background

Early mobilization after colorectal cancer surgery is a key component of Enhanced Recovery After Surgery (ERAS) protocols. Despite its importance, qualitative insights into patient experiences with mobilization remain limited in Türkiye.

Objectives

To explore the early postoperative mobilization experiences of patients undergoing colorectal cancer surgery.

Methods

The study was conducted between October 2024 and April 2025 in the General Surgery Clinic of Bursa Uludağ University Hospital. Based on a phenomenological design, in-depth, semi-structured face-to-face interviews were conducted with 21 purposively selected patients. Data were collected via audio recordings and analyzed using thematic analysis.

Results

Five main themes were identified:

- (1) Pain, Nausea, and Fear:** Postoperative Pain, dizziness, nausea, and fear of wound dehiscence acted as barriers to mobilization.
- (2) Lack of Preoperative Education:** Participants reported a lack of written or verbal information regarding mobilization prior to surgery.
- (3) Support from Nurses and Family:** Nurses played a guiding role, while family members provided physical support.
- (4) Environmental and Equipment-Related Barriers:** Devices such as IV poles, urinary catheters, drains, and nasogastric tubes restricted mobility.
- (5) Personal Motivation and Goal Setting:** Some patients independently set walking goals, reporting benefits such as relief from gas and reduced pain.

Conclusion

Patients' early mobilization experiences are shaped by a combination of physical, emotional, environmental, and educational factors. Implementing nurse-led, structured mobilization protocols and incorporating individualized goal-setting strategies may enhance recovery outcomes in colorectal surgery patients.



73 Perioperative Care of the Patients with Body Modifications: Knowledge, Attitudes, and Safety Concerns of Surgical Teams – An Online Survey

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Background: Evolving fashion trends are increasingly impacting healthcare practices, resulting in a rise in patients with tattoos and piercings. Surgical team members need to recognize the specific perioperative risks associated with these body modifications to ensure patient safety and provide effective care.

Objectives: We aimed to assess the knowledge, attitudes, and practices of healthcare professionals involved in the perioperative care of patients with tattoos and piercings.

Methods: In this descriptive study, a structured online questionnaire comprising 27 questions was designed to collect data. IRB approval was obtained. The survey was distributed via Google Forms from February to April 2025 in Turkey, using snowball sampling through social media and messaging applications. The questionnaire included three sections: Participant demographics, experiences with tattoos, piercings, and attitudes toward patient management. IRB approval was obtained. Data were analyzed using descriptive statistics. The CROSS checklist for survey studies was followed.

Results: A total of 320 responses were received, with 70.9% being perioperative nurses, and 39.1% had over 10 years of experience. Most participants (62.5%) worked in operating rooms. About 43.8% frequently cared for patients with tattoos or piercings. Notably, 26.9% reported that tattoos or piercings caused delays or cancellations of surgeries. A majority (59.1%) believed patients should declare their body modifications to healthcare providers. The primary concerns associated with tattoos were infections and tissue integrity disruptions, while for piercings, electrosurgical safety, infections, and tissue integrity were most prominent. Despite 83.4% recognizing the need for specific regulations and protocols, only 40% reported that their institutions had such guidelines.

Conclusion: The study underscores a significant gap between the recognized need for standardized protocols and their implementation within institutions. Enhancing awareness, developing clear guidelines, and training healthcare professionals are crucial steps to improve perioperative management of patients with tattoos and piercings, ultimately enhancing patient safety and care quality.

32 Enhancing Patient Safety: Optimizing Multi-Use Clinical Device Reprocessing

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Background

Proper reprocessing of multi-use clinical devices (MCDs) is crucial for patient safety and resource management in hospitals. Inadequate handling can lead to biofilm formation, compromising cleaning and sterilization, and causing surgical site infections (SSIs), which increase hospitalization, patient suffering, and healthcare costs. Global observations highlight persistent organic and inorganic matter on MCDs upon reception, indicating issues with training, standardization, and resources.

Objectives

This program aims to enhance the knowledge and practices of nurses in operating theaters, ambulatory surgery units, and delivery rooms regarding MCD reprocessing. Specific goals include evaluating nurses' knowledge, attitudes, and practices pre- and post-training, developing and implementing theoretical-practical training, standardizing point-of-use MCD treatment, and improving compliance.

Methods

This ongoing project utilizes a pre- and post-intervention observational study design, focusing on PDSA cycle. Initially, a knowledge questionnaire on MCD reprocessing will be administered to nurses in the hospital units to assess baseline knowledge. Concurrently, a standard operating procedure for point-of-use MCD treatment will be developed. Theoretical-practical training sessions will then be conducted in operating theaters, ambulatory surgery units, and delivery rooms. Post-training, the knowledge questionnaire will be reapplied. Monthly audits of MCDs received in centralized sterilization services will also commence to verify compliance with point-of-use cleaning.

Expected Results

We anticipate an increase in nurses' knowledge. Target participation in training is 85%, with an expected satisfaction level of 85%. The goal for point-of-use MCD cleaning compliance is 80%. Questionnaire and audit results will be analyzed and presented to identify gaps, propose continuous improvements, and guide annual training reinforcement.

Conclusion

This pre and post-intervention observational study will assess the training's effectiveness in improving nurses' knowledge and practices in MCD reprocessing. These anticipated improvements will significantly contribute to preventing healthcare-associated infections, optimizing patient safety, and enhancing hospital process efficiency.



11:30 – 12:30

Koločep

S21 | Session 21 | Leadership / Management

Meryem Yavuz van Giersbergen

39 A survey on factors distracting operating theatre staff during surgery in Korea

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Background

Operating theatre (OT) staff perform complex tasks requiring high concentration. However, frequent intraoperative disruptions—auditory, visual, and equipment-related—can impair focus and increase error rates, thereby compromising patient safety.

Objectives

This study aims to identify intraoperative disruptions as subjectively perceived by operating theatre staff and to contribute to patient safety by proposing strategies to minimise these disruptions.

Methods

This descriptive study was conducted in a 2,700-bed general hospital in Seoul. A total of 156 OT staff participated, and surgical disruptions were assessed using a validated translated tool (Nasri et al., 2023; WHO, 2015), with a Cronbach's α of .87. Data were collected via questionnaire between October and November 2023. For statistical analysis, a chi-square test was performed, and the minimum sample size was calculated using G*Power with $\alpha = .05$, power = .80, and effect size = .30.

Results

The absence of the surgical team was reported by 89.1% of respondents, with 90.4% rating it as a major disruption and 93.6% perceiving it to have a negative impact on surgery. Equipment availability issues were noted by 91.7%, with 87.8% identifying them as highly disruptive and 91.7% reporting a negative effect. OT nurses consistently reported higher disruption levels across most factors compared to other professional groups ($p < 0.05$). In contrast, music was reported as a frequent disruption by 56.4% ($p < 0.001$), yet more than half perceived it to have a positive impact on surgical performance ($p < 0.05$).

Conclusion

This study identified equipment issues and absence of the surgical team as the most negatively impactful intraoperative disruptions, with operating theatre nurses showing heightened sensitivity to such factors. Conversely,



music was perceived positively. Strategies such as preoperative checklists, clear role allocation, and noise reduction are essential to minimise disruptions and enhance surgical safety and concentration.

276 A National e-Delphi Study to Define the Core Curriculum for Italian Operating Room Scrub Nurses

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Background

In Italy, the role of the scrub nurse (SN) lacks a nationally defined core curriculum, despite the complexity and critical nature of SN responsibilities in the operating room. The lack of standardized competencies contributes to inconsistent training and variability in the quality of patient care.

Objectives

This study aimed to identify essential competencies for Italian SNs and define appropriate timeframes for acquiring them during the role transition into operating room practice.

Methods

A two-phase e-Delphi study was conducted from April to September 2023, involving 35 expert nurses with substantial experience in the scrub nurse role or operating room coordination. Participants were purposively selected based on seniority and expertise, ensuring a nationally representative panel. In phase one, panelists identified and validated the essential competencies using the five domains of the EORNA Core Curriculum as a reference. In phase two, they evaluated appropriate timeframes for acquiring each competency during the transition of a nurse entering scrub practice. Three Delphi rounds were conducted, followed by a final consensus meeting. Descriptive statistics and Cronbach's α were used to assess agreement and internal consistency.

Results

The expert panel reached consensus (>80% agreement) on 77 core competencies. Two additional competencies specific to the Italian context were proposed and accepted. Cronbach's α was 0.979 in round two and 0.956 in round three, indicating high internal consistency. Timeframes were categorized as short (1–3 months), medium (3–12 months), and long (>12 months). Consensus on timeframes was reached for 49 competencies after round two; the remainder were finalized during the consensus meeting.

Conclusion

This study produced the first evidence-based core curriculum for Italian scrub nurses, aligned with international standards but tailored to national needs. The defined competencies and timeframes offer a foundation for standardized training, professional development, and structured role transitions in perioperative nursing.



310 Improving First-Case-On-Time Start Rates in Elective Neurosurgery Through Structured Team Communication

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Background

The primary aim of this project was to increase the first-case on-time start rate in elective neurosurgery cases from a monthly average of 41% to 62% or higher by November 2024 through evidence-based quality improvement strategies in team communication.

Objectives

- Demonstrate the effectiveness of structured communication in improving OR start times.
- Highlight the role of interdisciplinary collaboration in achieving sustained quality improvement outcomes.
- Share effective implemented interventions for surgical efficiency.

Methods

This quality improvement (QI) project utilized the Plan-Do-Study-Act model in conjunction with the Institute for Healthcare Improvement's Model for Improvement. Conducted at Vanderbilt University Medical Center's neurosurgery operating rooms. The study included elective neurosurgery and neurointerventional cases from November 2024 to January 2025. Key interventions included the formation of an interprofessional team, the use of communication tools, and scheduled communication updates.

Results

Implementing structured communication protocols in the neurosurgery operating rooms led to a notable improvement in the timeliness of first cases on time starts. By November 2024, the on-time start rate had reached 62% and was maintained or exceeded by January 2025. This improvement in timeliness contributed to overall operating room efficiency. Furthermore, the most common reasons for the delay include room not ready (14.2%), instrument contamination of not being available and/or missing (11.4%), and transport delay (6.8%) of the 176 delayed cases. These findings underscore the importance of addressing logistical issues alongside enhancing communication practices to reduce delays further and improve surgical start times.

Conclusion

Effective team communication significantly improved efficiency, with on-time starts increasing to a 62% average within the 5-minute threshold and maintaining an 85% average within the 15-minute threshold since November 2024. This enhancement is crucial for neurosurgery patient outcomes, demonstrating the value of structured communication protocols. Future research should involve more extensive, cross-specialty studies in an extended period.



33 Securing the Future of Sustainable Perioperative Nursing – A National Initiative in Sweden

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Background

In response to increasing challenges in perioperative care, the Swedish Operating Room Nurses Association (SEORNA), in collaboration with the Swedish Society of Nursing and the National Program Area for Surgery and Plastic Surgery, launched a national project in 2024 to strengthen the sustainability and safety of future perioperative care.

Objectives

The project aimed to assess the current state of the perioperative nursing profession, identify risks, and propose strategic actions to support workforce sustainability and patient safety.

Methods

Key components included a nationwide survey of operating room (OR) nurses (n=817), a national mapping of operating departments and staffing levels, and the development of a structured tool for Risk and Consequence analysis (ROK) to guide safe task redistribution. The project also initiated the creation of a national curriculum for nurses and radiology nurses involved in interventions requiring advanced aseptic competence.

Results

The survey revealed widespread concerns regarding professional development, staffing shortages, and intentions to leave the profession. The mapping exercise exposed significant gaps in national data and workforce planning. The ROK tool was developed to support healthcare leaders in making informed decisions about work allocation. The proposed curriculum addresses the growing need for specialized knowledge outside traditional operating theatres.

Conclusion

This initiative demonstrates the importance of profession-led strategies to ensure patient safety, staff retention, and sustainable development in perioperative care. It also highlights the need for improved national data and structured support for competence development in a rapidly evolving healthcare landscape. This presentation offers valuable insights for perioperative nurses, leaders, and policymakers by highlighting practical tools, national data, and profession-driven strategies that can inspire similar initiatives across Europe to strengthen workforce sustainability and patient safety.



11:30 – 12:30

Orlando A

S22 | Session 22 | Infection Control and Prevention/ Decontamination

Esmeralda Nunes

251 Compliance with perioperative infection prevention recommendations - A Mixed-Methods Study

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Background

Hip replacement surgery significantly improves patients' quality of life but surgical site infections and periprosthetic joint infections can be devastating. A Swedish project initiated in 2009 developed care bundles to reduce infection rates in hip and knee surgeries. Despite these efforts, a significant portion of hospital adverse events, including infections, occur in the operating room, highlighting the need for adherence to infection prevention guidelines.

Objectives

To investigate the operating room team's adherence to the care bundle designed to prevent PJI and to explore their experiences with adherence.

Methods

A mixed-method design was employed, including three focus group interviews and observations during 23 scheduled hip and knee joint replacement surgeries. Observations were structured according to the perioperative care bundle, 'Optimal operating room environment for knee or hip joint replacement surgery'. To enhance hand hygiene accuracy, the World Health Organization's "Save Lives – Clean Your Hands" observation form was used. The care bundle interventions guided the interviews.

Results

Integrating the results revealed several areas of convergence between the quantitative and qualitative data, with some divergences. The observational findings were largely confirmed by the qualitative interviews.



Conclusion

The study highlights the need to strengthen infection control strategies in the operating room. Despite ongoing efforts, challenges persist in translating national recommendations — particularly those concerning hand hygiene — into routine clinical practice. Achieve broader adherence requires effective communication, targeted education, and the removal of practical barriers. Enhancing these strategies would not only improve patient safety but also support more sustainable healthcare practices by reducing preventable infections and minimizing unnecessary use of resources.

56 A comparison between unidirectional airflow (UDF) and mixed-air (TMA) ventilation during hip replacement surgery in modern operating rooms

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Background

The bacterial count of operating room air has traditionally been analysed with CFU/m³ measurements. An alternative method is real-time measurement of fluorescent bioparticles (FBP > 3 μm/50 dm³).

Objectives

Compare FBP levels, close to and far from the surgical wound, and to investigate how these values differ between operating rooms with unidirectional airflow (UDF) and turbulent mixed airflow (TMA).

Methods

Simultaneous measurement of FBP ≥ 3 μm was performed 1 and 3 meters from the surgical wound in 50 hip replacement surgeries in operating rooms with either UDF (n=25) or TMA (n=25). Comparisons of mean FBP ≥ 3 μm/50 dm³ for entire surgeries were compared between measurement points 1 and 3 meters from the surgical wound for each ventilation type, as well as between ventilation types.

Results

In the operating room with UDF, FBP ≥ 3 μm/50 dm³ was lower 1 meter compared to 3 meters from the surgical wound, 2.9 (CI 2.4 – 3.4) and 4.6 (CI 3.1 – 6.1). There was no difference in bioparticle levels 1 meter or 3 meters from the surgical wound in the operating room with TMA, 11.7 (CI 10.2 – 13.1) and 13.0 (CI 11.5 – 14.5).

The mean level of FBP ≥ 3 μm/50 dm³ was lower in the operating room with UDF than in the operating room with TMA 1 meter from the surgical wound, 2.9 and 11.7 respectively, difference 8.9 (CI 7.8 – 10.0) and 3 meters from the surgical wound 4.6 and 13.0 respectively, difference 8.66 (CI 7.2 – 10.1).

Conclusion

In the operating room with UDF, levels of fluorescent bioparticles were lower near the surgical wound than at a distance from the wound. In the operating room with TMA, the levels are at the same level regardless of the distance from the surgical wound. The UDF rooms had lower levels than the TMA rooms, indicating that infection-sensitive surgery should probably be performed in the UDF rooms.



166 Surgical antibiotic prophylaxis: are perioperative teams complying with the guidelines?

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Background

Surgical site infections (SSI) remain one of the most significant issues in perioperative care due to their impact on patient outcomes - including suffering, morbidity, mortality, as well as on healthcare costs. Surgical antibiotic prophylaxis (SAP) effectively reduces SSI when correctly administered. However, in real-world practice, full compliance with administration guidelines is often suboptimal.

Objectives

To evaluate compliance with institutional SAP guidelines - focusing on antibiotic selection, dosage, timing and intraoperative redosing, in a Swiss tertiary care hospital.

To propose targeted measures to improve compliance with SAP guidelines.

Methods

One-year prospective survey (March 2019–February 2020) including emergency and elective surgical procedures. Exclusion criteria were contaminated or infected surgeries, paediatrics, ophthalmology, endoscopic or endoluminal interventions, transplants and digestive or urological procedures. SAP adequacy was assessed according to four parameters: antibiotic choice, dose, time interval between SAP administration to incision and intraoperative redosing. Compliance was determined by concordance with institutional guidelines, with each parameter classified as concordant or discordant.

Results

A total of 11'115 surgical interventions were analysed, comprising 12'133 SAP opportunities. Overall compliance rates were:

- 87% for correct antibiotic choice (ranging from 13% to 92% across specialties),
- 82% for dosage (10% to 92%),
- 76% for timing (12% to 89%)
- and, 77% for intraoperative redosing (11% to 88%).

Full compliance across all parameters was achieved in 72% of cases.

The highest compliance rates were observed among orthopaedics, gynaecology and thoracic surgeries.

Protocol deviations were most frequently observed in maxillofacial and obstetric surgery.

Conclusion

This study showed significant variation in SAP compliance across surgical specialties.

A computerized decision support system has been implemented to improve compliance with SAP protocols and enhance patient safety in the perioperative setting.



94 Scoping review: specific interventions for the prevention of surgical site infection in hip arthroplasty

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Background

Hip arthroplasty is one of the most common and successful surgical procedures in orthopaedics. However, surgical site infection (SSI) in arthroplasty is a complex process and a serious threat to patient safety. It can result in severe complications and substantial economic burden for patients and healthcare systems. These costs in the USA for hip arthroplasty in 2020 were 753.4 million dollars (Premkumar et al., 2021).

Objectives

Explore and map the scientific evidence on perioperative interventions that prevent SSI associated with hip arthroplasty.

Methods

Review in line with JBI methodology, with the following eligibility criteria: population (patients undergoing hip arthroplasty), concept (interventions for prevention of SSI), and context (perioperative period). The research was carried out in March 2024, using the EBSCO discovery service, web of science, and scopus databases. Free search was conducted in Google Scholar.

Additional studies were identified by consulting the reference lists of the articles included in the review.

Results

The search yielded 218 records. After screening and selecting the studies, 24 were included in this review. Were identified interventions that were developed specifically for arthroplasties.

Interventions developed for arthroplasties that generate consensus include:

- Specific antibiotic prophylaxis;
- Screening and decolonisation of staphylococcus aureus;
- Reduce traffic in the OR. Interventions that are not recommended or are still controversial:
- Ventilation system with a laminar airflow;
- Use of antibiotic-loaded bone cement.
- Use of adhesive incise drapes;
- Use of special surgical suits.

Conclusion

In response to the problem of SSIs in arthroplasty surgeries, specific interventions and measures have been implemented. Some of these interventions are effective and should be adopted in clinical practice. However, several studies have shown that many of these measures are ineffective in reducing the risk of SSI or have not yet generated scientific consensus. Further research is required to establish a scientific basis for this issue.



15:30 – 16:30

Orlando B

S23 | Session 23 | Technology and Innovation

Elvira Sadiku

295 THE MEDIATING ROLE OF ARTIFICIAL INTELLIGENCE LITERACY IN THE RELATIONSHIP BETWEEN ARTIFICIAL INTELLIGENCE ATTITUDES AND ANXIETY OF SURGICAL NURSES: A STRUCTURAL EQUATION MODELING STUDY

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Background

The use of artificial intelligence (AI) is rapidly increasing day by day in the field of health. Surgical nurses need to keep their knowledge, skills, and competencies up to date with this constantly developing technology.

Objectives

This study aims to evaluate the mediating role of AI literacy in the relationship between AI attitudes and the anxiety of surgical nurses.

Methods

The descriptive and correlational study was conducted between November 09, 2024, and January 15, 2025. The sample consisted of 244 surgical nurses. Descriptive Information Form, General Attitude Towards Artificial Intelligence Scale, Artificial Intelligence Anxiety Scale, and the Artificial Intelligence Literacy Scale were used as data collection tools. Descriptive statistical methods, parametric tests, Pearson correlation analysis, linear regression analysis, and structural equation modeling were applied to analyze the data.

Results

The mean age of the surgical nurses participating in the study was 33.09±8.45 years, 84% were female, and 77.5% were undergraduate graduates. It was determined that 81.6% of the nurses did not use AI technologies, and 53.3% of the nurses who used AI technologies learned how to use AI through the internet. A positive, weakly significant relationship ($r: 0.417$; $p<0.05$) was found between nurses' AI literacy and their positive attitudes towards AI. It was determined that the direct effect value of the scale score on the General Attitude Towards AI Scale Positive Attitude ($\beta= -0.156$) and General Attitude Towards AI Scale Negative Attitude ($\beta= 0.190$) was significant. In the study, it was



determined that the indirect effect value of AI Anxiety Scale score on General Attitude Towards AI Scale Positive Attitude ($\beta = -0.003$) and General Attitude Towards AI Scale Negative Attitude ($\beta = -0.010$) was significant.

Conclusion

It was determined that AI literacy has a mediating role in the relationship between AI attitude and the anxiety level of surgical nurses.

324 Technological Innovation Project in Sterilization and Operating Room: Implementation of QR Codes for Surgical Instrument Counting and Container Traceability

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Background

Ensuring safe and sustainable healthcare delivery is a constant challenge for healthcare institutions. In the surgical setting, the World Health Organization (WHO) recommends standardized protocols to promote safe practices and prevent avoidable harm. One such recommendation is the Surgical Safety Checklist (SSC), which includes the mandatory counting of surgical instruments at various stages of the procedure.

Objectives

This project aimed to design a traceability system for surgical instruments using QR codes, enabling identification of the contents of sterile containers and digital recording of each phase, from preparation in the sterilization unit to intraoperative use.

Methods

The system has been piloted with one container in the General Surgery specialty. By digitizing the process, the project also seeks to reduce paper usage.

The project utilized Microsoft Forms, a corporate tool, to automate records and generate QR codes. A shared template was developed to allow multiple users to work on the same document at different stages.

Results

In May 2025, a pilot test was conducted using a laparoscopic cholecystectomy instrument container. The traceability system successfully recorded the container's condition upon arrival in the operating room, its exit, arrival at the cleaning center, the sterilization process, and the completion of its cycle before being restarted. Instrument validation before leaving the sterilization unit serves as the reference point for intraoperative counting, ensuring completeness upon exit from the operating room. This enabled real-time identification of any incidents and generated a comprehensive digital record of the entire process.

Conclusion

The project established a sequential traceability system between sterilization and the operating room. It reinforces compliance with the SSC, promotes conscious and recordable workflows, enhances patient safety, and facilitates data storage and analysis. The digital format minimizes paper use and enables data-driven decision-making.



286 Operating room nurses and the da Vinci robotic system: A literature review on roles, technical challenges, and troubleshooting in robotic-assisted surgery

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Background

In recent decades, rapid technological advancement has revolutionized many fields, including medicine. Robotic-assisted surgery, particularly with the da Vinci Surgical System, represents a pivotal innovation in minimally invasive surgery. By combining medical science, robotics, and engineering, it has enhanced surgical precision, patient care, and procedural efficiency. However, the integration of such complex technology introduces new demands, especially for operating room (OR) nurses, who play a critical role in preparation, coordination, and system maintenance throughout the surgical process.

Objectives

This literature review aims to analyse the role of OR nurses in robotic-assisted surgeries using the da Vinci system, highlight common technical challenges, and identify effective troubleshooting strategies to support safe and efficient surgical outcomes.

Methods

A systematic review was conducted across databases including PubMed, Scopus, and CINAHL, covering publications from 2010 to 2024. Search terms included “robotic surgery,” “da Vinci system,” “OR nurse,” “technical error,” and “troubleshooting.” Relevant studies were screened and thematically analysed.

Results

The review shows that OR nurses are essential in all stages of robotic procedures: from setup of robotic components (console, tower, arms), patient positioning, and cable connection, to post-operative care such as cleaning and reprocessing instruments. Technical problems include system malfunctions, robotic arm blockages, and connectivity issues. Quick identification and resolution—whether minor or complex—often rely on the nurse’s system knowledge and rapid response. Remote technical support may be required for system-level faults. Communication and teamwork were highlighted as key factors in managing disruptions.

Conclusion

Comprehensive knowledge of the da Vinci system and strong troubleshooting skills are crucial for OR nurses. Standardized training, clear protocols, and interprofessional collaboration significantly contribute to surgical safety and high-quality patient care in robotic-assisted environments.



181 The Role of Operating Room Nurses in Gynecological Robotic-Assisted Surgeries – Experiences from the University Medical Centre Ljubljana

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Background:

Robotic-assisted surgery represents a significant technological advancement in minimally invasive gynecological surgery, especially for patients with a high body mass index (BMI). At the Gynecology Clinic of the University Medical Centre Ljubljana, we have successfully performed 88 robotic-assisted surgeries since introducing the system in 2024.

Objectives:

The study aims to highlight the crucial role of operating room nurses in preparing and conducting robotic-assisted gynecological procedures, describe the necessary workflow adaptations, challenges, and additional training required for the successful implementation of the new technology into clinical practice. We also analyzed cases of complications to emphasize the importance of teamwork, effective communication, and responsiveness in managing unexpected situations.

Conclusion:

Our experience confirms that the role of operating room nurses in robotic-assisted surgery is indispensable. High-quality preparation and coordinated teamwork significantly contribute to the success of procedures and patient safety, especially when facing unexpected challenges.



15:30 – 16:30

Orlando A

S24 | Session 24 | Patient Safety

Peter De Gang

287 Surgical Safety through Technology: A Bibliometric Study on Retained Foreign Body Prevention

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Background:

Operating rooms are high-risk environments where preventable surgical errors, such as the retention of foreign bodies, continue to pose serious threats to patient safety and impose financial burdens on healthcare systems. In response, recent years have witnessed growing interest in leveraging information technologies—such as radio frequency identification (RFID), barcode systems, and digital checklists—to mitigate these risks. However, no bibliometric mapping study to date has explored the scientific literature on the use of these technologies in preventing retained surgical items.

Objective:

This study aims to map research trends, thematic focus areas, collaboration networks, and influential sources in the field of digital and information-based technologies for the prevention of retained surgical items in operating rooms.

Methods:

Data were retrieved from the Elsevier Scopus database on July 10, 2025. A comprehensive search was conducted using terms including "retained surgical item", "operating room", "RFID", "digital health", and "electronic surgical count", covering the period from 2003 to 2025. After applying inclusion criteria, 44 publications (36 original articles and 8 reviews) published between 1998 and 2025 were analyzed using quantitative bibliometric techniques and visualized via VOSviewer software.

Results:

The United States was the most prolific country, and the *Journal of Surgical Research* was identified as the leading publication outlet. The most cited work was Greenberg et al. (2008) with 96 citations, focusing on barcode and manual surgical count methods. Keyword analysis revealed two dominant themes: (1) patient safety and case reporting, and (2) surgical process-related foreign body retention.



Conclusion:

RFID, barcoding, and electronic counting systems are emerging as core technologies in surgical safety literature. However, only three nursing-related studies were identified, highlighting a critical gap. Given nurses' central role in surgical safety, future interdisciplinary research should integrate both technological efficacy and the nursing perspective.

206 Perceived Disruptions and Their Effects on Operating Room Nurses: A Descriptive Study Using the DiSI Scale

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Background

The OR is a sensitive working environment in which team members perform critical tasks that require attention and communication. However, distractions can lead to interruptions that could endanger patient safety.

Objectives The aim of this study was to identify and describe the types, frequency, and perceived effects of workplace disruptions experienced by operating room nurses, using the Disruptions in Surgery Index (DiSI) scale.

Methods A descriptive cross-sectional study was conducted with 199 OR nurses. Data were collected online using the DiSI scale. The scale evaluates various distraction sources and their perceived impact on clinical performance. Descriptive statistics—including frequencies, percentages, means, and standard deviations—were used to analyze the data.

Results

The mean age of the participants was 29.39 ± 7.86 years, and 73.4% were female. Nearly half (47.7%) reported working in all surgical specialties. Regarding distraction frequency, 57.8% of OR nurses stated they experienced distractions sometimes, 8.0% frequently, and 2.0% always. Mobile phone use in the OR was reported by 98.0% of participants, while 10.6% used smartwatches and 10.6% used Bluetooth headsets. The most frequently reported sources of disruption were tiredness (mean score: 62.8 ± 26.2), temperature problems (55.1 ± 30.3), and multitasking (53.9 ± 31.1). In terms of perceived contribution to surgical errors, tiredness ranked highest (7.1 ± 2.6), followed by lapses in attention (6.7 ± 2.7) and multitasking (6.4 ± 2.8). These same factors also scored highest for obstructing nurses' ability to achieve clinical goals.

Conclusion

Disruptions such as multitasking, attention lapses, and environmental stressors were also perceived to interfere with task completion and patient safety. These results underscore the importance of recognizing and addressing disruptive elements in the operating room environment from the perspective of frontline nursing staff.

Key words: Operating Room Nurses, Workplace Disruptions, DiSI Scale, Fatigue, Surgical Safety, Nursing Performance



27 Defining and recognising Clinical Leadership in Flemish hospitals: a mixed methods qualitative study among nurses

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Background

In today's complex and rapidly evolving healthcare landscape, strong clinical leadership is crucial, not only among formal leaders but also at the bedside or at the operating table. However, the concept remains insufficiently defined and often unrecognised among nursing teams.

Objectives

This practice-based study aimed (1) to define the concept of clinical leadership in nursing and (2) to explore how clinical leaders are identified within hospitals.

Methods

This mixed methods study consisted of two components: a scoping literature review of nursing databases, which served as the basis for the conceptual framework and qualitative research involving three focus groups and 51 semi-structured interviews. Participants included nurses, head nurses, advanced practice nurses, nurse managers, and nursing students from 14 acute care hospitals in Flanders. The data were analysed using thematic coding to identify core attributes.

Results

Clinical leadership was described as informal yet impactful leadership at the bedside. Five key attributes were identified: (1) **clinical expertise**, demonstrated through advanced reasoning and care delivery, (2) **effective communication**, including patient-centred dialogue and constructive team interaction, (3) **flexibility**, both in managing change and responding to team dynamics, (4) **sense of responsibility**, reflected in quality-driven care and reflective practice and (5) **vision for the future**, shown in innovation and systems thinking. Despite their influence, many nurses do not self-identify as clinical leaders, often perceiving leadership-related tasks as additional workload rather than developmental opportunities.

Conclusion

This study provides a context-specific definition of clinical leadership and outlines observable characteristics that support its recognition in practice. Empowering bedside nurses, especially in specialised settings such as perioperative care, to embrace clinical leadership may positively impact care quality, job satisfaction and workforce sustainability. Further research is needed to explore how to support leadership development and measure its effects on healthcare outcomes.

89 On skin preparation : The Operating Room Nurse Perspective

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Background



Surgical site infections (SSIs) are a significant risk in surgical care. Preoperative skin preparation is a key preventive measure. In many countries, this task is primarily the responsibility of the operating room (OR) nurse. Therefore, it is important to study skin preparation from the perspective of OR nurses."

Objectives

To investigate and compare skin preparation practices used by OR nurses.

Methods

The thesis includes four studies:

- A cross-sectional survey mapping usage and knowledge of skin preparation
- A focus group study exploring OR nurses' perspectives
- An integrative literature review of SSI prevention prerequisites during the intraoperative phase from the OR nurse perspective.
- A randomized controlled trial (RCT) comparing two cleaning methods for sutured wounds

Results

The studies reveal inconsistent skin preparation practices that deviate from manufacturer instructions and current evidence, often influenced by routines, traditions, resource limitations, and operating room team dynamics. OR nurses expressed a need for stronger scientific support and felt their leadership in SSI prevention was not fully acknowledged. The RCT did not yield statistically significant results.

Conclusion

Fundamental factors such as traditions, limited resources, and lack of evidence impact practices in the Operating room. Supporting OR nurses with clear guidelines, leadership recognition, and adequate resources is essential to strengthening evidence-based skin preparation and SSI prevention. This research highlights key areas for improvement and advocates for the central role of OR nurses in maintaining surgical safety. *Please replace your content here*



15:30 – 16:30

Koločep

S25 | S25 | Leadership / Management

Bart Cooreman

355 Structure, Process, and Outcome: What Most Impacts Nurses' Perception of Quality in Ambulatory Surgery?

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Background

In Portugal, ambulatory surgery (AS) accounts approximately 72% of surgical activity. Perioperative nursing in AS remains insufficiently studied, highlighting the urgent need to define indicators that enable the evaluation of the quality and safety of nursing care in this context.

Objectives

To analyze the relationship between the global assessment of Ambulatory Surgery Units (ASUs) and Nurse-Sensitive Quality Indicators (NSQIs) dimensions, based on nurses' perceptions.

Methods

A questionnaire was developed and validated to assess nurses' perceptions of the NSQIs. A descriptive-correlational study was then conducted with a sample of 222 nurses in Portugal. Pearson correlation analysis was performed to identify statistically significant associations between the NSQIs and the overall evaluation of the ASU, with significance set at $p < 0.001$.

Results

The process dimension showed the strongest correlation with the overall assessment of ASUs ($r=0.555$), particularly nursing care based on theoretical models ($r=0.545$), adherence to professional safety guidelines ($r=0.421$), and the provision of verbal and written postoperative instructions ($r=0.405$). The structure dimension revealed a moderate correlation ($r=0.424$), with stronger associations found in professional recognition ($r=0.391$), learning from errors ($r=0.347$), and work organization that allows adequate time with patients ($r=0.346$). The outcome dimension showed the weakest correlation ($r=0.327$), with event reporting being the most significant item ($r=0.298$), suggesting that the presence of a non-punitive reporting culture positively impacts perceived quality.

Conclusion

The perceived quality of ASUs by nurses is more strongly influenced by structured clinical practices, a culture of



safety, and professional recognition than by clinical outcomes alone. Environments that promote leadership support, team autonomy, learning from errors, and safe practices contribute to a positive organizational climate. These findings align with the literature, emphasizing that structural and procedural elements are more decisive in shaping nurses' global perceptions of care quality in ambulatory surgical settings than isolated clinical outcomes.

75 The Second Victim Phenomenon Among Operating Room Nurses: Psychological Impact and Support Needs

Simha Brezines, [Khaleel Shammās](#)

Galilee medical center, operating room, nahariya, Israel

Background

[Please replace your content here] Operating room (OR) nurses are frequently exposed to high-stress environments where adverse events may occur. These events can lead to emotional and psychological distress among the involved staff, a phenomenon known as the "second victim." Despite growing awareness, this issue remains underexplored in perioperative settings

Objectives

[Please replace your content here] To examine the prevalence and psychological impact of second victim experiences among OR nurses in Israel and to identify their coping strategies and support needs.

Methods

[Please replace your content here] A cross-sectional quantitative study was conducted among 152 OR nurses using validated questionnaires assessing traumatic outlook, emotional distress, and perceived organizational support. Statistical analyses included descriptive statistics and correlation tests.

Results

[Please replace your content here] A significant proportion of participants reported symptoms consistent with **second victim** experiences, including guilt, anxiety, and professional self-doubt. A negative correlation was found between perceived organizational support and the intensity of traumatic symptoms. Nurses who received structured support reported better emotional outcomes and resilience.

Conclusion

[Please replace your content here] Second victim experiences are common among OR nurses and can have lasting psychological effects. Healthcare institutions should implement structured support systems, such as peer support programs and debriefing protocols, to mitigate emotional distress and enhance staff well-being.

172 Assessment of the Health Status of Polish Operating Room Nurses and Midwives Based on an Author-Designed Survey

[Iwona Sobczak](#)

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The aim of this study is to assess the physical and mental health status of Polish operating room (OR) nurses and midwives using an original, author-designed questionnaire. As of July 2025, there are 8,260 registered nurses in Poland with a specialist title in perioperative nursing. According to the latest report from the National Consultant in this field, approximately 9,000 OR nurses and midwives are currently active in the profession.

The study will include participants from various hospital centers across Poland. Perioperative nurses and midwives represent a professional group particularly exposed to occupational stress, physical strain, and specific working conditions inherent to the surgical environment, which may lead to a range of health problems—both physical and mental.

The survey collects data on physical condition, mental well-being, frequency of health symptoms, and lifestyle factors. It also includes professional characteristics such as years of experience, facility type, education level, weekly working hours, and shift work frequency. Importantly, the questionnaire contains items on a history of oncological diseases and the process of returning to work after treatment.

The collected data will help identify the most common health issues within this professional group and support the development of targeted preventive and systemic actions. The results—currently being gathered—will serve as a basis for recommendations to improve working conditions and well-being among Polish perioperative nurses and midwives. Findings will be presented to the President of the Supreme Chamber of Nurses and Midwives in Poland, the highest professional body representing the nursing and midwifery community.

330 Managing the Uncertainty of Human Error in Perioperative Practice

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Background

Operating theatres are high stakes environments that are particularly susceptible to human error due to time pressure, complex decision-making, multidisciplinary team coordination and the critical nature of interventions. The uncertainty inherent in human performance creates significant challenges for patient safety and quality outcomes. Despite established global procedures for managing sentinel events, there continues to be a significant increase in adverse patient outcomes specifically in perioperative practice. The emerging field of human factors has brought valuable awareness to healthcare safety, leading to the development of new policies and procedures across the entire healthcare industry. However, even with these improvements and interventions catastrophic events are paradoxically continuing to increase rather than decrease. This presents a troubling paradox in perioperative healthcare safety: while we have better understanding of human factors, more comprehensive policies, and established procedures for managing serious safety events, the actual incidence of these preventable adverse outcomes is still rising in surgical and perioperative settings. The situation highlights the need for more effective approaches to translating human factors knowledge and safety policies into actual reduction of patient harm in perioperative care.

Objectives

The discussion aims to address a critical gap in perioperative safety by acknowledging that while human error cannot be eliminated, its impact can be systematically managed through structured approaches that account for uncertainty and variability in human performance.

Methods

Human factors challenge- to change the thinking from -seeing people as the primary liability in an otherwise safe system VERSUS seeing people as the primary resource for adaptability and flexibility in a hazardous workplace.



Results

Encouraging more emphasis on adaptability and flexibility to adjust to dynamic work situations in perioperative practice, many of which are not foreseen by the authors of policies and procedures.

Conclusion

Safety is not a collateral duty; it is a core business



8:10 – 8:55

Koločep

RT01 | Round Table 1 | prevention of perioperative hypothermia

Esther Espuñes

For the round table, three panelists from three different countries will be included.

This approach ensures diverse perspectives and provides visibility to participants from various countries.



8:10 – 8:55

Koločep

RT02 | Round Table 2 | surgical counting

Marin Repustic

For the round table, three panelists from three different countries will be included.

This approach ensures diverse perspectives and provides visibility to participants from various countries.



12:45 – 13:45

Orlando A

ePoster01 | ePoster Session 01

Ioannis Koutelekos

269 Swedish guidelines and recommendations for preparing surgical instrument before surgery

Anna Ekepil, Lars Salomonsson, Rose-Marie Gabrielsson, Linda Andersson, Anna-Karin Andersson

Swedish Operating Room Nurses Association SEORNA, Quality Council SEORNA, Stockholm, Sweden

Background

The Quality Council within the Swedish Operating Room Nurses Association is author of evidence-based Guidelines and Recommendations with the aim to promote high quality and safe perioperative nursing care.

Postoperative infections are today the third most common form of healthcare-associated infections, which means costs for healthcare and suffering for patients.

Checking and preparing surgical instruments before surgery could be an infection prevention measure carried out by an operating room nurse.

Preparation of sterile surgical equipment can be done in the operating room or in a preparation room where they will be covered with surgical drapes that will reduce bacterial contamination of the surgical equipment before the patient is brought into the operating room. Preparing surgical equipment in good time leads to efficient use of the operating room which reduce stress for operating room staff.

Objectives

Describe the work process of producing guidelines and the Swedish recommendations for preparing surgical instrument before surgery.

Methods

The work process for producing guidelines is based on an evidence-based model. Data was collected through systematic reviews of literature, local routines and standards collected through members in SEORNA, advice from experts in perioperative nursing, published adverse events, and reviews of international guidelines.

Results

The use of sterile covers to protect sterile surgical equipment from bacterial air contamination while waiting for operations to start is common practice in Sweden although there has not previously been a recommendation on time limit.



Conclusion The guideline has been updated based on recent Swedish studies showing that prepared surgical instruments protected by sterile drapes can be stored in an operating room with approved ventilation for 15 hours. The evidence-based guidelines serve as a foundation to maintain patient safety and high-quality perioperative nursing care. Operating room nurses have evidence-based guidelines to rely on in their daily work.

443 Experiences with Surgical Patient Positioning: Roles, Responsibilities, and Challenges

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Background

Appropriate patient positioning on the operating table during surgery is vital for optimal anatomical exposure, access to essential equipment, patient comfort and to minimize the risk of injuries. Patient positioning has been described as a shared responsibility of the entire surgical team. Research on roles and responsibilities in patient positioning during surgery is sparse.

Objectives

The aim was to explore how representatives from the different professions in the surgical team experience roles, responsibilities, and challenges in positioning the surgical patient.

Design

The study had a qualitative design, including 16 individual, semi-structured interviews,

Methods

Participants included surgeons (n=4), anesthetists (n=4), operating room nurses (n=4) and nurse anesthetists (n=4) in a hospital in Southeastern Norway. The data were analyzed using Braun and Clarke's six-step Reflexive Thematic Analysis.

Result

Three main themes with subthemes were identified, namely 1) A teamwork approach, with subthemes a) facilitating surgery, b) performing actors 2) A patient safety issue, with subthemes a) risk patients, and b) procedural challenges; and 3) Lack of a systematics, with subthemes a) various approach to second time-out, and b) documentation and feed-back issues.

Conclusion

Appropriate and safe positioning during surgery is a common responsibility of all members of the surgical team. Even if surgeons assumingly are the main responsible, operating room nurses have a greater performing part of patient position. Different health professionals emphasized different risk patients, risk procedures, and perceived challenges. This suggests a correlation with distinct professional domains, tasks and competencies within the surgical context.



213 Clinical supervision in the Surgical Center: a relationship between experience, safety and professional development

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Background

The supervising nurse has a challenging role in a highly complex environment such as the surgical center, requiring self-knowledge and a combination of technical and interpersonal skills.

Objectives

To understand the evidence on the importance of effective clinical supervision practices in perioperative nursing.

Methodology: An integrative literature review was conducted using the EBSCOhost and PubMed databases. The Mesh terms were used: Preceptorship, nursing education, teaching methods, and perioperative nursing, restricted to the period 2019 to 2025. A total of 23 articles were found, with 5 remaining after reading the title and abstract.

Results: Innovative strategies are essential to address challenges in the clinical setting and improve the quality of perioperative care through continuous updating, strengthening leadership, and interprofessional collaboration. Effective clinical supervision facilitates learning, promotes critical reflection, and contributes to the development of new skills. The role of the clinical supervisor is crucial in guidance, mentoring and professional preparation. The connection between theory and practice strengthens nurses' training and performance in the perioperative setting.

Discussion: Clinical supervision helps students develop confidence and facilitate their transition to nursing. Students feel more confident performing procedures, increase their competency, and are able to apply theory to clinical practice, as well as develop critical thinking. Clinical experience, teaching skills, and the ability to establish interpersonal relationships are essential elements in selecting a clinical supervisor.

Conclusion

Clinical supervisors possess knowledge and skills in teaching, socialization, and assessment methods, contributing to changing and improving aspects of clinical teaching, thus enabling the successful transition of supervisees to professional practice. It is essential that perioperative nurses proactively contribute to the production of knowledge and research, contributing to the advancement of clinical supervision through their technical competence and knowledge in the perioperative context.

Keywords: Clinical supervision; Nursing education; Teaching methods; Perioperative nursing

226 Surgical Nursing Training in Robotic Surgery: Is Our Training Necessary?

Irene Rodríguez López, Desirée Adán Lledín

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Background

Laparoscopic surgery transformed surgical practice in the 1990s due to its minimally invasive approach and faster



recovery times, although it limited vision and precision. In the early 2000s, robotic surgery improved these limitations by offering 3D vision, articulated instruments, and tremor reduction, increasing safety and effectiveness. This advancement demands updated training for the surgical nursing role.

Objectives

The main objective is to evaluate the need for and effectiveness of specialized training in robotic surgery for perioperative nurses. Secondary objectives include analyzing the role of surgical nursing during robotic procedures and identifying specific competencies.

Methods

A quantitative analytical study was conducted, combining open and closed questions answered by 64 surgical nursing professionals in Madrid, Valencia, and Barcelona, along with a literature review including articles from 2019 to 2025.

Results

A high percentage of respondents have worked as scrub nurses in robotic surgery, demonstrating significant participation. However, the vast majority show a lack of specific technical knowledge about the robot models they work with, and therefore do not have an in-depth understanding of the equipment. Despite this, they agree that specific training is essential to fully understand procedures, equipment, and responsibilities, ensuring patient safety and reducing emotional burden.

Conclusion

Robotic surgery requires nurses who are well-trained and up to date. It is recommended to implement training programs, certification, and continuous practice to strengthen technical competence and staff autonomy, adapting to current technological challenges.

285 Debriefing value in simulated perioperative nursing practice

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Background

Simulation is a pedagogic strategy that include a hypothetic representation of clinical reality. Debriefing in simulated practice is a learning method that allows reflection on what happened in the simulation scenario and requires the active participation of students. The debriefing values are the psychosocial, cognitive and affective dimension, for their impact on the development of competences. Debriefing in simulated practice is a learning method that allows reflection on what happened in the simulation scenario and requires the active participation of students. The debriefing in simulation practice is a very important moment of learning because the students have the opportunity to develop their instrumental or non-instrumental skills. In this area it is fundamental recognize the value of the debriefing to incorporate them in centre of the pedagogical process.

Objectives

To evaluate the value of debriefing in the simulated practice of perioperative nursing during master degree.

Methods

Quantitative study. Data were collected using a questionnaire (Simulation Debriefing Assessment Scale). Participated 166 students of perioperative master degree, after the classes that used the simulation methodology. Data analysis was performed using SPSS® software according variables nature.

Results

The majority of participants were female (83.1%), with a mean age of 24 years. Participants presented high mean



values in the psychosocial value of debriefing (4.04), cognitive value (4.31) and affective value (4.32). There are differences with statistical significance in the value attributed to debriefing (psychosocial, affective and cognitive) depending on the course students attend.

Conclusion

The debriefing associated with the simulation is valued by the perioperative nursing in terms of affective, cognitive and psychosocial values.

428 Finnish nursing curricula alignment with the European Operating Room Nurses Association scrub and circulating competencies

Petra Nissinen

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Background

Perioperative nursing competence requirements are increasing due to technological intensity in the operating room and rising patient safety expectations. European Operating Room Nurses Association (EORNA) guidance provides a competence benchmark for scrub and circulating practice.

Objectives

To examine how scrub and circulating perioperative competencies are described in Finnish nursing curricula, to compare curricular content with the EORNA competence framework and to identify congruence, partial alignment and omissions.

Methods

Publicly available curriculum and course-unit documents from Finnish universities of applied sciences (n=18) were analysed using qualitative document analysis (total course units n=52) and deductive content analysis with an a priori coding matrix derived from the EORNA framework. Units of analysis included learning outcomes, content descriptions, teaching/assessment methods, and placement descriptions. Competence elements were coded as present, partially present, or absent.

Results

Perioperative content was identified in all institutions (n=18) across analysed course units (n=52). Aseptic practice (present n=32/52) and patient safety (present n=30/52) were most consistently addressed. Explicit circulating-role competence appeared more often (present n=15/52) than explicit scrub-role competence (present n=5/52). Instrumentation (present n=7/52) and sterile field management (present n=9/52) were unevenly represented, suggesting variable role-specific preparation across curricula.

Conclusion

Finnish nursing curricula provide perioperative foundations, but explicit scrub and circulating competencies align inconsistently with the EORNA framework, particularly for scrub-role elements. The findings support clearer role-based learning outcomes and structured intraoperative learning opportunities to improve comparability and patient safety preparedness. Moreover, the findings underscore the need for an internationally coherent alignment that delineates role-specific perioperative nursing competencies alongside the structural and pedagogical principles governing the preparation of operating room nurses. Such harmonized international guidance would enhance the quality, comparability, and patient-safety-related robustness of perioperative nursing education.



66 AN INNOVATIVE SUSTAINABILITY PROJECT: WASTE SEGREGATION AND RECYCLING IN THE SURGICAL UNIT OF HOSPITAL UNIVERSITARI MUTUA TERRASSA

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Background

Hospital Universitari Mútua Terrassa (HUMT) launched an innovative Project in its Surgical Unit (SU) aimed at reducing its carbón footprint, through responsible waste management practices.

Objectives

The main objective was to assess the impact of an intervention promoting the segregation of non-hazardous plastic and paper waste in the perioperative setting over a six-month period.

Secondary objectives included quantifying the volumen of segregated wasste and evaluating staff engagement and motivation towards sustainable practices.

Methods

A quasy-experimental pre-test/post-test study was conducted involving 350 professionals from the SU. A multidisciplinary team led the intervention, which included surveys, staff training sessions, visual awareness campaigns, and a comprehensive waste inventory. Designated containers for paper and plastic were installed in all operating theatres (n=17), recovery rooms (n=3), and procedure rooms (n=2).

The intervention was implemented in three consecutive phases:

1. Phase 1 (1 week-pilot): training on clean plastic and paper segregation in the pre-incision, without reciclyng.
2. Phase 2 (4 months): active recycling of pre-incision waste to consolidate segregation practices.
3. Phase 3 (1 month): full segregation and recycling waste throughout the entire surgical procedure.

Each phase was evaluated through checklists and surveys (Likert scale 0–10), requiring a minimum score of 7 to proceed. The final stage included waste weighing, compacting, and transport.

Results

A total of 267 responses were collected (267/350): 60% from nursing staff and assistants, 29% from physicians, and 11% from other roles. Staff showed strong support (average 9), project satisfaction (8.8), infrastructure adequacy (7.5), belief in segregation (9.3), and consensus that hospitals should implement such systems (10). Daily segregation reached 63 kg of paper and 55 kg of plastic, reducing the carbon footprint by 85%.

Conclusion

The Project was successfully implemented, achieving high levels of staff engagement and effective waste segregation pratices.



224 GreenCare: Perception and Behaviour of the Perioperative Team in Outpatient Surgery

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Background

Outpatient surgery currently accounts for around 70% of surgical activity in Portugal, known for its accessibility, quality, and cost-effectiveness. However, Operating Rooms (ORs) remain among the main sources of hospital waste and greenhouse gas emissions, significantly contributing to the carbon footprint of healthcare organisations. In this context, it is imperative to rethink care delivery and integrate sustainable practices into surgical activity. Transitioning to green surgery requires not only structural changes, but also the mobilisation of the perioperative team as active agents in the sector's decarbonisation.

Objectives

To understand the perceptions and behaviors of the perioperative team in reducing their environmental footprint, promoting a roadmap for eco-friendly practices in outpatient surgery.

Methods

A quantitative, descriptive, cross-sectional study was conducted with a non-probabilistic sample of 102 perioperative professionals. Data collection was performed using a questionnaire validated by 11 experts through the e-Delphi technique. The instrument covered topics such as sustainability knowledge, waste sorting, resource management, medication handling, low-carbon anaesthetic practices, and environmental motivation.

Results

Participants demonstrated high environmental awareness: 88% valued effective waste sorting, 75% supported replacing disposables with reusables, and 61% preferred low-impact anaesthetic techniques. Main barriers identified were the lack of training and institutional protocols. The GreenCare Checklist consolidates these practices into a clear and actionable format aligned with green surgery principles. The GreenCare Checklist was developed as a guiding tool for sustainable practices in the perioperative setting, currently in testing phase, with potential for future implementation across other ORs.

Conclusion

The perioperative team plays a critical role in decarbonising surgical care. While structural and educational gaps persist, the GreenCare Checklist emerges as a strategic tool to support internal audits, standardise sustainable actions, and integrate environmental criteria into daily practice. Outpatient surgery must evolve towards sustainability with the perioperative team leading the way.



349 Sustainability in the operating rooms of the University Hospital Center Rijeka, Croatia

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Background: Concept of sustainability in operating rooms encompasses the application of practices that reduce negative environmental impacts without compromising patient safety. Despite this, research on the implementation level of sustainable practices in Croatian operating rooms remains limited.

Objectives: To examine and describe sustainable practices applied in the operating rooms and to identify opportunities for improving environmentally responsible behavior.

Methods: This research was descriptive. Surgical clinic employs two head nurses in the operating rooms, both of whom participated in the study. Data was collected using a standardized form based on the “Greening the OR Checklist,” which was adapted and translated for the needs of the Croatian context. The questionnaire contains four main domains: organizational development, waste reduction and prevention in the operating room, environmentally preferable purchasing in the operating room, and use of materials and built environment.

Results: Fourteen items (30.4%) from the checklist have been in place for over a year, primarily within the domain of waste reduction and prevention. Currently, nurses are actively working on implementing items in the environmentally preferable purchasing domain. The organizational development domain has not yet been widely recognized in Croatia; however, the checklist is raising awareness among nurses about the importance of forming green teams and educating staff on the benefits of sustainable practices. This increased awareness has the potential to support the implementation of all checklist items over time.

Conclusion: This was a single-center study, providing an initial insight into the implementation of environmentally sustainable practices among all operating room nurses. In the future, the study will be extended to operating rooms across Croatia. The checklist used in this study can serve as a practical orientation tool for all operating room nurses. It offers a structured approach to support the development of greener operating rooms and the promotion of environmentally responsible healthcare practices.

394 Evaluation of waste generation and disposal in Operating Rooms

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Background

In hospitals, the Operating Rooms (OR) are one of the sectors that produces the most healthcare waste, and for waste management to be optimized, both generation and disposal need to be conscious and accurate. It is necessary to understand the difficulties and barriers related to the generation, segregation, and disposal of waste.



Objectives

To observe the process of waste generation and disposal in OR, considering the assembling of the OR, the surgical procedure execution, and the period following the patients' exit from the OR.

Methods

A quantitative, observational, and cross-sectional study was done, which included a sample of 50 surgeries observed during a period of six months. Data collection encompassed the type and duration of procedures, the number of staff in the OR, as well as data related to waste generation, including the amount of adequate and inadequate disposals made per unit in each type of container. Information regarding the physical structure and organization of the OR, including the arrangement and availability of waste containers, was also recorded.

Results

The study showed that waste generation and disposal vary according to the stage of the surgical procedure, suggesting that factors such as specific occupational assignments and the physical arrangement of the collectors directly influence compliance with adequate disposal. Furthermore, more than half of the disposals made in infectious waste containers were carried out inadequately because they could have been discarded as ordinary waste and even recycled.

Conclusion

The segregation of healthcare waste represents a significant challenge in the OR, given the barriers observed in its segregation. The findings highlight the need for targeted interventions that encompass educational initiatives, reorganization of internal workflow processes, in order to reduce waste generation and optimize the segregation of healthcare waste in the OR, which is one of the largest generators of waste within hospitals.



12:45 – 13:45

Koločep

ePoster02 | ePoster Session 02

Edisa Korajac

412 Sterile Barrier Association's Hospital Survey: Managing Sterile Packaging Waste

Nina K. Tillaeus

Sterile Barrier Association, Lahti, Finland

Background

Sustainability is increasingly vital in the sterile barrier system (SBS) industry, prompting the Sterile Barrier Association to launch the Managing Sterile Packaging Waste Survey. This initiative, in collaboration with EORNA and WFHSS, aims to gather global insights from healthcare professionals on the use, disposal, sorting, and recycling of SBS materials. The survey's rationale is to understand current practices and challenges in hospitals worldwide, with a focus on environmental responsibility and patient safety.

Objectives

- Capture hands-on experiences in managing sterile packaging waste streams.
- Identify best practices for separating and recycling non-hazardous hospital packaging, ensuring safety for both patients and staff.
- Support SBA's global initiative by fostering collaboration and knowledge sharing.
- Influence future guidance, training, and resources for healthcare professionals.
- Shape the future of hospital sustainability and patient safety, amplifying the voices of professionals worldwide.

Conclusion

Early survey results reveal that over half of respondents work in public institutions, with most employed at large hospitals (over 200 beds and numerous operating rooms). Waste management reporting is primarily by weight. About half of the institutions have a designated "Green Champion" for sustainability. Disposal methods vary, including landfill, incineration, recycling, and autoclave treatments. Dedicated waste streams for different packaging materials are present in some facilities, but not all. The estimated percentage of sterile packaging waste ranges widely, with some facilities reporting over 30%. Regulatory approaches differ, with some facing strict requirements and others operating under general guidelines. Compliance is ensured through training, audits, and dedicated teams. Facilities express strong commitment to sustainability, with initiatives like recycling, waste segregation, and sustainable procurement. Key challenges include limited resources, regulatory constraints, and infrastructure gaps, while



opportunities lay in staff education and implementing recycling programs. The survey highlights the importance of ongoing support, training, and collaboration to advance sustainable waste management in healthcare. Full report when available: sterilebarrier.org

259 The Relationship Between Biological Rhythm, Chronotype, Fatigue, and Quality of Life in Operating Room Nurses

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Background

[Operating room nurses face challenges such as shift work and limited natural light exposure, which can disrupt circadian rhythms and result in misalignment with their chronotype. These factors may contribute to fatigue, sleep disturbances, and decreased quality of life.]

Objectives

[This study aimed to explore the relationship between biological rhythm and chronotype characteristics, fatigue levels, and quality of life among operating room nurses.]

Methods

[A descriptive and correlational study was conducted from June to December 2025 with 109 operating room nurses who had been actively working in the field for at least one year. Data collection tools included the Descriptive Information Form, Biological Rhythm Interview of Assessment, Morningness-Eveningness Questionnaire, Chalder Fatigue Scale, and EUROHIS WHOQOL-8.Tr. Statistical analyses were performed using SPSS 25.0, employing descriptive statistics, parametric tests, and Pearson correlation analysis.]

Results

[Preliminary analysis based on 84 complete responses revealed a mean participant age of 36.21 ± 7.12 years and an average of 13.70 ± 7.57 years of operating room experience. Mean sleep duration was 6.79 ± 1.47 hours, and daily caffeine intake averaged 3.69 ± 1.55 cups. Biological rhythm scores averaged 45.90 ± 6.12 ; fatigue 14.33 ± 3.21 ; quality of life 3.13 ± 0.35 ; and chronotype 52.54 ± 5.45 (indicating an intermediate type). Biological rhythm irregularity correlated positively with fatigue ($r = 0.266$; $p = 0.015$), while regular exercise was negatively associated with fatigue ($r = -0.256$; $p = 0.019$). Caffeine intake was positively correlated with quality of life ($r = 0.276$; $p = 0.011$). Having children was negatively associated with caffeine consumption and sleep duration.]

Conclusion

[Circadian rhythm disruptions were associated with increased fatigue. Lifestyle factors such as exercise and caffeine consumption also influenced fatigue and quality of life. These findings support the need for shift planning based on individual chronobiological traits and promotion of healthy lifestyle habits.]



410 Social Passport for New OR Nurses: A Novel Model for Social Integration Behind Closed Doors

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Background

Operating rooms (ORs) are highly demanding, closed clinical environments where new nurses often experience social isolation, emotional overload, and hesitation to ask questions. These challenges negatively affect confidence, learning, and long-term retention. Literature indicates that 20–30% of new nurses leave their position within two years, largely due to insufficient social integration and a lack of structured support. In response, our OR department designed an innovative model to strengthen belonging, emotional well-being, and team connection.

Objectives

To improve social integration, reduce early turnover, and enhance both the professional and emotional support provided to new OR nurses through a structured social mentoring framework.

Methods

A multi-layered onboarding intervention was implemented. A designated Social Mentor was appointed to provide consistent emotional and social guidance. Additionally, the department created a “Social Passport”—a passport-style booklet containing light, interpersonal tasks (such as guided introductions, team interactions, and shared breaks). Each completed task earned a stamp, turning the onboarding period into an engaging social process. After six months, a satisfaction survey was administered to all new staff members (N=6).

Results

A 100% response rate was achieved. All participants reported that the Social Passport significantly improved their integration into the OR team. All nurses described the Social Mentor as accessible, supportive, and essential during moments of difficulty. They reported increased confidence, stronger relationships, and reduced stress during their transition. Senior staff noted improved teamwork, a more positive departmental atmosphere, and renewed professional pride.

Conclusion

The Social Passport initiative effectively enhances social integration and emotional support for new OR nurses. By transforming a stressful entry process into a positive and empowering experience, the model contributes to improved retention and strengthens the sense of belonging within the OR environment. This framework can be adapted by other departments seeking structured, human-centered onboarding solutions.

449 Exposure to disruptive behavior is associated with turnover intentions and motivates actual turnover

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Background

Disruptive intraoperative behavior harms patients, clinicians, and institutions. Turnover intentions (a desire to leave one's current position) foreshadows turnover. Identifying the causes of turnover is critical to mitigate clinician shortages. While previous studies have linked experiencing discrimination and violence to turnover, the impact of disruptive behavior that is witnessed or less egregious is understudied.

Objectives

To examine whether different types of exposure predict turnover intentions among operating room clinicians.

Methods

Surgeons, nurses and perfusionists were surveyed across Canada, New Zealand, and the British Isles through professional medical associations. Data was collected online using validated scales measuring turnover intentions, five types of exposure (i.e., personal, ingroup, outgroup, patient, and undirected), and covariates including socio-demographics, personality factors, and safety attitudes. The association between exposure and turnover intentions was examined using mixed effects models with medical association as a random effect. To test whether witnessed exposure improved model fit, we compared nested models (personal exposure alone vs all 5 types included) using information criteria and likelihood ratio tests. Additionally, the cost of turnover due to exposure was estimated using profession-specific costs associated with one turnover event.

Results

362 responses were analyzed. Personal exposure to disruptive behavior was associated with turnover intentions after adjusting for covariates ($\beta=0.06$, $p<0.001$). Adding the remaining exposure types trended toward worsening model fit (AIC 2723 vs 2726, $X^2=4.99$, $p=0.289$), with personal exposure remaining significant ($\beta=0.06$, $p<0.001$), and the only form of witnessed exposure independently predictive was undirected ($\beta=0.027$, $p=0.041$). 67/362 (18.5%, 95%CI=14.9-22.8%) clinicians reported leaving a position because of disruptive behavior. The estimated cost of turnover due to disruptive behavior in this sample was ~\$7,600,000 USD.

Conclusion

Personal exposure showed the most robust association with turnover intentions. Nearly one in five clinicians reported leaving a position due to disruptive behavior, which is associated with significant financial burden.

388 The Impact of Leadership-Based Interventions Applied During the Perioperative Period on Team Performance and Patient Outcomes: A Systematic Review

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Background

Coordination and effective leadership practices among operating room teams during the perioperative period are critical to patient safety and quality of care. While the literature indicates that leadership-based interventions improve team performance, strengthen communication, and improve patient outcomes, there is a need for a systematic review of studies in this area.

Objectives

The aim of this systematic review is to comprehensively present the current knowledge by compiling the findings of randomized controlled trials that examine the effects of leadership-based interventions implemented during the perioperative period on team performance and patient outcomes.



Method

The study was conducted in accordance with PRISMA guidelines, and PubMed, Scopus, Web of Science, Google Scholar, Science Direct, EBSCOhost, Cochrane Library, Google Scholar, and CINAHL databases were searched for relevant studies published between 2015 and 2025. The keywords “perioperative leadership, team performance, patient safety, and surgical management” were used, and no restrictions were imposed on the study design. The search yielded 2,231 records.

Findings

As a result of the search, 12 publications were included in the systematic review. The studies reviewed showed that leadership-based interventions had positive effects on team communication, coordination, and collaboration. Additionally, improvements in patient outcomes, such as a decrease in surgical complication rates and an increase in patient satisfaction, were reported. However, some studies noted methodological differences in the effectiveness of the interventions and the impact of the duration of implementation.

Conclusion

The findings of the systematic review support the potential of leadership-based interventions to improve team performance and patient outcomes during the perioperative period. The widespread implementation of leadership training in clinical practice is important for improving the quality of patient care in operating room processes. Future studies should focus on developing standard intervention protocols and monitoring long-term effects.

447 Leveraging errors for learning in the operating theatres

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Background Errors in the operating theatres are often viewed solely as threats to workflow efficiency, leading to a “blame culture.” However, errors are an intrinsic feature of human nature. To improve safety, organisations must shift their perspective, viewing errors not as failures, but as unconventional strategic resources for organisational learning and staff development.

Objectives This study aimed to investigate how preventable workplace errors can be effectively captured and leveraged into valuable learning opportunities. Specifically, it sought to understand aftermath of errors from healthcare professionals’ perspective and how these outcomes can be fed back into the system to prevent reoccurrence.

Methods Adopting an interpretivist stance, this study applied the Enhanced Critical Incident Technique within the operating theatre department at (a general hospital in Europe). Data was collected to capture the experiences of theatre nurses, surgeons, and anaesthetists through 21 semi-structured qualitative interviews and 16 diary entries.

Findings revealed that learning is obstructed by a culture clinging to the status quo, distinct conflicts between staff and management, and obstructing behaviours by senior nurses, including microaggressions and favouritism. Furthermore, the reporting system was deemed non-functional due to ambiguity regarding reportable incidents and a distinct absence of feedback. Consequently, errors remain concealed or are discussed only within trusted “silos”, such as, among specific shift members or same-specialty peers, limiting learning to small groups. Despite inadequate ongoing training, staff expressed a strong willingness to leverage errors for prevention if these relational and systemic barriers are resolved.

Conclusion The tension between patient safety and operational efficiency currently stifles the psychological safety required for reporting. Interestingly, all the identified barriers may be considered resolvable. Operating theatres must



move beyond the "blame culture" to foster an environment where errors are transparently shared, discussed, transforming individual mistakes into systemic learning opportunities.

10 Title: Investigated postoperative symptoms of patients by application of local smoke evacuator during laparoscopic surgery: A systemic review

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Background

Postoperative symptoms often affect patients' recovery, and surgical smoke if not properly managed has been identified as a potential contributor to these symptoms. Used of smoke evacuators during surgery may help reduce such adverse effects.

Objectives

Aim of this study is to evaluate the clinical impact of local smoke evacuator systems, with a specific focus on their effects on postoperative symptoms.

Methods

A systematic literature search was conducted across PubMed, CINAHL, and the Cochrane Library for studies published between January 2015 and January 2025. Inclusion criteria were full article, randomized controlled trials (RCTs) that examined the use of surgical smoke evacuation systems during laparoscopic procedures and their impact on postoperative patient outcomes. Articles were performed independently by one reviewer, and assessed by Oxford CEBM.

Results

Six studies met the inclusion criteria, encompassing 773 patients. Three studies reported a statistically significant reduction in the incidence and severity of postoperative pain and shoulder pain when local smoke evacuators were utilized. Two studies demonstrated lower rates of postoperative subcutaneous emphysema in groups where smoke evacuation systems were used. In addition, three studies noted higher surgeon satisfaction regarding the clarity of the operative field with the application of local smoke evacuation systems. One study reported a reduction in average hospital stay and maximum end-tidal CO₂ levels in the evacuation group; however, it also noted an increase in hospitalization costs associated with the use of smoke evacuators.

Conclusion

Used of local smoke evacuation systems during surgery appears to offer several clinical benefits. These include a significant reduction in postoperative and shoulder pain, decreased incidence of subcutaneous emphysema, improved surgeon satisfaction due to enhanced clarity of the operative field, shorter hospital stays and lower maximum end-tidal CO₂ levels. Overall, the evidence suggests that smoke evacuation systems might enhance surgical outcomes, albeit with potential cost implications.



460 Advantages and Limitations of RFID Used in Surgical Instruments: A Narrative Literature Review

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Background

Traceability of surgical instruments is a central component of patient safety, risk management, quality assurance and regulatory compliance in perioperative and sterile processing workflows. Radiofrequency identification (RFID) technology has been explored to enhance real-time instrument tracking throughout the reprocessing cycle. However, adoption remains inconsistent across healthcare systems, reflecting uncertainty regarding added value, technical feasibility and cost-effectiveness.

Objective

To critically analyse the benefits and limitations of RFID use in surgical instruments based on current scientific evidence and international guidance.

Methods

A narrative literature review was conducted using PubMed, CINAHL and EBSCOhost databases. Articles published between 2015 and 2025 were analysed, focusing on benefits, technical and organisational limitations, costs, and implications for patient safety and process efficiency.

Results

The literature indicates that RFID offers relevant advantages but also significant challenges. A key benefit is the reduction of retained surgical items, particularly when combined with manual counting protocols, contributing to improved patient safety (Peng et al., 2023; Kusuda et al., 2024). RFID improves operational efficiency by enabling faster instrument identification compared to barcode systems, reducing workload and dependence on operator proficiency. Individualised tracking supports monitoring of usage, reprocessing cycles and maintenance history, facilitating predictive maintenance and procurement planning (Yoshikawa et al., 2019). Intraoperative RFID use has been associated with surgical tray optimisation, decreasing unnecessary instruments and reprocessing demands (Olivere et al., 2021). When appropriate cleaning protocols are followed, RFID does not appear to increase corrosion risk (Yamashita et al., 2019). Limitations include high initial implementation costs, potential electromagnetic interference, reduced detection accuracy in high-density environments and the need to adapt workflows.

Conclusion

RFID enhances traceability and efficiency in surgical instrument management but should be considered a complementary rather than standalone solution. Implementation requires assessment of technical, economic and organisational factors. Further cost-effectiveness and implementation studies are needed to support wider perioperative adoption.



315 Attitudes of Operating Room Teams Towards Black Box Technology: Digital Traces in Surgical Processes

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Background

[Black box technology is a digital monitoring system that enhances surgical safety by synchronizing video, audio, environmental, and patient data in the operating room. It identifies errors and distractions and provides feedback on team performance. Its effective and sustainable use depends on both technical competence and the attitudes of healthcare professionals.]

Objectives

[This study aims to identify potential barriers and facilitators to implementing black box technology in the operating room from the perspective of team members.]

Methods

[This descriptive, cross-sectional study will be conducted at three hospitals between June and December 2025, and the sample will consist of 160 healthcare professionals who have worked in intraoperative processes for at least one year. Data will be collected using a descriptive form and a 27-item, 5-point likert-type attitude survey. Results will be analyzed using SPSS 25.0 using numerical, percentage, and Pearson correlation analyses.]

Results

[According to preliminary results (n=64), 62.5% of participants were female, 68.8% were operating room nurses, 26.6% were surgeons, and 60.9% worked in general surgery. All participants stated that they had not heard of black box technology before. The majority believed the system would support patient safety (65.6%), operating room safety (84.4%), and objective assessment of surgical errors (100%). They also stated that it would be easy to use and could improve communication and efficiency within the team. However, 64% reported that it could increase stress levels and 51.6% expressed concerns about patient privacy. All participants emphasized the need for patient consent and the need for anonymity of data. Fifty percent of participants wanted to receive feedback based on black box data, and all participants stated that the system would contribute to performance evaluation. Data collection is ongoing.]

Conclusion

[Participants' attitudes toward black boxes are generally positive, acknowledging their positive impact in improving patient and operating room safety, preventing errors, ensuring objective evaluation of errors, and strengthening team communication. However, supportive regulations addressing ethical concerns and stress factors are needed before using black boxes.]



415 Multicultural blended learning and simulation in nursing education: perceived effects on clinical decision-making and perioperative-related competencies

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Background

Nursing practice in complex environments, such as perioperative settings, requires sound clinical decision-making and effective communication within multidisciplinary and multicultural teams. Blended Intensive Programmes (BIPs), developed under the Erasmus+ framework, integrate international collaboration with experiential and simulation-based learning to support these competencies.

Objectives

To evaluate nursing students' self-perceived development of clinical decision-making and related professional competencies following participation in a multicultural Blended Intensive Programme, including learning activities linked to perioperative-relevant clinical themes.

Methods

A mixed-methods study was conducted with undergraduate nursing students (n = 35) from Portugal, Spain, Italy, and Finland. The BIP comprised two online components (November 2024; March 2025) and one face-to-face intensive week in Portugal (April 2025). Educational activities included simulation-based learning, team-based clinical reasoning exercises, and intercultural collaboration. Some learning scenarios addressed patient safety, communication, and monitoring in situations analogous to perioperative care. Data were collected through an anonymous online questionnaire with Likert-scale items and open-ended questions. Quantitative data were analysed descriptively using SPSS v.29, and qualitative data underwent thematic content analysis. Ethical principles were respected.

Results:

Overall satisfaction was high, with 77% of participants rating the programme as “very good”. Simulation-based activities were identified as the most impactful learning component (46%). Highest-rated competencies included adaptability in multicultural environments (mean 4.40), teamwork (4.29), and communication (4.26). Clinical decision-making achieved a mean score of 3.83. Qualitative data highlighted increased awareness of communication, empathy, and shared decision-making in complex clinical contexts.

Conclusion:

Multicultural blended programmes integrating simulation positively influence nursing students' perceived clinical decision-making and transversal competencies, supporting preparation for complex practice contexts, including perioperative care.



ePoster | ePoster Viewing

18 A pre-experimental study of preoperative nursing consultation: from theory to practice

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Background

A preoperative nursing consultation is a complex and autonomous intervention that enables clients to feel an integral part of the treatment process, prioritizing their individual needs and providing guidance in a structured and systematized way.

Objectives

To assess the impact of a preoperative nursing consultation on the level of anxiety, level of information and satisfaction of clients undergoing scheduled general surgery.

Methods

A pre-experimental study with pre-post design was carried out with 37 clients in the preoperative period of scheduled general surgery. Three evaluation moments were considered: pre-consultation, post-consultation and admission to hospital. The structure of the preoperative nursing consultation was previously validated by a panel of experts and was implemented once a week. The Spielberger trait-state anxiety inventory, the preoperative information scale and a satisfaction assessment scale were used to collect data. The data was analyzed using SPSS software, version 30. The study was approved by the institutional ethics committee.

Results

After the intervention, there was an improvement in the level of preoperative information ($p < 0.001$), comparing the moment of admission to hospital and the pre-consultation. Regarding the level of anxiety, there was a significant decrease in state-anxiety after the consultation. Overall, 89% of clients rated the consultation as very good, with the majority (92%) agreeing that the consultation was important, which demonstrates the value placed at this moment of interaction with the nursing team.

Conclusion

The preoperative nursing consultation implemented had a positive impact on the level of anxiety, information and satisfaction of the clients. This intervention can be an important strategy to implement in any surgical context, regardless of the surgical specialty, helping to highlight the autonomous component of nurses' professional action and their social recognition among the population. It is thus a privileged opportunity for structured communication of relevant preoperative information.



21 Oncoplastic Breast Surgery or Wide Local Excision? – does it matter when the timing of Adjuvant Therapy is concerned

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Background

This single centre research project investigated whether oncoplastic breast surgery (OBS) causes delays to the start of adjuvant breast cancer treatment as compared to non-oncoplastic wide local excision (WLE). As the existing literature revealed Inconsistent findings, a local study was needed to provide patients with informed options for their surgical approach.

Objectives

To determine the difference in time to initiation of adjuvant treatment between oncoplastic breast operations and non-oncoplastic WLE.

To compare the rate of surgical site infections (SSIs) between oncoplastic breast operations and non-oncoplastic WLE.

To examine the number of patients requiring re-excision of surgical margins in the two groups and identify any difference.

Methods

Following ethical committee approval, retrospective quantitative data from 57 women operated on for breast cancer, who met the study's inclusion criteria, were analysed - 27 in group A (OBS) and 30 in group B (non-oncoplastic WLE). The rates of surgical site infection (SSI), re-excision of margins, and time to the start of adjuvant treatment were calculated, using the Statistical Package for the Social Sciences (SPSS).

Results

The difference in time to the start of adjuvant treatment, between these groups (81.4 days, group A vs 77.43, group B) was not statistically significant ($p=0.509$). Only 1 patient, (in Group A) in this study developed an SSI, but six patients required re-excision of surgical margins (1 in A, 5 in B). This trend is not statistically significant, because of small numbers.

Conclusion

1. In the hands of this group of surgeons, oncoplastic breast surgery did not significantly delay the initiation of adjuvant treatment.
2. If these results are to be acted upon more generally, this study needs to be repeated prospectively, with larger numbers and preferably with other teams of surgeons.
3. If confirmed, these findings could mean major benefits for the wider client group.



49 Enhancing Surgical Efficiency and the Meaningfulness of Operating Room Nurses' Work Through Task Reorganization at Coxa Hospital for Joint Replacement

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Background

Operating room (OR) efficiency is measured by minimizing non-operative time (NOT), including delays, turnover time, and procedural waste. By measuring and reporting them, and by encouraging staff to improve their practices, OR efficiency can be improved.

Objectives

We hypothesized that redesigning the process that occurs between operations would lead to a decrease in non-operative time (NOT). OR nurses were encouraged to take an active role in developing their work.

Main Findings

In the new model, the roles of the nurses rotate systematically throughout the workday. The nurse acting as the assistant is the first to be released from the surgery. He/she returns any unused implants to storage and collects new ones for the next surgery, in which he/she will act as the scrub nurse. The scrub nurse is the second to be released, taking the used instruments to the sterilization unit and then becoming the circulating nurse for the next procedure. The circulating nurse is the last to be released, participating in the patient's X-ray imaging and then becoming the assistant in the next surgery. The scrub nurse and assistant prepare the sterile tables, while the circulating nurse prepares the patient.

The ward domestics sanitize and prepare the OR, and the instrument technician collects the modular arthroplasty instruments outside the room. The induction nurse and anesthesiologist bring the patient into the OR.

Conclusion

The model has significantly improved efficiency: in primary knee replacements, turnover time has dropped from 64 to 49 minutes, operating room time from 145 to 77 minutes, and procedure duration from 95 to 47 minutes over ten years. These gains are due to both team efficiency and development of surgical technique.

Surgical volume has increased from 3 to 5 operations per OR per day, while patient satisfaction (NPS 98) and staff satisfaction (eNPS 65) remain high.

109 Postoperative Mobilization Experiences of Colorectal Surgery Patients: A Qualitative Study

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Background

Early mobilization after colorectal cancer surgery is a key component of Enhanced Recovery After Surgery (ERAS)



protocols. Despite its importance, qualitative insights into patient experiences with mobilization remain limited in Türkiye.

Objectives

To explore the early postoperative mobilization experiences of patients undergoing colorectal cancer surgery.

Methods

The study was conducted between October 2024 and April 2025 in the General Surgery Clinic of Bursa Uludağ University Hospital. Based on a phenomenological design, in-depth, semi-structured face-to-face interviews were conducted with 21 purposively selected patients. Data were collected via audio recordings and analyzed using thematic analysis.

Results

Five main themes were identified:

(1) Pain, Nausea, and Fear: Postoperative Pain, dizziness, nausea, and fear of wound dehiscence acted as barriers to mobilization.

(2) Lack of Preoperative Education: Participants reported a lack of written or verbal information regarding mobilization prior to surgery.

(3) Support from Nurses and Family: Nurses played a guiding role, while family members provided physical support.

(4) Environmental and Equipment-Related Barriers: Devices such as IV poles, urinary catheters, drains, and nasogastric tubes restricted mobility.

(5) Personal Motivation and Goal Setting: Some patients independently set walking goals, reporting benefits such as relief from gas and reduced pain.

Conclusion

Patients' early mobilization experiences are shaped by a combination of physical, emotional, environmental, and educational factors. Implementing nurse-led, structured mobilization protocols and incorporating individualized goal-setting strategies may enhance recovery outcomes in colorectal surgery patients.

111 Analysis of patients experience with intravitreal therapy at the Clinical hospital Sveti Duh in Zagreb

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Background

The main goal of this study was to test the satisfaction of patients treated with recurring intravitreal applications of medicine in the eye.

Objectives

The particular objectives of this research were: test the influence of demographic factors on patients' satisfaction and to examine patients' frequency of coming to intravitreal applications of medicine in the eye.

Methods: The study involved 150 subjects who come to the Day Surgery of the KB "Sveti Duh" Day Hospital for treatment with intravitreal drug applications. For the purpose of data collection, an anonymous survey questionnaire was used.



Results: 44 (29%) respondents live 5 to 10 km away from the Hospital, and 22 (15%) live more than 25 km away from the Hospital. The median time which takes them to get to the Hospital is 30 minutes (interquartile range 20 to 60 minutes) ranging from a minimum of 5 to a maximum of 240 minutes (4 hours). It has been observed that the older the respondents are, the less satisfied they are with the length of time doctors and nurses spend with them (Rho = -0.238). If the assessment of their physical health is higher, they show less agreement with the contention they are satisfied with the interest shown by doctors in their treatment (Rho = -0.233) and less agreement with the contention that examinations are exercised regularly (Rho = -0.182).

Conclusion

The research has shown that 86% of respondents were satisfied with the current effect of intravitreal therapy in the eye and that the number of intravitreal injections in the time span of one year ranged from two to a maximum of 24 injections in the eye. The distance from the place of residence to the Hospital proved to be the key factor in satisfaction evaluation.

Key words: demographic factors, intravitreal injections, time

112 THE EFFECT OF BACK MASSAGE ON PATIENTS' PAIN, SLEEP QUALITY AND SERUM CORTISOL LEVELS AFTER OPEN CARDIOVASCULAR SURGERY: A RANDOMIZED CONTROL RESEARCH

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Background: Sleep disturbance is a significant problem after heart surgery. Massage increases tissue circulation and reduces tension by manipulating tissues and body systems manually or mechanically, and is a widely used method in patient care. Studies have shown that massage applied after heart surgery improves sleep quality and reduces pain intensity.

Objectives: This study aimed to evaluate the effects of back massage on pain levels, blood cortisol levels, and sleep quality in patients undergoing open heart surgery.

Methods: This study was conducted using a randomized controlled design type. The study was carried out between August 2023 and October 2024 in the Cardiovascular Surgery Intensive Care Unit of a university hospital. Patients who met the inclusion criteria were divided into experimental and control groups. The experimental group received back massage three times on the first postoperative day, in addition to standard care. Richard-Campbell Sleep Scale (RCSQ) scores, sleep duration (measured by smartwatch), and morning serum cortisol and glucose levels were evaluated on postoperative days 1 and 2. pain and relaxation levels were assessed before and after the massage. Parametric tests were applied to analyze the data.

Results: Seventy-six patients participated, with 38 in each group. The experimental group showed a significant reduction in pain levels and improvements in sleep quality and duration. Although there was no difference in the use of paracetamol, NSAIDs, and opioids between the groups, the experimental group ceased using these drugs more rapidly. Serum cortisol and glucose levels were similar in both groups.



Conclusion: Back massage after open heart surgery proved effective for pain management and sleep quality improvement. The findings suggest that incorporating back massage into postoperative care plans is a safe, effective, and cost-efficient practice that supports patient recovery.

Clinical trials ID: NCT06529471

Keywords: cardiac surgery, massage, sleep, pain, serum cortisol

116 Perioperative Nursing Management in Pediatric Tracheal Resection

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Background

Tracheal resections in pediatric patients are rare and technically demanding procedures, especially when neurological comorbidities are present. In such cases, the perioperative nursing team plays a key role in ensuring the safety and effectiveness of the intervention, particularly in the management of the surgical field and airway.

A 9-year-old female patient with autism spectrum disorder, intellectual disability, structural epilepsy and cerebral malformation was referred for surgical treatment of severe subglottic stenosis. The condition followed an episode of respiratory distress and emergency intubation, complicated by the subsequent need for tracheostomy.

After a failed attempt at endoscopic dilation (grade IV stenosis), the patient underwent tracheal resection. Perioperative nursing care involved the preparation of the surgical field, mobilization of the laryngeal structures, and management of airway access in close coordination with the surgical and anesthesiology teams. Critical phases included bronchoscopy-guided intubation, tracheal dissection, termino-terminal anastomosis, and application of fibrin glue. Drainage and postoperative transfer to the pediatric intensive care unit were also coordinated by the perioperative team.

Objectives

- To describe the perioperative nursing management in a pediatric tracheal resection performed on a patient with severe comorbidities and grade IV stenosis
- To highlight the collaborative approach between ENT surgeons, anesthesiologist and nurses in planning and executing a high-risk tracheal procedure
- To outline the preparation, surgical set up and intraoperative strategies used by the OR nursing team to support safe airway access and management

Conclusion

This case highlights the vital role of the scrub nurse in complex pediatric airway surgery. Adequate knowledge of surgical techniques, proactive communication and interdisciplinary collaboration are essential to ensuring optimal outcomes and patient safety in high-risk airway procedures.



118 Tailoring the Perioperative Care process to the Needs of Children on the Autism Spectrum

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Background

In recent years, there has been a significant increase in the number of children diagnosed with autism spectrum disorder (ASD). Approximately 1 in 31 (3.2%) children aged 8 have been diagnosed with ASD, with a ratio of four boys to every girl. Despite the increasing prevalence, awareness and knowledge among healthcare professionals are inadequate. Children with ASD often experience difficulties with sensory regulation, communication and adaptation to change, which poses significant challenges for the inpatient and operating room care team and their parents.

Objectives

By adapting the preoperative process to the unique needs of the child with autism undergoing surgery and his parents, we will achieve the following goals:

- Reducing anxiety and stress in the child and his parents through customized and sensitive pre-operative preparation by a multidisciplinary team and through training and information tools tailored to them.
- Creating a safe and comfortable sensory and emotional environment, that is tailored to the child's needs throughout the perioperative process.
- Raising the awareness of the operating room staff and training them for the unique needs of these children and their parents.
- Strengthening the child and his parents' sense of control and partnership in the process while listening, supporting, and finding joint solutions.

Conclusion

Adapting the perioperative care process for children with autism and their parents is a vital need and an opportunity to improve the quality of child-centered care. By providing preoperative preparation tailored to the unique needs of the child and their parents, adapting the environment, and strengthening their sense of security and control, we will enable them to undergo a safe, respectful, and supportive surgical process. Awareness and targeted training of health professionals must continue to be strengthened to support the development of comprehensive, high-quality, and personalized care for this growing population.

123 Perioperative Thirstiness, Fasting and Anxiety in Patients Undergoing Colorectal Cancer Surgery: A Cross-Sectional Study

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Background

There are many studies in the literature investigating thirst and the factors affecting it, but no study has been found in which the factors affecting thirst, fasting and anxiety in the perioperative period were investigated together.

Objectives

This study was conducted as a methodological cross-sectional study to determine the factors affecting perioperative thirst, fasting and anxiety in patients undergoing colorectal surgery.

Methods

A Cross-Sectional Study. Physiologic, psychological and environment- related data were collected for 46 patients from colorectal surgery clinic of a hospital from June 2024– December 2024 through a questionnaires. For the purpose of multiple comparisons of repeated measures, the Bonferroni-adjusted Wilcoxon signed-rank test was utilized. The Generalized Estimating Equation (GEE) model with gamma distribution and log-link function was used to determine the associations between the outcome variable and the predictor variables, taking into account the changing time.

Results

Using GEE enabled us to examine the changes of thirstiness VAS intensity over time in a longitudinal framework and evaluate the effects of different factors on these changes. Under the influence of time; Glucose and K parameters were effective on the change in thirst VAS intensity. Higher thirst VAS intensity was associated with higher glucose (RR: 1.007) and lower K (RR: 0.903, $p < 0.001$ and $p = 0.014$ respectively). The GEE model, devised to investigate the association between TDS and risk factors that may influence TDS, revealed that age (RR: 1.043), gender (RR: 2.060), and glucose (RR: 0.997) were identified as risk factors.

Conclusion

In this study, we determined that perioperative thirst, fasting and anxiety levels of patients undergoing colorectal cancer surgery were affected by psychological, environmental and physiological factors. Blood glucose and K+ levels were found to be predictive factors for thirst, female gender, defecation time and time without food were found to be predictive factors for fasting.

151 Air Static Waffle Pad VS Aquari Mattress System

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Background

Stanford Healthcare is committed to reduce pressure injuries associated with cardiac surgery patients. Current Evidence based practice is to use an orthosatic waffle cushion placed under the coccyx of all cardiac surgical patients during their procedure. The leaf patient monitoring system is used in our ICU to create turn protocols, confirm turn quality, and reduce pressure injury incidence. Despite these practices, some of our cardiac surgical ICU patients still develop pressure injuries after their procedures, highlighting the need for enhanced preventive approaches to achieve a hospital environment free of Hospital Acquired Pressure Injuries.

Objectives

Comparison of the Aquari Mattress vs the orthosatic cushion. We used the Aquari mattress for 196 cardiac surgeries. At the same time, we continued the use of the orthosatic air cushion for approximately the same amount of patients. Education was provided to staff about positioning patients and audits were performed during patient care by fellow staff members. Real time feedback was given.



Conclusion

Staff feedback for the Aquari mattress included; did not like another power cord on the floor, the beeping the machine makes while mattress is in use, concern about the firmness on the edges of the mattress, and often it was forgotten to be reconnected during turn overs, increasing a potential for injury from patient resting on the bed frame. Staff liked the potential the mattress has for preventing patient pressure injuries and eliminating a step in preparing the OR table.

Final conclusion for the Aquari mattress was to not implement the change in care but to continue with the orthostatic waffle cushion.

No pressure injuries associated with the operating room developed during the trial and for six months following. It could not be determined if the mattress/cushion or the education/follow-up audits helped to reduce pressure injuries.

169 Investigation of Perioperative Medication Adherence in Elective Surgery Patients with Chronic Diseases

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Background

Medication adherence is a critical factor in ensuring the safety and effectiveness of perioperative care, particularly among patients with chronic diseases undergoing elective surgery.

Objectives

This study aimed to investigate medication adherence in elective surgery patients with chronic diseases during the perioperative process.

Methods

This study was cross-sectional and correlational in design. The study sample consisted of 200 patients who underwent elective surgery. The research data were collected by the researchers via face-to-face interviews within the first 72 hours after surgery. A Sociodemographic and Clinical Characteristics Form, the Medication Status of Surgical Patients Questionnaire, and the Charlson Comorbidity Index were used as data collection tools.

Results

The mean age of the patients was 66.26 ± 10.91 years (min.-max. = 29-95), 50% (n= 100) of them were female, 81.50%. The three most frequently used medications by patients were antihypertensive drugs, antidiabetic drugs, and anticoagulant/antiplatelet/antithrombotic drugs. It was found that 55 patients did not take their medication at least once (skipped medication). 37.50% of the patients stated that they had problems taking their medications. The being single, number of chronic diseases and number of the total medications negatively affected medication use behaviors ($p < 0.05$).

Conclusion

In this study, the patients reported difficulties taking their medications, mainly due to insufficient information from healthcare workers and forgetfulness. In the perioperative period, full adherence to starting or stopping medications (anticoagulants) but poor adherence to regular medications (antihypertensive, antidiabetes) suggests that surgical teams prioritize managing drugs with surgical risks.



211 Operating Room Safety and Efficiency: The Impact of Perioperative Nurses' Non-Technical Skills

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Background

Perioperative nurses' non-technical skills, such as communication, teamwork, decision-making, and stress management, are essential for safety and efficiency in the perioperative setting. Several recent studies have explored the importance of these skills in perioperative practice, highlighting their role in reducing errors and promoting a safe environment.

Objectives

Know the evidence about non-technical competencies of perioperative nurses, highlighting their relevance to the safety and effectiveness of surgical interventions for patients in perioperative situations.

Methodology

An integrative literature review was conducted using the following databases: EBSCOhost and PubMed. The terms Mesh included "operating rooms," "patient safety," and "social skills." Twenty articles were found. Articles in Portuguese and English relevant to the topic were selected, published between 2014 and 2024, resulting in five open-access articles for this study.

Results

Non-technical skills are crucial for preventing errors and adverse events in the perioperative setting. Effective communication, leadership, teamwork, and stress management skills are essential for coordinating activities and making quick, assertive decisions. Training programs have demonstrated significant improvements in team performance and reduced incidents. Work environments that promote open communication among professionals contribute to the effectiveness of surgical interventions.

Conclusion

The non-technical skills of perioperative nurses are essential components of safety and efficiency in the operating room. Recent literature reinforces the need to invest in developing these nurses' non-technical skills. Strengthening these skills, through specific training and institutional policies that encourage communication and teamwork, is essential for continuously improving the quality of care provided to patients in perioperative situations.

Keywords: Operating rooms, patient safety, and social skills.



231 The role of operating room nurses in maxillofacial trauma at University Hospital Centre Zagreb

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Background

Our aim was to retrospectively review the maxillofacial trauma at the Clinic for ear, nose and throat diseases and head and neck surgery at University Hospital Centre Zagreb and the perioperative management in the post COVID - 19 period. Operating room nurses play a major role in patient care during and after surgery.

Objectives

The purpose of the study is to review the maxillofacial trauma and perioperative management during post COVID-19 period. Hypothesis is that with every year in maxillofacial trauma the perioperative management of the trauma is improving and the rate of perioperative complications is decreasing.

Conclusion

Majority of maxillofacial trauma at the Clinic for ear, nose and throat diseases and head and neck surgery at University Hospital Centre Zagreb is represented by mandibular fractures followed by maxillary fractures as well orbitozygomatic fractures. Perioperative management of such trauma is usually handled by experienced operating room nurses. Some surgeries are performed as emergency procedures, and some are elective. With additional experience and empirically the time period of the operative procedure as well as patient care improves.

241 Challenges Faced by Surgical Nurses in Adhering to Enhanced Recovery After Surgery (ERAS) Protocols: A Qualitative Study

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Background

[Enhanced Recovery After Surgery (ERAS) protocols are an interdisciplinary approach aimed at accelerating the recovery process, reducing complications, and shortening hospital stays in the care of surgical patients. Surgical nurses play a critical role as healthcare professionals by directly implementing key components of ERAS protocols. While the number of qualitative studies analyzing nurses' perceptions of their ERAS experiences and compliance is increasing abroad, there are very few nurse-focused, original, and in-depth qualitative studies on ERAS protocols in Türkiye. Existing studies do not comprehensively analyze nurses' experiences and the challenges they face]

Objectives

[The study aims to understand the challenges surgical nurses face in the ERAS protocol adaptation process and to reveal the individual, professional, and systemic factors]



Methods

[The qualitative research was conducted between June 30 and July 20, 2025, with nurses working in surgical departments. Purposive sampling was used as the sampling method. It was completed with 28 participants who had knowledge and experience in ERAS protocols and surgical clinical practice. Data were collected using a “Semi-Structured Interview Form.” The COREQ guidelines were followed during the reporting process, and the data were evaluated using thematic analysis]

Results

[Five main themes and related subthemes were identified. These themes include nurses' participation in ERAS protocols, challenges encountered during protocol implementation, collaboration with the team, the importance of ERAS in nursing care, and increasing compliance with ERAS protocols]

Conclusion

[The results revealed that surgical nurses encounter many factors during the ERAS protocol compliance process. Factors such as lack of knowledge about the protocols, coordination issues in interdisciplinary work, and workload negatively affect the implementation process. It is recommended that education programs covering all healthcare professionals be implemented, a supportive work environment be created, and ERAS protocols be standardized in healthcare institutions, as these measures will improve the quality of nursing care]

246 The Effect of Pain Level After Bariatric Surgery on Readiness for Discharge.

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Background

Bariatric surgery is a surgical method widely used in the treatment of obesity, which aims to provide weight loss to the individual through various structural changes in the digestive system. This study was conducted to evaluate the effect of pain levels after bariatric surgery on patients; readiness for discharge. The study questioned the existence of the effect of pain experienced after bariatric surgery on the level of readiness for discharge and the level of this effect.

Objectives

In this study, which was conducted using a descriptive and correlational design, the data collection process was initiated in the general surgery department of a private Hospital located on the European side of Istanbul between September 2024 and March 2025 after receiving ethics committee approval. A total of 150 patients aged between 18 and 60, who were fully oriented to time and place, cooperative, willing to participate in the study, and had signed the written informed consent form, were included in the study. Data were collected on the second postoperative day using the Patient Information Form, the Visual Analog Scale (VAS), and the Readiness for Hospital Discharge Scale–Patient Self-Assessment Form. Data analysis was performed using the SPSS 21.0 statistical software package. Skewness and kurtosis values were examined to assess normality. Relationships were evaluated using Pearson correlation analysis and regression modeling, with a significance level set at $p < 0.05$.

Conclusion

It has been found that the level of participants; readiness for discharge is significantly affected by postoperative pain.



249 Factors Affecting the Use of Anti-Embolism Stockings in Patients Undergoing Orthopaedic Surgery

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Background Venous thromboembolism is a significant health problem that begins with deep vein thrombosis and results in pulmonary embolism. One of the most commonly used, easy-to-use, and cost-effective methods to prevent this condition is anti-embolism stockings. The primary aim of this method is to prevent thrombus formation and reduce complications such as embolism. Although anti-embolism stockings are used to prevent many complications, complications related to their use may also arise.

Objectives The aim of this study is to investigate the factors affecting the use of anti-embolism stockings in patients undergoing orthopaedic surgery.

Methods

The study population consisted of 120 patients who underwent orthopaedic surgery at a private hospital in 2023 and used anti-embolism stockings. The sample size was determined to be 99 using a known sampling method. Data were collected between September and December 2024 using a questionnaire prepared by the researchers in accordance with the literature. Descriptive statistical methods were used in the evaluation, and t-tests, chi-square tests, and Mann-Whitney-U tests were used in the analysis of numerical data.

Results The average age of the patients was 70.24±0.88, and 56.6% were female. 70.7% of the patients reported problems with the use of anti-embolic stockings and stated that the stockings cut into their feet and caused pain. A statistically significant relationship was found between the duration of anti-embolic stocking use, the duration of discontinuation of use, the presence of chronic disease, and the occurrence of problems related to anti-embolic stockings. ($\chi^2=9.919$; $p=0.019$; $\chi^2=10.302$; $p=0.016$; $\chi^2=4.185$; $p=0.041$).

Conclusion Problems related to the use of anti-embolic stockings have been observed in patients undergoing orthopaedic surgery to prevent the development of complications. In this context, it is recommended that nursing interventions such as regular skin assessments, position changes, appropriate stocking measurement protocols, patient education on the use of anti-embolic stockings, and regular follow-up be implemented.

269 Swedish guidelines and recommendations for preparing surgical instrument before surgery

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Background

The Quality Council within the Swedish Operating Room Nurses Association is author of evidence-based Guidelines and Recommendations with the aim to promote high quality and safe perioperative nursing care.



Postoperative infections are today the third most common form of healthcare-associated infections, which means costs for healthcare and suffering for patients.

Checking and preparing surgical instruments before surgery could be an infection prevention measure carried out by an operating room nurse.

Preparation of sterile surgical equipment can be done in the operating room or in a preparation room where they will be covered with surgical drapes that will reduce bacterial contamination of the surgical equipment before the patient is brought into the operating room. Preparing surgical equipment in good time leads to efficient use of the operating room which reduce stress for operating room staff.

Objectives

Describe the work process of producing guidelines and the Swedish recommendations for preparing surgical instrument before surgery.

Methods

The work process for producing guidelines is based on an evidence-based model. Data was collected through systematic reviews of literature, local routines and standards collected through members in SEORNA, advice from experts in perioperative nursing, published adverse events, and reviews of international guidelines.

Results

The use of sterile covers to protect sterile surgical equipment from bacterial air contamination while waiting for operations to start is common practice in Sweden although there has not previously been a recommendation on time limit.

Conclusion The guideline has been updated based on recent Swedish studies showing that prepared surgical instruments protected by sterile drapes can be stored in an operating room with approved ventilation for 15 hours. The evidence-based guidelines serve as a foundation to maintain patient safety and high-quality perioperative nursing care. Operating room nurses have evidence-based guidelines to rely on in their daily work.

272 Outcomes of the implementation of a fast-track recovery program in total knee arthroplasty with robotic assistance: key challenges for the perioperative nurse.

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Background

The concept of fast-track surgery involves employing various perioperative strategies aimed at facilitating better surgical conditions, ensuring quicker recovery, and enabling early discharge.

Objectives

To present the implementation of the efficient care program in the operating room; to identify challenges and strategies; and to present the outcomes of the program's implementation in the operating theater.

Methods

Descriptive study and literature review.

Results

A multidisciplinary team was created to identify challenges. This analysis allowed for mapping obstacles and



weaknesses, and proposing solutions. The perioperative process times to be improved include: patient entry into the operating room, readiness for anesthesia, incision time, and last suture, as well as turnover time.

Conclusion

The implementation of a program poses a challenge for the multidisciplinary team. There are opportunities for change and improvement in perioperative process times.

280 Perceptions of teamwork and learning - Operating room nurses perceptions when working in paediatric OR-units.

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Background

Effective teamwork is essential in surgery (Vincent, 2010); however, adverse events may occur when team members misinterpret or fail to communicate effectively, creating stress and risking patient safety. Health professionals need right attitudes, skills, and knowledge (Dornan, 2011) and must implement a transparent, coordinated approach to adapt to changing conditions and pressures (Irving et al., 2024).

Social interactions in clinical settings help establish reference frameworks, enhancing learning (Mezirow, 2009). Research suggests that teamwork requires a broad definition, considering assumptions about its nature, study methods, and limitations (Anderson et al., 2021). Advanced medical technologies are critical in ensuring patient safety (Lee et al., 2022; Sevdalis et al., 2012), yet their complexity also raises the potential for human error.

Objectives

To uncover operating room nurses' perceptions of team work and learning processes in the paediatric perioperative setting.

Methods

Phenomenographic method was applied to capture how different operating room nurses (ORN) perceive and understand various aspects of teamwork and learning.

Results

The results reveal two primary approaches to perception and learning within the operating room team: *the team-oriented* and *person-oriented* approaches. The *team-oriented* learning prioritises the team itself, focusing on collective discussions—what is said, what actions to take, and how tasks are performed. Knowledge in this approach appears to stem from shared experiences and interactions within the team. The *person-oriented* learning on the other hand, directs the team's focus toward the individual patient undergoing surgery. Here, knowledge is gathered from a range of text-based resources, providing comprehensive, specific information about the patient. This could be considered a more academic or advanced approach to learning.

Conclusion

Diverse ways of understanding teamwork and learning in the team or together with the team might have impact on quality of care and preparedness for adverse events. The outcome of this study important for team learning development.



281 Inhaled Danger: Surgical Smoke — The Overlooked Risk in the Operating Room

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Background

With advancements in surgery, electrosurgical devices have become commonly and widely used in operating rooms. While these tools provide many advantages in surgery—such as rapid hemostasis and precision—they also produce surgical smoke during use, which can have harmful effects on both the surgical team and patients. Despite posing a significant risk to human health, these effects are often overlooked by many operating room staff and continue to threaten patient and staff safety.

Objectives

This review aims to highlight the adverse effects of surgical smoke on human health and to emphasize the importance of protective strategies for enhancing patient and staff safety.

Conclusion

Operating rooms are enclosed workspaces, which leads to prolonged exposure of both patients and staff to surgical smoke. It is known that surgical smoke can be absorbed through the skin, mucous membranes, and respiratory system, potentially entering the bloodstream and being linked to certain cancers and viral infections. These effects, which can be either local or systemic, may occur immediately after exposure or emerge years later. Due to symptom overlap with other conditions, surgical smoke-related health issues are often not recognized as such. When appropriate protective measures are used, however, surgical smoke becomes an avoidable risk. Key protective strategies include the use of personal protective equipment (PPE), proper ventilation, and smoke evacuation systems. Unfortunately, the lack of awareness and knowledge regarding the hazards and long-term impacts of surgical smoke often results in inadequate implementation of safety measures. Therefore, it is essential that operating room personnel have sufficient knowledge and awareness of surgical smoke risks. Regular training, a safety-oriented institutional culture, and the development of specific policies and procedures for surgical smoke management are vital to ensuring both patient and staff safety.

282 Nursing Communication in the Context of Ambulatory Surgery: A Scoping Review

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Background

In ambulatory surgery, effective communication plays a crucial role in promoting safety by reducing adverse events and improving the quality of care for individuals in the perioperative setting.



Objectives

To identify the scientific evidence on communication strategies used by nurses in the context of ambulatory surgery.

Methods

A scoping review was conducted following the methodology proposed by the Joanna Briggs Institute. Eligibility criteria were defined according to the PCC framework: Population (nurses), Concept (communication), and Context (ambulatory surgery). The search was performed in the MEDLINE, CINAHL Complete, and Scielo databases. Grey literature was searched via Google Scholar and RCAAP

Results

Six studies addressing nursing communication strategies in the context of ambulatory surgery were included. Effective communication between nurses and patients in ambulatory surgery is fundamental to reducing anxiety, promoting trust and therapeutic relationships, and improving the overall care experience. It is essential to minimise risks and complications, such as pain management, where standardised messaging demonstrated significant benefits.

Conclusion

Communication strategies used by nurses in ambulatory surgery play an essential role in promoting safety, trust, and the quality of care provided, contributing to the reduction of anxiety and postoperative complications.

304 Body Image, Aesthetic Surgery Acceptance, and Related Factors in Rhinoplasty Candidates

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Background

Who undergo rhinoplasty may have unrealistic aesthetic expectations. Effective nursing care requires determining the body image and acceptance of patients undergoing cosmetic surgery.

Aim

This study was conducted to determine the factors associated with body image and plastic surgery acceptance of rhinoplasty patients.

Method

A cross-sectional study of 160 patients (80 with rhinoplasty, 80 with other surgeries) was conducted using a demographic form and scales for body image and plastic surgery acceptance. The data was analyzed with descriptive statistics, reliability analysis, and tests to find differences between groups.

Findings

Cronbach's alpha values of the scales used in the study were found to be $\alpha = 0.895$, $\alpha = 0.935$. 61.9% of the participants were female and the mean age was 32.08 ± 10.77 . Those who liked their bodies, were male, and were married had higher Body Perception Scale scores. While the mean score of the level of acceptance of plastic surgery was moderate, it was found that personal motivations were important among its subdimensions (25.33 ± 7.68), and social interaction motivation was less effective (16.28 ± 8.62). The plastic surgery acceptance scale scores of those who had rhinoplasty were significantly higher than those who had other surgeries ($p = 0.000$). The social



environment is the most important factor in tendencies towards plastic surgery ($p < 0.001$). Those who were dissatisfied with their body appearance or life had a significantly higher acceptance of plastic surgery ($p < 0.001$).

Conclusion

This research demonstrates the role of body and life dissatisfaction, as well as social environment, in determining whether patients seek cosmetic surgery. Nurses should conduct comprehensive psychosocial assessments, manage unrealistic expectations, and provide psychological support and counseling.

325 Relationship Between Pre-Operative Anxiety and Fear of Pain and Post-Operative Pain and Comfort

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Background: Patients experience pain ranging from mild to severe level after surgery despite all available analgesic medications and modern devices. Pain that is not effectively managed negatively impacts the healing process. Therefore, determining and effectively managing the pain level is important for rapid postoperative recovery and increased comfort.

Objectives: This study aimed to determine the relationship between preoperative anxiety and fear of pain and postoperative pain and comfort in patients undergoing planned surgery.

Methods: This descriptive study was conducted with 100 patients who underwent surgery in the urology, general surgery and orthopedics departments of a state hospital between March 4 and April 2, 2024. Data were collected using the “Patient Information Form”, “Surgical Anxiety Scale”, “Fear of Pain Scale-III”, Numerical Pain Scale” and “General Comfort Scale-Short Form”. Independent sample t-test, analysis of variance, Pearson correlation analysis and linear regression analysis were used in data analysis.

Results: It was determined that the patients' preoperative anxiety score was 28.56 ± 11.14 (out of 68 points), their fear of pain score was 70.58 ± 18.38 (out of 150 points), and they experienced moderate anxiety and fear of pain before surgery. In the postoperative, it was found that the pain intensity score was 6.52 ± 1.85 (out of 10 points), their general comfort level score was 3.64 ± 0.59 (out of 6 points), they experienced severe pain, and their comfort level was moderate. It was found that there was a positive correlation between preoperative anxiety and fear of pain and postoperative pain intensity and general comfort level, and as anxiety and fear of pain increased, pain intensity and general comfort level increased.

Conclusion: The research findings showed that patients experienced anxiety, fear of pain, pain in perioperative period and their comfort levels were moderate, and fear of pain had a significant effect on pain intensity and comfort.



333 Effect of Semi-recumbent Position on Treatment of Shoulder Pain Seen After Laparoscopic Cholecystectomy

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Background

Gallbladder diseases are common gastrointestinal illness, and Laparoscopic cholecystectomy is the gold standard treatment for them. Laparoscopic surgery has proven superior to laparotomy but postoperative shoulder pain remains a concern. The perioperative nurse attempts to relieve the patient's pain and ensure comfort.

Objectives

The objective of the present study was to evaluate the impact of the nurse-led semi-recumbent position to reduce shoulder pain in patients following laparoscopic cholecystectomy.

Methods

This is a quasi-experimental type study and was conducted between April and January 2021 in a surgery clinic in Ankara. The study sample consisted of 70 patients in two groups. The experimental group includes 35 patients with semi-recumbent positions whereas the control group includes 35 patients with supine positions. Descriptive Characteristics of Patients Form, Pain Observation Form, and Patient Satisfaction Evaluation Form were used for data collection. Patients' haemodynamic parameters, pain, analgesia use were assessed at the time of arrival at the postoperative clinic, at the 6th and 12th hour. Also the patients' satisfaction were evaluated at the 12th hour.

Results

In this study, most of the patients in experimental (%62.9) and control groups (%65.7) were females, and the mean age of the patients were 47.80 ± 10.86 in the experimental group and 42.89 ± 11.37 in the control group. There was no significant difference between descriptive characteristics between groups ($p > 0,05$). Furthermore, there was no significant difference between the experimental and control groups in terms of haemodynamic parameters, pain, analgesia use during all time periods ($p > 0,05$).

Conclusion

This study indicate that the semi-recumbent position does not have superior nor negative effect on reducing patients pain than supine position. However, it is evaluated that semi-recumbent position is a safe position that can be used as an evidence-based nursing practice related to patient preference. Further studies are recommended to investigate reducing and preventing shoulder pain.

373 The Operating Room Nurse's Interdisciplinary Role in Corneal Harvesting and Transplantation.

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Background

In recent years, advancements in ocular surgery, especially the adoption of DSAEK technique for endothelial keratoplasty have increased the demand for corneas with specific characteristics, such as a wide scleral ring. These requirements make it essential to perform corneal harvesting directly in the operating room, rather than in the mortuary, where such ideal conditions may not be met. This change has highlighted the vital role of operating room nurses, especially those trained in corneal harvesting. A retrospective observational study was conducted at the Fondazione IRCCS Cà Granda- Ospedale Maggiore Policlinico in Milan from 2024 onward. Nurses became eligible through a regional training course organized by the Hospital Procurement Coordination for Donation (COP) which includes practical training and certification by an eye bank

Objectives

In 2024, one ophthalmology scrub nurse became certified and performed three corneal harvests out of 14 organ donations. In 2025, four more nurses were certified—three in ophthalmology and two in other surgical specialties—bringing the total to five. So far in 2025, five out of ten corneal harvests have been carried out by these trained nurses. Currently, out of 28 operating room nurses, five are certified, with plans to train at least 30% of the staff further. This initiative has enhanced awareness and competence among ophthalmology nurses, who now bring their transplantation experience to the donation process. Their involvement improves efficiency, accuracy, and safety. The goal is to expand training opportunities and integrate more nurses into this critical role, particularly those managing ophthalmology instrumentation.

Conclusion

Ultimately, having trained personnel perform corneal harvesting directly in the operating room has optimized the donation process, reduced waiting times, and ensured safer, more suitable procedures. Nurses have thus become active, essential contributors to the evolving practice of organ and tissue donation.

408 Exploring Factors Influencing the Implementation of Pre-Surgical Smoking Cessation Interventions: a cross-sectional survey.

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In all types of surgery, smoking is associated with an increased risk of mortality and general morbidity. Clinical trials have shown that pre-surgical interventions to help patients quit smoking increase their likelihood of giving up smoking in the long term and reduce surgical complications. However, previous research indicates that the assistance provided in this period is insufficient.

Purpose: To evaluate the level of implementation of healthcare professionals in helping surgical patients quit smoking using the 5As brief intervention model, and to identify the main barriers and facilitators affecting the implementation during preoperative visits at Catalan hospitals.

Methods: Multicenter cross-sectional study administering an online survey of clinical healthcare professionals who perform preoperative visits. The main outcome variable is the implementation of each of the 5As (Ask, Advise,



Assess, Assist and Arrange follow-up). The validated Knowledge, Attitudes, Behaviors, and Organization (KABO) questionnaire was used to assess barriers and facilitators. Univariate and bivariate analyses of the 5As and the KABO domains were performed according to professional category and sociodemographic variables. Medians and interquartile ranges (IQR) were used, and non-parametric Kruskal-Wallis test was applied.

Results: The survey was completed by 216 professionals of 633 invited to participate (34.1%). Engagement was high in the categories Ask 10.0 (9.0-10.0) and Advise 7.5 (5.0-10.0), but very low in Assist 1.0 (0.0-3.0) and Arrange follow-up 0.0 (0.0-2.0). “Individual skills” and “Organizational support/resources” had significantly lower scores compared with other domains, whereas “Individual commitment” and “Beliefs about patients’ desire/readiness” had significantly higher scores.

Conclusion: The level of implementation of smoking cessation in preoperative visits is poor. The main barriers detected are lack of knowledge and lack of resources and organizational support. Hospitals should promote strategies that address the main barriers identified and should apply interventions to help people quit smoking as a routine practice in preoperative visits.

411 The Critical Role of the Operating Room Nurse in the Use of Pneumatic Tourniquets: Safe Practice in the Context of AORN Recommendations

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Background: Although pneumatic tourniquets are widely used to provide a bloodless surgical field in extremity surgical procedures, they carry potential risks of complications such as ischemia, nerve injury, thrombotic events, and pain. The management of these risks and ensuring patient safety requires multidisciplinary knowledge and meticulous implementation by the perioperative care team, especially operating room nurses. The practices recommended by AORN for the care of patients undergoing procedures using pneumatic tourniquet support provide fundamental standards that guide the safe, effective, and evidence-based use of these devices. These guidelines require the operating room nurse to play an active role in all stages of tourniquet use.

Objectives: The purpose of this compilation is to highlight the critical role and responsibilities of the operating room nurse during surgical procedures involving pneumatic tourniquets, in light of AORN recommendations, thereby demonstrating how patient safety and quality of care can be enhanced during the perioperative process. In particular, the focus will be on the nurse’s intervention roles in preoperative assessment, care plan development, intraoperative monitoring, and preventing potential complications.

Conclusion: In procedures supported by pneumatic tourniquets, the operating room nurse’s evidence-based practices in accordance with AORN guidelines form the basis of quality perioperative care that minimizes potential complications, maximizes patient safety, and optimizes surgical outcomes. Supporting these roles through continuous training and competency verification is of critical importance.



429 Need to Know or Nice to Know? Operating Room Nurses' Preoperative Information Priorities and Barriers

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Background

Preoperative preparation is a key responsibility of operating room (OR) nurses and plays an important role in ensuring patient safety and workflow efficiency. OR nurses are required to navigate large amounts of patient information within limited timeframes, which may influence how information is prioritized before surgery.

Objectives

The aim of this study was to explore which types of patient information OR nurses prioritize during preoperative preparation, how they perceive the balance between time and information, and which barriers affect their preparation. Methods: A descriptive cross-sectional survey was conducted among OR nurses using an anonymous questionnaire. The survey included questions on information-seeking practices, perceived relevance of information (“need to know” versus “nice to know”), time for preparation, and experienced barriers. A total of 60 out of 100 invited OR nurses responded.

Conclusion

Most respondents reported that they usually manage to read the information, they consider necessary prior to surgery. However, despite this, many still experienced a general lack of time to prepare adequately. Preparation was primarily focused on technical aspects of the procedure, such as the type of surgery and required instruments. Patient-specific information, including individual needs and clinical context, was read less consistently. OR nurses described an ongoing need to prioritize their limited preparation time, with technical preparation often taking precedence over patient-centered information.

Although OR nurses report accessing essential information before surgery, the findings reveal a tension between technical preparation and patient-specific preparation. Time constraints appear to drive prioritization toward procedural and instrumental readiness, potentially at the expense of individualized patient preparation. These results highlight a need for improved access to relevant patient information and organizational strategies that support balanced preoperative preparation in the operating room.

443 Experiences with Surgical Patient Positioning: Roles, Responsibilities, and Challenges

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Background

Appropriate patient positioning on the operating table during surgery is vital for optimal anatomical exposure, access to essential equipment, patient comfort and to minimize the risk of injuries. Patient positioning has been described as a shared responsibility of the entire surgical team. Research on roles and responsibilities in patient positioning during surgery is sparse.



Objectives

The aim was to explore how representatives from the different professions in the surgical team experience roles, responsibilities, and challenges in positioning the surgical patient.

Design

The study had a qualitative design, including 16 individual, semi-structured interviews,

Methods

Participants included surgeons (n=4), anesthetists (n=4), operating room nurses (n=4) and nurse anesthetists (n=4) in a hospital in Southeastern Norway. The data were analyzed using Braun and Clarke's six-step Reflexive Thematic Analysis.

Result

Three main themes with subthemes were identified, namely 1) A teamwork approach, with subthemes a) facilitating surgery, b) performing actors 2) A patient safety issue, with subthemes a) risk patients, and b) procedural challenges; and 3) Lack of a systematics, with subthemes a) various approach to second time-out, and b) documentation and feed-back issues.

Conclusion

Appropriate and safe positioning during surgery is a common responsibility of all members of the surgical team. Even if surgeons assumingly are the main responsible, operating room nurses have a greater performing part of patient position. Different health professionals emphasized different risk patients, risk procedures, and perceived challenges. This suggests a correlation with distinct professional domains, tasks and competencies within the surgical context.

455 Current Approaches to Surgical Pathology Safety in the Perioperative Process: Good Practice Recommendations

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Background

The secure surgical pathology specimen process is critical for patient safety and diagnostic accuracy. Most errors occur in the pre-analytical phase, specifically within the operating room. International studies identify labeling and transport processes as frequent adverse events. Similarly, Turkey's National Security Reporting System reveals frequent errors in verifying patient identity, surgical site, and procedures. This demonstrates that specimen safety is a security chain encompassing the entire surgical operation.

Objectives

The objective of this review is to evaluate contemporary approaches for ensuring surgical pathology safety and preventing potential errors during the specimen transmission process. Within this scope; preoperative identification steps, intraoperative fixation with appropriate solutions, monitoring of fixation times, and postoperative labeling and transfer standards have been reviewed in light of current literature

Conclusion

It is demonstrated that the implementation of standardized protocols to enhance surgical pathology safety leads to significant reductions in error rates. It is reported that placing specimens in leak-proof containers during the post-operative period, ensuring accurate labeling, and utilizing barcode systems integrated with the Electronic Laboratory Information System minimize the risk of confusion. Technological approaches, such as specimen collection via smart glasses, telepathology, and the establishment of error reporting systems, are recommended for process



improvement. Secure surgical pathology management is expressed as a fundamental process for patient safety, requiring multidisciplinary collaboration, standardized procedures, management of the human factor, and the adoption of technological solutions. Furthermore, the requirement for absolute documentation of the optimal fixation period, particularly for molecular tests, and the importance of all these components in error-free transmission are reported. It is stated that technological advancements will contribute to the improvement of surgical pathology stages, and that standardized surgical pathology specimen protocols must be established and audited to enhance safety.

93 The use of the escape room at the Sobecc symposium - impact assessment and evaluation

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Background

An escape room is a type of adventure game in which a group of people are "locked" in one or more themed rooms and must work together to solve a series of riddles, puzzles, and challenges within a limited time, usually 60 minutes. The ultimate goal is to successfully "escape" the room or complete a specific mission.

Objectives

This summary explores the application of escape rooms as an innovative tool in the professional development of nurses. We address how this playful and immersive methodology can be strategically used to enhance critical skills, such as decision-making, interprofessional communication, and teamwork, in a simulated and safe environment.

Conclusion

The goal was to discover how a patient acquired a surgical site infection, connecting the infection process to inadequate care of surgical equipment in the CSD, going through each step after discovering the enigma corresponding to the stage to be overcome, from cleaning, packaging, sterilization, and storage of the surgical box.

Participants also evaluated the activity, rating their experience, and an impact analysis was collected at the end of each escape room session. The results showed that participants reported 85% satisfaction with the escape room experience, 87% would recommend the escape room to their colleagues, 69% considered the topics covered in the escape room relevant and important to their practice.

We concluded that the Simposio was an excellent opportunity to apply the escape room methodology and should continue to challenge our participants in future editions of the event.



120 Construction of an Evaluation Index System for Emergency Response Capability of Nurses in Da Vinci Robot Operating Rooms

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Background

The emergency response capability of nurses in Da Vinci robot operating rooms is crucial for ensuring patient safety and optimizing surgical team performance, but a standardized evaluation system is lacking.

Objectives

To develop an emergency response capability evaluation index system for nurses in Da Vinci robot operating rooms, providing an objective basis for their selection and training.

Methods

Relevant literature was systematically retrieved, and a preliminary index pool was formulated based on semi-structured interviews with 8 senior Da Vinci operating room nurses and nursing managers. Twenty-five experts from robot surgical nursing, operating room management, surgical medicine, and nursing education fields participated in 2 rounds of expert consultation. The analytic hierarchy process (AHP) was used to calculate the weight coefficients of indicators at all levels.

Results

The recovery rate of consultation questionnaires was 100% in both rounds. The expert authority coefficients were 0.89 and 0.92, and Kendall's coordination coefficients were 0.278 and 0.169 (both $P < 0.05$), indicating high authority and good consistency of expert opinions. The final system included 4 first-level indicators (emergency skills: 0.382; emergency knowledge: 0.295; emergency psychological quality: 0.214; emergency response speed: 0.109), 14 second-level indicators, and 36 third-level indicators. Key second-level indicators included mastery of Da Vinci robot fault emergency handling procedures, intraoperative complication prediction ability, team collaboration efficiency, and emotional stability under pressure.

Conclusion

The developed system, with high expert recognition, is scientific, reliable, and operable. It provides a standardized tool for quantifying nurses' emergency capabilities, facilitating precise training needs identification, optimized training design, and objective performance evaluation, thereby enhancing the emergency response capacity of the surgical team, improving nursing quality, and ensuring patient safety.

177 THE ONE NOTE APPLICATION AS A WORK TOOL.

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Background

To look forward the arrival of new nurse professionals in the surgical area of the Hospital Universitario Puerta de Hierro Majadahonda our hospital has created a tool to help and guide new staff and also existing staff, this include all the protocols guides, instrutions, that all the profesional can be needit in the consultation of protocols.



Objectives

The One Note application has contributed to a series of improvements in our operating theatre service due to its ease of access and speed of consultation on the different topics of interest in our unit. In addition to different specific objectives:

- Facilitate information on surgical protocols.
- Optimise the consultation of schedules.
- Improve the daily distribution of activities.
- Update information on procedures and schedules in real time.
- Encourage collaboration and effective communication.
- Ensure compliance with protocols and regulations.

Conclusion

The implementation of an application designed specifically for nursing staff, which guides the consultation of surgical procedures, the management of schedules and the organisation of daily distribution, represents a significant advance in the optimisation of work processes. This tool not only improves efficiency and accessibility of information, but also fosters smoother and more effective communication between team members. By centralising resources and updating information in real time, it facilitates compliance with protocols and regulations, resulting in more accurate and quality care.

179 PERIOPERATIVE NURSE'S ROLES IN TRANSPLANTATION

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Background

Organ transplantation is a highly complex surgical procedure that requires a multidisciplinary approach to ensure its success. Within this team, perioperative nurse play a fundamental role, it's not only in coordination and perioperative care but also contribute a unique set of specific skills and knowledge that optimise patient safety. Hospital Universitario Puerta de Hierro Majadahonda is a third level hospital in Madrid where all organs and tissues are removed and the four main solid organs are implanted (Heart, Lung, Liver, Kidney), as well as the cardiopulmonary and hepatorenal, and transplantation of different tissues and cells. Hospital also it's performs transplants in cases of brain death and asystole.

Objectives

Description and determination of the different roles, actions and safety issues that the nursing team plays in the specific safe performance.

- Explant nurse: Team nurse go to the hospital where the donor is located, removes the organ and keeps it until it is implanted.
- Implant nurse: Nurses (2) for the intraoperative process of the transplant and the care of the patient during them.
- Anaesthesia nurse: Nurse responsible for the entire intraoperative anaesthetic process who are knowledgeable about the transplant process, working in close collaboration with the anaesthesia team.

Conclusion

To understand the role of nursing professionals in transplantation, showing the importance of the specialisation of the different roles, it's important the specialisation in the different roles to guaranteeing the correct technique and patient safety throughout the process.



213 Clinical supervision in the Surgical Center: a relationship between experience, safety and professional development

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Background

The supervising nurse has a challenging role in a highly complex environment such as the surgical center, requiring self-knowledge and a combination of technical and interpersonal skills.

Objectives

To understand the evidence on the importance of effective clinical supervision practices in perioperative nursing.

Methodology: An integrative literature review was conducted using the EBSCOhost and PubMed databases. The Mesh terms were used: Preceptorship, nursing education, teaching methods, and perioperative nursing, restricted to the period 2019 to 2025. A total of 23 articles were found, with 5 remaining after reading the title and abstract.

Results: Innovative strategies are essential to address challenges in the clinical setting and improve the quality of perioperative care through continuous updating, strengthening leadership, and interprofessional collaboration. Effective clinical supervision facilitates learning, promotes critical reflection, and contributes to the development of new skills. The role of the clinical supervisor is crucial in guidance, mentoring and professional preparation. The connection between theory and practice strengthens nurses' training and performance in the perioperative setting.

Discussion: Clinical supervision helps students develop confidence and facilitate their transition to nursing. Students feel more confident performing procedures, increase their competency, and are able to apply theory to clinical practice, as well as develop critical thinking. Clinical experience, teaching skills, and the ability to establish interpersonal relationships are essential elements in selecting a clinical supervisor.

Conclusion

Clinical supervisors possess knowledge and skills in teaching, socialization, and assessment methods, contributing to changing and improving aspects of clinical teaching, thus enabling the successful transition of supervisees to professional practice. It is essential that perioperative nurses proactively contribute to the production of knowledge and research, contributing to the advancement of clinical supervision through their technical competence and knowledge in the perioperative context.

Keywords: Clinical supervision; Nursing education; Teaching methods; Perioperative nursing



214 Design and pilot evaluation of a multidisciplinary training programme for perioperative nurses in robotic surgery: beyond traditional onboarding

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Background

The incorporation of new nurses into robotic surgery operating rooms presents a significant educational challenge. Current onboarding often relies on observational learning, which may lack structure, consistency, and adaptability. To address this, a multidisciplinary team developed a structured training programme focused on the real clinical tasks of the perioperative nurse in robotic surgery.

Objectives

To design, implement, and evaluate a targeted educational intervention for perioperative nurses newly assigned to robotic surgery, with the aim of improving knowledge acquisition and user satisfaction. The programme integrates diverse learning resources, including nurse-generated procedural protocols, printed materials, digital formats, and complementary technological tools such as AI and virtual reality.

Methods

A mixed-methods, prospective study was conducted in a public university hospital in the Canary Islands. The intervention was developed through expert consensus and included original nurse-authored protocols and surgical content applicable to robotic procedures. Participants were randomized into two groups: the intervention group received structured training with access to the materials in multiple formats (including AI assistant and VR simulation), while the control group followed standard observational learning. Both groups completed pre- and post-intervention knowledge tests. Satisfaction surveys were administered to the intervention group.

Results

Initial qualitative feedback suggests that the structured content and multimodal access improved nurses' confidence and understanding of robotic workflows. The AI and VR components were perceived as useful complements to the core materials, particularly for reviewing procedures independently. Quantitative analysis of pre- and post-test results is ongoing and will determine the overall impact of the intervention on knowledge acquisition and user experience.

Conclusion

This nurse-led educational initiative demonstrates a pragmatic, scalable approach to improving the onboarding of perioperative nurses in robotic surgery. Emphasizing protocol-based content creation and flexible learning formats, the programme supports standardization, professional autonomy, and clinical safety. Final results will be presented at the congress.



221 Immersive and interactive virtual onboarding: a VR-based welcome plan for perioperative nurses

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Background

Incorporating new professionals into the operating room environment is a critical and complex process, especially in highly specialized settings such as robotic or minimally invasive surgery. Traditional orientation models often rely on observational learning and informal guidance, which may be inconsistent and difficult to scale. To address this, a structured, multimedia onboarding programme has been developed using immersive and non-immersive virtual reality (VR) to enhance familiarity, autonomy, and clinical safety among perioperative nurses

Objectives

To describe the design, development, and pilot testing of an innovative VR-based onboarding plan for newly incorporated surgical staff, aimed at improving their spatial orientation, knowledge of equipment, and readiness for the real clinical environment.

Conclusion

The programme consists of three progressive virtual tours, each with distinct pedagogical goals:

1. **Immersive 360° tour** using VR goggles (e.g., Oculus), where the user enters a virtual replica of the operating room. As the nurse explores, interactive hotspots trigger pop-up cards with text, images, and videos explaining surgical tools, patient setups, and procedural contexts.
2. **Guided virtual tour**, viewed via computer screen and led by an experienced professional. Users may be geographically dispersed. The tutor has real-time control of the session, including the ability to relocate users who become disoriented, ensuring engagement and group cohesion.
3. **Self-guided evaluation tour**, where users navigate the same space autonomously, completing tasks such as identifying errors, locating instruments, and answering scenario-based questions to progress between rooms.

The system has been piloted successfully with positive feedback, although full institutional implementation is pending due to logistical constraints. This initiative illustrates how VR technology can support structured onboarding, promote spatial and procedural learning, and empower nurses through experiential, low-risk preparation before entering the live surgical environment. Next steps include full institutional implementation and a comparative study to quantify knowledge retention, user confidence and safety benefits

226 Surgical Nursing Training in Robotic Surgery: Is Our Training Necessary?

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Background

Laparoscopic surgery transformed surgical practice in the 1990s due to its minimally invasive approach and faster recovery times, although it limited vision and precision. In the early 2000s, robotic surgery improved these limitations by offering 3D vision, articulated instruments, and tremor reduction, increasing safety and effectiveness. This advancement demands updated training for the surgical nursing role.

Objectives

The main objective is to evaluate the need for and effectiveness of specialized training in robotic surgery for perioperative nurses. Secondary objectives include analyzing the role of surgical nursing during robotic procedures and identifying specific competencies.

Methods

A quantitative analytical study was conducted, combining open and closed questions answered by 64 surgical nursing professionals in Madrid, Valencia, and Barcelona, along with a literature review including articles from 2019 to 2025.

Results

A high percentage of respondents have worked as scrub nurses in robotic surgery, demonstrating significant participation. However, the vast majority show a lack of specific technical knowledge about the robot models they work with, and therefore do not have an in-depth understanding of the equipment. Despite this, they agree that specific training is essential to fully understand procedures, equipment, and responsibilities, ensuring patient safety and reducing emotional burden.

Conclusion

Robotic surgery requires nurses who are well-trained and up to date. It is recommended to implement training programs, certification, and continuous practice to strengthen technical competence and staff autonomy, adapting to current technological challenges.

244 Triflow Exercise Training and the Use of the Teach-Back Method in Surgical Patients: A Review

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Background

Despite advances in perioperative care, pulmonary complications occurring in the postoperative period remain a significant cause of morbidity and mortality. These complications are closely related to factors such as anesthesia, surgical techniques, pain, and decreased respiratory muscle strength. They may lead to increased intensive care admissions and prolonged hospital stays. Therefore, various interventions such as smoking cessation, early mobilization, respiratory and coughing exercises, tapotement, postural drainage, and relaxation techniques are recommended to optimize respiration after surgery. The most effective nursing intervention to prevent postoperative respiratory complications is teaching respiratory exercises before surgery. Respiratory exercises can be performed with or without device support. Nurses should ensure not only regular use but also correct usage of the device so that patients can perform effective breathing postoperatively and achieve better patient outcomes.

Objectives

o examine the role and effectiveness of the teach-back method in the education given to surgical patients on the use of the triflow device.

Conclusion

Devices such as triflow in respiratory exercises positively affect patient participation and outcomes. However, studies



show that only a small portion of patients receive adequate preoperative education and lack basic knowledge about device usage. Factors such as age and low health literacy reduce the effectiveness of education; thus, the use of interactive methods is gaining importance. The teach-back method is based on repeating education until the patient correctly understands and demonstrates the information provided. This method enhances effective communication between the patient and healthcare team, improves health literacy, and strengthens self-management. In the education process of surgical patients, the teach-back method stands out as a strong strategy that should be integrated into nursing practices.

Key words: Teach-back, incentive spirometry, patient education.

285 Debriefing value in simulated perioperative nursing practice

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Background

Simulation is a pedagogic strategy that include a hypothetic representation of clinical reality. Debriefing in simulated practice is a learning method that allows reflection on what happened in the simulation scenario and requires the active participation of students. The debriefing values are the psychosocial, cognitive and affective dimension, for their impact on the development of competences. Debriefing in simulated practice is a learning method that allows reflection on what happened in the simulation scenario and requires the active participation of students. The debriefing in simulation practice is a very important moment of learning because the students have the opportunity to develop their instrumental or non-instrumental skills. In this area it is fundamental recognize the value of the debriefing to incorporate them in centre of the pedagogical process.

Objectives

To evaluate the value of debriefing in the simulated practice of perioperative nursing during master degree.

Methods

Quantitative study. Data were collected using a questionnaire (Simulation Debriefing Assessment Scale). Participated 166 students of perioperative master degree, after the classes that used the simulation methodology. Data analysis was performed using SPSS® software according variables nature.

Results

The majority of participants were female (83.1%), with a mean age of 24 years. Participants presented high mean values in the psychosocial value of debriefing (4.04), cognitive value (4.31) and affective value (4.32). There are differences with statistical significance in the value attributed to debriefing (psychosocial, affective and cognitive) depending on the course students attend.

Conclusion

The debriefing associated with the simulation is valued by the perioperative nursing in terms of affective, cognitive and psychosocial values.



362 Insights from Turkish Doctoral Students' Internship in Croatia: A Qualitative Study

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Introduction:

International clinical internships offer nursing students unique opportunities to enhance professional, educational, and cultural competencies. This study explores the lived experiences of doctoral nursing students during an international operating room (OR) internship in Croatia, with a focus on how the experience influenced their clinical practice, educational outlook, and leadership development in perioperative nursing.

Methods:

This qualitative descriptive study employed purposive sampling and included four doctoral nursing students who participated in an OR internship in Croatia. Data were collected using daily reflective journals and post-internship semi-structured interviews conducted within two weeks of their return. Thematic analysis, based on Braun and Clarke's six-phase framework, was used to interpret the data.

Results:

Five major themes emerged. (1) *Memorable and Impactful Learning Experiences*—participants described immersive engagement in the OR environment, highlighting the warm welcome and professional inclusion by Croatian surgical teams. (2) *Perceptions of Nursing Roles*—the role of OR nurses was viewed as highly skilled and central to surgical success, emphasizing teamwork, safety, and leadership. (3) *Insights for Clinical and Academic Practice*—participants noted advanced ergonomic practices, use of safety checklists, and structured communication as best practices for implementation in their home settings. (4) *Professional Growth and Global Perspective*—exposure to international standards broadened their understanding of global nursing challenges, such as nurse-surgeon communication, and highlighted shared areas for improvement. (5) *Motivation and Aspirational Influence*—the internship boosted students' confidence, professional identity, and commitment to elevating nursing practice to international benchmarks.

Conclusion:

Participation in the Croatian OR internship significantly influenced doctoral nursing students by reinforcing the value of teamwork, global competence, and patient safety. The findings underscore the transformative impact of international clinical experiences on professional development, and support their integration into advanced nursing education programs.

366 Elevating Perioperative Nursing Education-Simulation Training for Category 1 Emergencies in Theatres.

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Background

Category 1 surgical emergencies require immediate response and flawless team coordination to ensure optimal patient outcomes. These high-stakes, time-critical scenarios demand that perioperative teams — especially nurses — are well-prepared to act decisively under pressure. Simulation-based education (SIM) has emerged as a powerful tool to bridge the gap between theory and practice, offering a safe and controlled environment to rehearse rare but critical events. By replicating real-time Cat 1 emergencies, SIM enhances clinical readiness, communication, and role clarity within multidisciplinary theatre teams.

Objectives

- To explore the role of simulation training in preparing perioperative nurses for Category 1 surgical emergencies.
- To highlight the impact of interprofessional SIM on communication, leadership, and crisis management in the operating theatre.
- To evaluate how regular simulation exercises improve team confidence, response times, and patient safety during high-acuity events.

Conclusion

Simulation training for Category 1 emergencies provides perioperative nurses with invaluable experiential learning, reinforcing clinical skills and strengthening interprofessional collaboration. Regular, structured SIM scenarios improve preparedness, reduce human error, and promote a culture of safety in the operating theatre. Investing in simulation as a core component of perioperative education empowers nurses to respond swiftly and effectively when every second counts.

386 The Investigation of the Relationship Between Clinical Learning Environment and Nursing Students' Perceived Competence Levels in Preoperative Nursing Care: A Descriptive and Correlational Study

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Background

Evaluating students' perceived competence regarding preoperative nursing care is essential for assessing the perioperative nursing curriculum and for the development of new educational strategies to enhance students' knowledge and skills before graduation.

Objectives The aim of this study is to examine nursing students' perceptions of the clinical learning environment and its relationship with their perceived competence in providing preoperative nursing care.

Methods

This study was designed as a descriptive and correlational research. It was conducted with 129 third- and fourth-year nursing students from the nursing department of a university. Data were collected using the 'Perceived Competence Scale for Preoperative Nursing Care for Student Nurses' and the 'Clinical Learning Environment, Supervision and Nurse Teacher Evaluation Scale'. Ethical committee approval and institutional permissions were obtained prior to data collection.

Results



The mean perceived competence score of students in preoperative nursing care was 89.32 ± 21.32 . The subdimension with the highest mean score was 'Fulfilling legal responsibilities and adherence to ethical principles' (21.95 ± 3.84), while the lowest was 'Research and professional development' (16.02 ± 4.55). In terms of students' evaluations of the clinical learning environment, the 'Role of the nurse teacher' subdimension received the highest mean score (3.94 ± 1.013), while the lowest was for the 'Learning environment' subdimension (3.54 ± 0.96). The study revealed weak, statistically significant, negative correlations between the 'Fulfilling legal responsibilities and adherence to ethical principles' subdimension and the 'Learning environment' subdimension ($r = -0.195$, $p = 0.027$), and weak, statistically significant, positive correlations between the 'Patient assessment and monitoring' subdimension and the 'Role of the nurse teacher' subdimension ($r = 0.209$, $p = 0.017$).

Conclusion The study found that students' perceived competence in providing preoperative nursing care was above average, and that the role of the nurse teacher in the clinical learning environment was of significant importance.

419 "Ready, Set, Scrub!" Preparing Entry Level Scrub Nurses for Perioperative Practice with an Online Course

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Background

New theatre nurses present different transitional skills and knowledge gaps in scrub practice. Typically, they have had limited surgical training in their UK courses; others are experienced internationally, but would like to refresh their theatres skills and/or gain confidence in working in the UK's National Health Service (NHS). Through a collaboration between hospital and university, a 14-chapters scrub theory course was developed by educators and experienced theatre practitioners. It provides core scrub practice knowledge complementing hands-on learning. Materials and assessment are completely online and asynchronous, covering different specialist topics - from clinical technical skills to non-technical skills and professionalism - with referenced material, videos, and interactive activities. Learners can sign up and start at any time and can complete the course at their own pace.

The course adheres fully to the training guidelines of the European Operating Room Nurses Association (EORNA). It constitutes 45 hours of Continuing Professional Development and it has been adopted by NHS England, ensuring free access to the perioperative workforce nationally.

Objectives

1. To develop and provide a course for entry-level scrub practitioners to aid the completion of their competencies at the start of their careers, and for experienced nurses to refresh on evidence behind practice.
2. To help newly-qualified practitioners (nurses and operating department practitioners) transition into the specialised practice of scrubbing in surgical procedures by bridging knowledge gained in training with the necessary specialist theory and evidence base.

Conclusion

1. Two thirds of learners have completed the course in 14 weeks. The satisfaction score was 4.8 out of 5.
3. Pilot work in the NHS has shown that enrolling new nurses on the course reduced their time to competency by almost two months, from an average of 6.1 months to 4.2 months, ensuring that any drop in productivity typically seen as a result of onboarding new team members was minimised.



4. The course is now available to the entire perioperative care workforce in the UK and internationally.

428 Finnish nursing curricula alignment with the European Operating Room Nurses Association scrub and circulating competencies

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Background

Perioperative nursing competence requirements are increasing due to technological intensity in the operating room and rising patient safety expectations. European Operating Room Nurses Association (EORNA) guidance provides a competence benchmark for scrub and circulating practice.

Objectives

To examine how scrub and circulating perioperative competencies are described in Finnish nursing curricula, to compare curricular content with the EORNA competence framework and to identify congruence, partial alignment and omissions.

Methods

Publicly available curriculum and course-unit documents from Finnish universities of applied sciences (n=18) were analysed using qualitative document analysis (total course units n=52) and deductive content analysis with an a priori coding matrix derived from the EORNA framework. Units of analysis included learning outcomes, content descriptions, teaching/assessment methods, and placement descriptions. Competence elements were coded as present, partially present, or absent.

Results

Perioperative content was identified in all institutions (n=18) across analysed course units (n=52). Aseptic practice (present n=32/52) and patient safety (present n=30/52) were most consistently addressed. Explicit circulating-role competence appeared more often (present n=15/52) than explicit scrub-role competence (present n=5/52). Instrumentation (present n=7/52) and sterile field management (present n=9/52) were unevenly represented, suggesting variable role-specific preparation across curricula.

Conclusion

Finnish nursing curricula provide perioperative foundations, but explicit scrub and circulating competencies align inconsistently with the EORNA framework, particularly for scrub-role elements. The findings support clearer role-based learning outcomes and structured intraoperative learning opportunities to improve comparability and patient safety preparedness. Moreover, the findings underscore the need for an internationally coherent alignment that delineates role-specific perioperative nursing competencies alongside the structural and pedagogical principles governing the preparation of operating room nurses. Such harmonized international guidance would enhance the quality, comparability, and patient-safety-related robustness of perioperative nursing education.



431 The Effect of Artificial Intelligence Tools Used in Elective Courses in Surgical Nursing on Students' Self-Efficacy and Attitudes Towards Artificial Intelligence: A Quasi-Experimental Study

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Background Artificial intelligence (AI) technologies offer significant opportunities in health education by enabling personalized learning, immediate feedback, and enhanced instructional support. However, empirical evidence regarding the effects of AI-based educational practices on learning outcomes in nursing education—where human interaction and clinical reasoning are central—remains limited. In particular, the combined effects of AI-supported instruction on students' academic self-efficacy, attitudes toward AI, and anxiety levels warrant further investigation.

Objectives This study aimed to examine the effects of AI-supported teaching practices used in elective surgical nursing courses on nursing students' academic self-efficacy, attitudes toward artificial intelligence, and AI-related anxiety. A quasi-experimental pretest–posttest design was employed. The study sample consisted of 63 second-year nursing students enrolled in Operating Room Nursing and Nursing Care of Trauma Patients courses at a university. During the instructional process, various AI-supported tools—including quiz and assessment platforms, visualization tools, personalized learning assistants, and text-to-video applications—were integrated into teaching activities. Data were collected using the General Attitude Toward Artificial Intelligence Scale, the Artificial Intelligence Anxiety Scale, and the Academic Self-Efficacy Scale. Paired-sample t-tests, correlation analyses, and multiple regression analyses were conducted.

Following the AI-supported instructional intervention, students demonstrated a significant increase in academic self-efficacy scores ($p = 0.005$), a significant decrease in AI-related anxiety levels ($p < 0.001$), and a significant improvement in positive attitudes toward AI ($p = 0.001$). Regression analysis revealed that positive attitudes toward AI were a significant predictor of academic self-efficacy.

Conclusion:

When implemented in a structured and controlled manner, AI-supported teaching practices enhance nursing students' academic self-efficacy and reduce anxiety related to artificial intelligence. The findings support the integration of AI-based tools as complementary pedagogical approaches in nursing education.

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

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Background

This study investigates the integration of simulation and video-based training to enhance preparedness for acute scenarios in thoracic and vascular surgery. The training aims to improve technical skills, communication, situational awareness, and interdisciplinary collaboration. Ethical considerations, particularly informed consent, ensure participants fully understand the procedures, risks and benefits. **Methods**

A high-fidelity simulated operating room and a structured training program were developed to replicate real-life emergencies. Participants engage in immersive simulation exercises designed to provide hands-on experience in managing acute surgical situations. Debriefing sessions and video analysis facilitate reflective learning, allowing participants to identify strengths and areas for improvement. The program prioritizes teamwork, decision-making, and crisis management skills essential for high-pressure surgical environments. **Discussion**

The implementation of this training faces challenges, including time constraints and limited resources. Collaboration with institutional stakeholders and securing financial support are essential for sustainability. Despite these challenges, simulation and video-based training offer significant advantages, including enhanced technical proficiency, improved interdisciplinary communication, and better decision-making under stress. This structured and immersive approach provides a more effective learning experience, ensuring healthcare professionals are better equipped to manage acute intraoperative events. **Conclusion**

Integrating simulation and video-based training optimizes surgical crisis management. Ethical considerations, adequate resource allocation, and stakeholder engagement are critical to its success. By fostering competence, teamwork, and decision-making, this approach contributes to improved surgical safety and patient outcomes. Sustainable implementation requires ongoing investment and institutional commitment to training excellence.

442 360° Vision: Revolutionizing Thoracic and Vascular Surgical Training via VR Simulation

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Background

Thoracic and vascular surgery requires precision and technical expertise, posing challenges for training healthcare personnel. Traditional training methods have limitations, necessitating innovative approaches. The integration of 360-degree camera technology in the operating room allows for immersive VR-based training, enhancing surgical preparedness and reducing procedural uncertainty.

Methods

This project investigates the use of 360-degree cameras in thoracic and vascular surgery to capture procedures from multiple angles. The recorded material is processed and integrated into a VR simulation for training healthcare personnel. The study assesses camera placement, video quality, and the effectiveness of VR training. Ethical and legal considerations, including patient privacy and consent, are also evaluated. A combination of quantitative and qualitative analyses examines the impact on training outcomes, cost-effectiveness, and user experiences.

Results/Discussion

The integration of 360-degree camera technology with VR simulation enhances surgical training by providing immersive, repeatable learning experiences. However, challenges include optimizing camera placement, technical



limitations, and ensuring patient privacy. Ethical and legal considerations, including consent and data protection, must be addressed. While VR training offers potential cost savings and improved preparedness, its effectiveness compared to traditional methods requires further evaluation to establish its long-term value in medical education.

Conclusion

Integrating 360-degree camera technology with VR simulation presents a novel approach to surgical training. While the technology has promising potential, challenges related to ethical, legal, and technical aspects must be addressed. Future research should focus on optimizing implementation and evaluating long-term benefits to ensure sustainable integration into medical education.

450 Perianesthesia Specialty certification: A Pathway to Global Nursing Excellence, Professional Development and Workforce Retention

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Background

Perianesthesia nurses contribute specialized expertise that is essential to safe and high-quality perioperative care. In an increasingly complex healthcare environment, combining clinical expertise with evidence-based knowledge is critical to advancing practice, improving outcomes, and supporting sustainable nursing workforces. Specialty certification has been recognized internationally as a means of validating professional knowledge, fostering continuous learning, and strengthening clinical expertise. However, access to internationally recognized perianesthesia specialty certification remains limited across Europe.

Objectives

To explore perianesthesia specialty certification as an educational strategy that promotes the synergy of expertise and knowledge, supports professional development, enhances workforce sustainability, and aligns with excellence frameworks such as Magnet®. This poster advocates for the international expansion of perianesthesia certification opportunities for European nurses.

Methods:

A narrative review of peer-reviewed literature was undertaken to examine relationships between specialty nursing certification, professional development, job satisfaction, nurse retention, and patient outcomes. Findings from certified perianesthesia nurse surveys and publications in nursing leadership and professional practice journals were synthesized. Emphasis was placed on certification as a structured approach to lifelong learning and clinical excellence.

Results:

The literature demonstrates that specialty certified nurses report higher job satisfaction, stronger professional identity, and greater engagement in continuing education. Organizations that support certification show improved nurse retention, with reported reductions in turnover of 15-25%. Certification is associated with enhanced clinical confidence, reduced burnout, and improved patient outcomes, contributing to safer perioperative care. These findings align with Magnet® principles that emphasize education, professional development, collaboration, and nursing excellence.

Conclusion

Perianesthesia specialty certification strengthens the synergy between clinical expertise and evidence-based



knowledge. Expanding internationally recognized certification pathways supports continuous learning, professional growth, and workforce sustainability while enhancing patient safety and quality of care. For European perianesthesia nurses, certification represents a strategic opportunity to advance specialty practice and contribute to a collaborative, excellence-driven perioperative community.

99 Construction of an Evaluation Index System for Emergency Response Capability of Operating Room Nurses in Public Disaster Events

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Background

Sudden public disaster events usually result in a large number of casualties. Operating room nurses play a crucial role in emergency treatment. Therefore, it is necessary to continuously enhance the emergency response ability, professional skills, teamwork ability and psychological adaptability of operating room nurses in the face of sudden public disaster events.

Objectives

Establish a scientific and systematic evaluation index system for the emergency response capabilities of operating room nurses in public disasters, providing a quantitative basis for clinical emergency capability training and quality assessment.

Methods

Based on the global core competence framework for disaster nursing of the International Council of Nurses and the PPRR theory, an evaluation index system was initially constructed through literature analysis and semi-structured interviews. Finally, the emergency capability evaluation index system was determined using the Delphi method.

Results

The positive coefficients of the two rounds of expert inquiries were both 100%; the expert authority coefficients C_r were 0.911 and 0.917; the Kendall's coefficient of agreement W ranged from 0.165 to 0.371, $P < 0.05$. The final constructed evaluation index system for the emergency response capabilities of operating room nurses in sudden public disaster events consists of 4 first-level indicators, 14 second-level indicators, and 57 third-level indicators.

Conclusion

The evaluation index system for the emergency response capabilities of operating room nurses in dealing with sudden public disaster events, which was constructed in this study, is highly scientific and reasonable. The content is specific and complete, and can be used to assess the emergency response capabilities of operating room nurses in dealing with sudden public disasters. It provides a reference basis for the standardized training of emergency capabilities of operating room nurses and the arrangement, assessment of emergency personnel.



139 Managing Perioperative Nurse Well-Being Through Evidence-Based Leadership and Workforce Recovery Strategies

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Background

In the aftermath of the COVID-19 pandemic, perioperative nursing staff in a high-volume Operating Room (OR) department at the country's largest trauma center experienced significant disruptions to annual leave scheduling. The department, consisting of 13 operating rooms—three of which operate 24/7 with a focus on orthopedic trauma—faced a serious accumulation of unused leave. This backlog contributed to staff fatigue, elevated burnout risk, and operational inefficiencies. Leadership identified an urgent need to address this issue as part of a broader workforce recovery effort.

Objectives

The motivation for presenting this case study stems from the urgent need to address the long-term impact of the COVID-19 pandemic on perioperative nursing staff, particularly in high-pressure surgical environments. The OR department in question—part of the country's largest trauma center—faced critical challenges in staff well-being due to the accumulation of unused leave, elevated burnout, and service continuity risks. This topic is highly relevant to the field, as many surgical units worldwide continue to grapple with similar post-pandemic workforce recovery issues. By sharing the outcomes of a structured, evidence-based leadership intervention, this case offers practical, scalable strategies that can inform organizational resilience, staff retention, and operational planning across perioperative care settings.

Conclusion

The intervention, conducted over a six-month period, achieved a 38% reduction in accumulated leave across 70 perioperative nursing staff members, decreasing the average leave balance from 22 to 13.6 days per nurse. Staff well-being scores, measured via quarterly pulse surveys, improved by 27%, with notable gains in work-life balance and perceived leadership support. Surgical throughput remained stable, with no procedure cancellations attributed to staffing shortages during the implementation period. This case underscores the importance of intentional, data-informed leadership in addressing post-pandemic workforce fatigue, particularly in complex, high-acuity surgical environments

173 The Power of Positive Leadership: Happy Surgical Team, Efficient Operating Room

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Background

In the current scenario, the relationship between positive leadership and happiness at work is essential for



professional growth and well-being. Committed leaders increase team satisfaction and productivity. In perioperative nursing, leadership is crucial for coordination and collaboration, ensuring patient safety throughout all surgical stages. This recognition encourages professionals to hone their skills and improve the care provided.

Objectives

Know the evidence about the importance of positive leadership in perioperative nursing and its influence on promoting happiness at work, identifying strategies for a culture of well-being and efficiency in the operating room.

Methodology:

An integrative literature review was conducted to answer the question: What is the influence of positive leadership on happiness at work and team performance in the perioperative nursing context? The research was conducted in June 2025 using the CINAHL and MEDLINE Complete databases (via EBSCOhost), covering the years 2019 to 2025. The Mesh terms used were Leadership; Happiness; Job Satisfaction and Perioperative Nursing. Studies in Portuguese and English that linked positive leadership to the well-being and performance of perioperative teams were included. After analyzing 19 articles, 12 were selected.

Results:

Studies show that leaders with a positive approach foster more productive, resilient, and innovative teams. A safe and inclusive environment motivates professionals to achieve institutional goals. Effective leadership in perioperative nursing is associated with a reduction in adverse events and the promotion of patient safety. Skills such as effective communication, positive encouragement, active presence, and emotional intelligence are crucial.

Conclusion

Positive leadership is essential for transforming the perioperative environment. Leaders who inspire, recognize, value, and promote motivated, resilient, and excellence-focused teams. Investing in training focused on emotional intelligence and communication strengthens patient safety and professional well-being, promoting more human and efficient organizations.

Keywords:

Leadership; Happiness; Perioperative Nursing; Job Satisfaction.

199 Collaboration of the surgical team – the key to successful patient health

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Background

When dealing with trauma procedures, it's crucial that the entire surgical team—scrub nurses and physicians—form a single team that will preserve/save the patient's health and life.

A 71-year-old patient, for example, was admitted to the hospital with a traumatic subamputation of his right wrist and hand (spaghetti injury). The injury included damage to vessels (arterial and venous), muscles, tendons (superficial and deep flexors of the fingers, flexor carpi radialis and ulnar muscles, flexor pollicis longus, palmaris longus), nerves (median and ulnar nerves), and bones (fracture of the trapezius major). The physicians reported the "right hand replantation" procedure to the "orthopedic" surgical nurse in the operating room.

Objectives

The orthopedic surgeons who reported the emergency procedure clearly explained the case and provided the



necessary equipment. The team on duty in the operating room comprises nurses who are supposed to be proficient in all possible "on-call" procedures. However, the reality is that during the shift, a nurse from every possible specialty is on duty, in which they are experts. Mutual communication and collaboration allowed for the rapid preparation of the operating room for the procedure, taking just a few minutes. Each specialty provided necessary equipment (e.g., mini-headlamp microscopes), microsurgical instruments (not necessarily available in orthopedics), and vascular sutures.

Conclusion

Efficient and quick decision-making under time pressure, self-control, and mutual support, and the experience of orthopedic surgeons and surgical nurses (specializing in orthopedics, neurosurgery, and otolaryngology) allowed the patient to save his hand (whereas several other centers specializing in replantation had refused to help him). The patient could partially move his fingers and retained much of his sensation!

232 Measuring operating room nurses' preferences regarding work intensity using a discrete choice experiment

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Background

Operating room (OR) nurses face varying levels of work intensity depending on surgical conditions, staffing, and workload. Understanding how nurses perceive different intensity factors is crucial for designing supportive work environments, staffing models, and compensation policies.

Objectives

This study aims to assess OR nurses' preferences regarding different aspects of work intensity using a Discrete Choice Experiment (DCE) and to estimate their marginal willingness to pay for changes in key job characteristics.

Methods

A DCE was designed with five attributes: number of surgeries per shift (1, 2, 4, 6), type of surgery (emergency daytime, emergency night-time, elective), standing time (under 2 hours, 2–4 hours, 4+ hours), presence of a circulating nurse (yes/no), and hourly wage (€13–16). Nurses were also asked to rank operations from different specialities by their intensity. A pilot survey was conducted among OR nurses from Estonia's two largest operation departments: Tartu University Hospital and North Estonia Medical Centre. Data were collected and analyzed using the SurveyEngine.com platform. Descriptive statistics were calculated, and a multinomial logistic regression model was used to estimate the impact of each attribute on nurses' preferences.

Results

Preliminary findings indicate that nurses perceive night-time emergency surgeries, prolonged standing, and the absence of a circulating nurse as key contributors to increased work intensity. Among these, prolonged standing and lack of support staff were the most significant. Estimated MWTP values suggest that nurses require higher compensation to accept work under these conditions.

Conclusion

The study demonstrates that DCE is a useful method for quantifying OR nurses' preferences regarding work intensity. These insights can support human resource planning, work design, and wage policy by aligning job demands with nurses' expectations and improving retention in high-intensity surgical settings.



360 Not Done Yet: A Theatre Nurse's Journey Beyond Retirement

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After more than 40 years in the operating theatre, I retired from a role that had defined me for most of my life. Theatre nursing wasn't just a job—it was my identity, my passion, and my purpose. But when the time came to leave, I quickly realised I wasn't ready. I still had so much more to give.

This presentation reflects on the emotional and professional experience of retiring from a lifelong career in perioperative care. It explores the sense of loss that came with stepping away, and the deep desire to continue contributing—not in scrubs and clogs, but in a different, equally valuable way. I found myself looking at the new faces coming into the theatre—junior nurses, newly qualified staff, and international colleagues adjusting to new systems—and felt an overwhelming pull to support, mentor, and guide them.

Throughout my career, I witnessed the transformation of surgical practice, technology, and theatre culture. I adapted, learned, led, and supported countless teams. Now, I want to use that experience to give back—through education mentorship, and being a steady hand for those just beginning their journey.

This talk will not only share my personal story, but also advocate for structured roles that enable retired perioperative nurses to stay involved. We have a wealth of knowledge, practical skills, and emotional insight that shouldn't be lost when the retirement bell rings. Let us become part of the support system—because retirement doesn't mean we're done. It just means we're ready to contribute in a new way.

My hope is to spark a conversation about how we can better integrate senior experience into the evolving future of perioperative care. Because while I may be retired, my heart is still in the theatre.

388 The Impact of Leadership-Based Interventions Applied During the Perioperative Period on Team Performance and Patient Outcomes: A Systematic Review

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Background

Coordination and effective leadership practices among operating room teams during the perioperative period are critical to patient safety and quality of care. While the literature indicates that leadership-based interventions improve team performance, strengthen communication, and improve patient outcomes, there is a need for a systematic review of studies in this area.



Objectives

The aim of this systematic review is to comprehensively present the current knowledge by compiling the findings of randomized controlled trials that examine the effects of leadership-based interventions implemented during the perioperative period on team performance and patient outcomes.

Method

The study was conducted in accordance with PRISMA guidelines, and PubMed, Scopus, Web of Science, Google Scholar, Science Direct, EBSCOhost, Cochrane Library, Google Scholar, and CINAHL databases were searched for relevant studies published between 2015 and 2025. The keywords “perioperative leadership, team performance, patient safety, and surgical management” were used, and no restrictions were imposed on the study design. The search yielded 2,231 records.

Findings

As a result of the search, 12 publications were included in the systematic review. The studies reviewed showed that leadership-based interventions had positive effects on team communication, coordination, and collaboration. Additionally, improvements in patient outcomes, such as a decrease in surgical complication rates and an increase in patient satisfaction, were reported. However, some studies noted methodological differences in the effectiveness of the interventions and the impact of the duration of implementation.

Conclusion

The findings of the systematic review support the potential of leadership-based interventions to improve team performance and patient outcomes during the perioperative period. The widespread implementation of leadership training in clinical practice is important for improving the quality of patient care in operating room processes. Future studies should focus on developing standard intervention protocols and monitoring long-term effects.

447 Leveraging errors for learning in the operating theatres

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Background Errors in the operating theatres are often viewed solely as threats to workflow efficiency, leading to a “blame culture.” However, errors are an intrinsic feature of human nature. To improve safety, organisations must shift their perspective, viewing errors not as failures, but as unconventional strategic resources for organisational learning and staff development.

Objectives This study aimed to investigate how preventable workplace errors can be effectively captured and leveraged into valuable learning opportunities. Specifically, it sought to understand aftermath of errors from healthcare professionals’ perspective and how these outcomes can be fed back into the system to prevent reoccurrence.

Methods Adopting an interpretivist stance, this study applied the Enhanced Critical Incident Technique within the operating theatre department at (a general hospital in Europe). Data was collected to capture the experiences of theatre nurses, surgeons, and anaesthetists through 21 semi-structured qualitative interviews and 16 diary entries.

Findings revealed that learning is obstructed by a culture clinging to the status quo, distinct conflicts between staff and management, and obstructing behaviours by senior nurses, including microaggressions and favouritism. Furthermore, the reporting system was deemed non-functional due to ambiguity regarding reportable incidents and a distinct absence of feedback. Consequently, errors remain concealed or are discussed only within trusted “silos”, such as, among specific shift members or same-specialty peers, limiting learning to small groups. Despite inadequate



ongoing training, staff expressed a strong willingness to leverage errors for prevention if these relational and systemic barriers are resolved.

Conclusion The tension between patient safety and operational efficiency currently stifles the psychological safety required for reporting. Interestingly, all the identified barriers may be considered resolvable. Operating theatres must move beyond the "blame culture" to foster an environment where errors are transparently shared, discussed, transforming individual mistakes into systemic learning opportunities.

10 Title: Investigated postoperative symptoms of patients by application of local smoke evacuator during laparoscopic surgery: A systemic review

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Background

Postoperative symptoms often affect patients' recovery, and surgical smoke if not properly managed has been identified as a potential contributor to these symptoms. Used of smoke evacuators during surgery may help reduce such adverse effects.

Objectives

Aim of this study is to evaluate the clinical impact of local smoke evacuator systems, with a specific focus on their effects on postoperative symptoms.

Methods

A systematic literature search was conducted across PubMed, CINAHL, and the Cochrane Library for studies published between January 2015 and January 2025. Inclusion criteria were full article, randomized controlled trials (RCTs) that examined the use of surgical smoke evacuation systems during laparoscopic procedures and their impact on postoperative patient outcomes. Articles were performed independently by one reviewer, and assessed by Oxford CEBM.

Results

Six studies met the inclusion criteria, encompassing 773 patients. Three studies reported a statistically significant reduction in the incidence and severity of postoperative pain and shoulder pain when local smoke evacuators were utilized. Two studies demonstrated lower rates of postoperative subcutaneous emphysema in groups where smoke evacuation systems were used. In addition, three studies noted higher surgeon satisfaction regarding the clarity of the operative field with the application of local smoke evacuation systems. One study reported a reduction in average hospital stay and maximum end-tidal CO₂ levels in the evacuation group; however, it also noted an increase in hospitalization costs associated with the use of smoke evacuators.

Conclusion

Used of local smoke evacuation systems during surgery appears to offer several clinical benefits. These include a significant reduction in postoperative and shoulder pain, decreased incidence of subcutaneous emphysema, improved surgeon satisfaction due to enhanced clarity of the operative field, shorter hospital stays and lower maximum end-tidal CO₂ levels. Overall, the evidence suggests that smoke evacuation systems might enhance surgical outcomes, albeit with potential cost implications.



96 Investigation of the relationship between mobility levels of older patients undergoing spinal surgery and fear of pain and fear of falling

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Background

The evaluation of the post-operative mobilization levels of older patients undergoing spinal surgery and knowing the factors affecting them are important for the post-operative recovery process.

Objectives

To determine the relationship between mobility levels (turning from one side to another in bed, sitting on the edge of the bed, standing at the edge of the bed, and walking inside the patient room) of older patients undergoing spinal surgery and their fear of pain and falling, and the factors affecting them.

Methods

A descriptive correlational study was conducted with 144 older individuals who underwent spinal surgery

Results

In older patients who underwent spinal surgery, higher post-operative pain, fear of pain, and fear of falling were significantly associated with reduced mobility. Female gender, advanced post-operative days, fewer mobilizations, presence of chronic disease, and use of aids were negatively correlated with overall mobility and specific activities such as turning in bed, sitting, standing, and walking ($p < .05$). Female gender and post-operative pain were predictors of total and all sub-dimensions of mobility level in older patients who underwent spinal surgery. It was determined that the presence of chronic disease was the predictor of the sub-dimensions of turning from one side to the another in bed and standing at the edge of the bed while using aids and fear of falling were the predictors of the sub-dimensions of standing at the edge of the bed and walking inside the patient room.

Conclusion

More mobilization assistance should be provided for older people who have undergone spinal surgery to reduce their fear of falling, which affects their ability to stand up and walk inside the patient room. Enhancing patients' mobilization levels with bed exercises before mobilization can reduce pain and fear of falling.

100 The Role of the Radiation Protection Committee in Patient Safety: A Case of Good Practice in a Surgical Setting

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Background

The use of ionising radiation in hospitals, particularly in hybrid operating rooms, orthopaedics, and vascular procedures, has increased significantly in recent years. This trend presents risks for both professionals and patients,



requiring a structured and sustained approach. Despite national and European regulations, radiological protection measures are not always implemented consistently. In this context, the Radiation Protection Committee (RPC) plays a key role in promoting a culture of safety, monitoring practices, and empowering clinical teams.

Objectives

This poster aims to present the experience of actively implementing an RPC in a private hospital, highlighting its contribution to patient safety and institutional good practice. It also seeks to demonstrate how multidisciplinary collaboration and the standardisation of procedures can have a measurable and positive impact.

Conclusion

The RPC enabled the development of various initiatives, such as proper signage of controlled areas, continuous team training, occupational exposure assessment, review of protocols based on ALARA principles, and direct involvement of operating room nurses in monitoring practices. These actions show that the integration of technical knowledge, leadership, and institutional accountability creates a safer environment for patients and staff alike. This model of operation can be successfully replicated in other hospital settings, reinforcing the value of combining expertise and collaborative governance in the field of radiation safety.

124 Caring Beyond Binaries: Perioperative Nursing Considerations for Transgender and Gender Diverse Patients

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Background

All individuals receiving healthcare have the right to access and benefit from quality services equally, regardless of their skin color, ethnicity, religion, sexual orientation, or gender identity. This principle is directly aligned with the ethical codes of nursing, which are grounded in equity. Among the patient groups at risk of care refusal and stigmatization are members of transgender and gender-diverse (TGD) communities. The terms transgender and gender diversity refer to individuals whose gender identity or expression differs from the sex assigned at birth. Many TGD individuals have reported experiencing discrimination or negative encounters in healthcare settings due to their gender identity or expression.

Objectives

This review aims to emphasize the unique perioperative care needs of TGD individuals and the role of perioperative nurses, along with key ethical and clinical considerations, in delivering safe, equitable, and inclusive care based on current literature.

Conclusion

TGD individuals may seek healthcare for various reasons, including gender-affirming medical or surgical treatments. Perioperative nurses must be competent in ensuring patient safety and providing high-quality care, as they may encounter surgical patients of different ages and stages in gender transition. Creating an inclusive and supportive environment, establishing open, respectful, and trust-based communication, using patients' affirmed names and pronouns, and protecting privacy and confidentiality are essential components of this competence. Additionally, nurses should be aware of the perioperative risks and physiological effects related to hormone therapy, as well as specific care needs associated with previous gender-affirming surgeries. It should not be overlooked that patients may experience identity confusion, social withdrawal, anxiety, or difficulty adapting to a new body image. Recognizing these unique needs and providing inclusive, respectful, and ethical perioperative nursing care is critical to improving



patient safety and care quality. Enhancing nurses' knowledge and skills will contribute to increased awareness and equity in healthcare services.

129 Postoperative Fear of Falling and Risk of Falling: A Systematic Review of Nursing Master's Theses in Turkey

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Background: Fear of falling and risk of falling in patients undergoing surgical procedures are important issues that need to be addressed in terms of patient safety. Fear of falling causes deterioration in patients' physical health and increases the risk of falling. It also reduces the patient's quality of life and prolongs the healthcare process. Fear of falling is a modifiable factor and, when managed with appropriate approaches, can reduce the burden of care for postoperative patients.

Objectives: This study aimed to systematically review postgraduate theses in the field of nursing in Turkey that address the fear of falling and the risk of falling after surgery.

Methods: The data for this retrospective and descriptive study were accessed from the Turkish Higher Education Council Thesis Centre Database on 8 July 2025. The inclusion criteria for theses were: related to nursing and patients who underwent surgery, full-text access, and search terms 'fall,' 'fall risk,' and 'fear of falling.' Sixteen theses were included in the study. Data were collected using the 'Thesis Evaluation Form' and evaluated using descriptive statistical methods.

Results: The search yielded 13 master's theses and 3 doctoral theses published between 2008 and 2024. The sample size in the theses ranged from 28 to 344. The study design of the theses was descriptive (n=14), experimental (n=1), and quasi-experimental (n=1). The theses investigated the relationship between postoperative fear of falling and risk of falling, the effect of fear of falling on quality of life, and the determination of risk of falling.

Conclusion: It was determined that most of the thesis designs were descriptive in nature and conducted with patients who had undergone orthopaedic surgery. It is recommended that high-evidence-level randomised controlled studies be conducted with different patient groups.

Keywords: Falling, fear of falling, risk of falling, postoperative period, nursing care

152 Medical Device Related Pressure Injuries in the Operating Room: Risk Factors and Preventive Practices

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Background

Operating room environments are at high risk for pressure injuries because patients are immobilized for long periods of time. Medical device-related pressure injuries (MDRPI) are defined as localized skin and/or subcutaneous tissue



damage caused by the pressure generated by the medical device. In the literature, it is emphasized that the risk of injury increases with prolonged contact of medical devices used during surgery to the skin.

Objectives The aim of this review was to discuss medical device-related pressure injuries in the operating room, the risk factors that cause these injuries, and interventions for their prevention in line with the current literature.

Conclusion

Studies and clinical guidelines published between 2015 and 2025 in Web of Science, PubMed, Scopus, Science Direct, Medline, Ovid, EbscoHost, Dynamed, Springer Link, Google. In the literature, the incidence of MDRPI in the operating room is reported to vary between 0.56% and 27.4%. Age, mean arterial pressure, duration of surgery, body mass index, tightness of the medical device and the duration of the presence of the medical device are reported as important risk factors for MDRPI. The most common devices causing pressure injury include blood pressure cuffs, vital sign monitoring devices such as electrocardiogram cables, and respirators. In the literature, it was determined that the main recommendations for the prevention of MDRPI are assessment of the risk of pressure injury, keeping the skin clean and dry, positioning of the medical device, and use of prophylactic protective drapes. Medical instrument-related pressure injuries are a common and often preventable patient safety problem in the operating room environment. It is critical to know the risk factors, implement preventive strategies and increase the awareness of healthcare professionals.

297 The Impact of Patient Safety Culture on Medical Error Propensity Among Surgical Nurses: A Multicenter Cross-Sectional Study

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Background

Nurses working in surgical units play a critical role in ensuring patient safety and preventing medical errors.

Objectives

This study aimed to examine the effect of patient safety culture on the propensity for medical errors among nurses working in surgical units.

Methods

This multicenter cross-sectional study was conducted between January and May 2025 with nurses working in the surgical units of four different hospitals in Gaziantep, Turkey. The sample size was determined using the G*Power program, and data were collected from 355 nurses. Data were gathered through face-to-face surveys using a Demographic Information Form, the Patient Safety Culture Scale, and the Medical Error Propensity Scale. Statistical analyses were performed using SPSS 22.0, with a significance level set at $p < 0.05$.

Results

Among the participating surgical nurses, 52.4% were aged 30 or below, 74.4% were female, and 69.8% held a bachelor's degree or higher. Additionally, 44.5% had less than five years of professional experience, and 64.8% worked in shifts. While orientation and patient safety training rates were high (89.9% and 93.5%, respectively), the rate of medical error reporting was notably low (2.0%). Nurses working ≤ 40 hours per week had significantly higher medical error propensity scores (4.69 ± 0.35) than those working > 40 hours ($p = 0.001$), indicating a lower tendency to make errors. Younger, male, single nurses with lower education levels, less experience, longer work hours, and prior



patient safety training had significantly higher patient safety culture scores, suggesting a stronger perception of safety culture. Patient safety culture was also identified as a significant predictor of error propensity ($\beta=0.415$, $p<0.001$).

Conclusion

The level of patient safety culture among surgical nurses has a significant impact on their propensity to make medical errors. A strong perception of patient safety culture emerges as an effective determinant in reducing the likelihood of errors.

357 Multicomponent, Evidence-Based Nonpharmacological Interventions for the Prevention of Delirium in Geriatric Surgery Patients During the Perioperative Period

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Background *[[Please replace your content here]]* Delirium is an important geriatric syndrome that develops as a result of the interaction of multiple aetiological factors in elderly individuals and is characterised by cognitive and functional impairments.^{1,2} It is common among hospitalized elderly patients and is associated with increased morbidity, mortality, length of hospital stay, and healthcare costs.¹ It is observed in 23% of non-cardiac surgery, 27% of orthopaedic surgery, and 19% of oncological surgery.^{3,4} Its prevalence is expected to increase with the ageing population. It is emphasised that approximately 30-40% of cases are preventable and that inappropriate medical interventions increase the risk.^{1,5} Therefore, a multidisciplinary, individualised approach is required. Current guidelines recommend prioritising non-pharmacological, multi-component interventions and the use of structured protocols.⁶⁻¹⁰ The Scottish Guidelines Network supports multi-component interventions that include pain control, regular orientation, reduction of patient transfers, sleep hygiene, early mobilisation, and nutritional optimisation.⁸ The European Society of Anaesthesiology emphasizes a quiet environment, night eye masks, caffeine restriction, early mobilization, and a team-based approach.¹¹ The literature has shown that multi-component interventions reduce the risk of delirium by 13% to 43%¹¹⁻¹³ and shorten the duration of delirium.^{12,13}

Objectives Although delirium is preventable, there are significant gaps in healthcare professionals' knowledge and management, which affect patient safety and quality of care.^{14,15} Ageing, frailty, and increasing comorbidities necessitate improved early diagnosis and management skills in high-risk patients.¹⁵ The aim of this review is to examine preventive non-pharmacological interventions for delirium and evaluate the existing evidence.

Conclusion Evidence and guidelines indicate that multi-component interventions play a fundamental role in the prevention of delirium. These interventions must be implemented with the active participation of patients, their families, and all perioperative stakeholders.¹⁶

387 Pressure Injuries in the Operating Room: A Scoping Review

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Background: Pressure injuries (PIs) are a major perioperative complication, resulting from prolonged immobility and sustained pressure during surgery. They are associated with increased morbidity, extended hospital stays, and higher healthcare costs. Although preventive protocols exist, intraoperative PIs remain underreported, and evidence specific to surgical populations is fragmented.

Objective: This scoping review aimed to synthesize current literature on risk factors, preventive interventions, and outcomes related to pressure injuries in the operating room (OR), while identifying research gaps and providing recommendations for perioperative practice.

Methods: Following the Joanna Briggs Institute (JBI) methodology and PRISMA-ScR guidelines, a comprehensive search was conducted across PubMed, CINAHL, Cochrane Library, Scopus, and Embase for studies published between 2013 and 2023. Inclusion criteria focused on adult surgical patients, peer-reviewed articles in English, and studies addressing PI risk, prevention, or outcomes. Twenty studies met eligibility requirements and were analyzed using structured data extraction and thematic charting.

Results: Key risk factors included surgical duration exceeding three hours, patient comorbidities such as obesity, diabetes, and cardiovascular disease, and positioning in supine or lateral orientations. Preventive strategies—particularly pressure-relieving devices, specialized support surfaces, repositioning protocols, and perioperative staff training—were consistently associated with reduced PI incidence. Reported outcomes highlighted improved recovery, shorter hospital stays, and cost savings. However, barriers such as limited equipment availability, high OR workload, and inconsistent staff adherence hindered implementation.

Conclusion: Pressure injuries in the OR are preventable yet remain a critical patient safety issue. Consistent use of pressure-relieving devices, regular staff education, and multidisciplinary collaboration are essential to reduce incidence. Future research should prioritize randomized controlled trials, evaluate long-term effectiveness of intraoperative prevention strategies, and explore innovative approaches to enhance compliance with perioperative protocols.

392 Operating Room Patient Safety – From Checklists to Artificial Intelligence

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Background and Objectives

This study aimed to analyse global research trends in operating room patient safety using bibliometric methods, revealing a progressive transformation of surgical safety practices from traditional checklists to artificial intelligence-based approaches.

Methods

A descriptive bibliometric design was employed, and data were retrieved from the Web of Science Core Collection using terms related to “operating room,” “perioperative,” “patient safety,” “surgical safety checklist,” and “artificial intelligence.” Analyses were conducted with the bibliometrix package in R and the Biblioshiny interface.

Results

A total of 2,499 publications produced between 1989 and 2025 were examined, with an annual scientific growth rate of 17.36%. Overall, 3,631 thematic keywords were identified. Scientific output accelerated notably after 2008, coinciding with the introduction of the WHO Surgical Safety Checklist. The most productive sources were *Surgical Endoscopy and Other Interventional Techniques* (n = 52), and *Patient Safety in Surgery* (n = 42). Authorship patterns



showed strong alignment with Lotka's Law: 84.9% of authors produced a single publication, while approximately 10% authored two studies. The United States led global output (≈ 780 publications), followed by China (≈ 230) and the United Kingdom (≈ 210).

Keyword frequency analysis revealed "surgery" ($n = 393$), "safety," "communication," and "checklist" as the conceptual core of the field. The term "artificial intelligence" displayed rapid growth in recent years. Co-word and thematic mapping showed that the dominant themes involve surgical safety processes, checklist implementation, and team communication, whereas emerging themes include augmented reality and AI-based predictive models.

Conclusion

In conclusion, the evolution of operating room patient safety research demonstrates a shift from procedure standardisation in the 2000s, to human factors and communication in the 2010s, and to artificial intelligence and data-driven safety systems in the 2020s. The current literature reflects a clear transition from manual checklist-based safety practices toward AI-supported, automated, and predictive perioperative safety frameworks.

407 Evaluation of the Use of Retained Surgical Item Risk Assessment Scale in Operating Room

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Background: Retained surgical items represent a serious and preventable patient safety problem in operating rooms. Despite the existence of counting protocols and safety checklists, human factors, system-related issues, and workload continue to contribute to this risk. The use of structured risk identification tools may support clinical decision-making and enhance awareness regarding retained foreign body prevention.

Objectives: This study aimed to evaluate operating room nurses' perceptions, experiences, and recommendations regarding the use of the Retained Surgical Item Risk Assessment Scale in clinical practice.

Methods: This qualitative study was conducted with 15 operating room nurses working in a university hospital operating room. Data were collected through in-depth semi-structured interviews. Thematic analysis was performed in accordance with the six-phase framework of Braun and Clarke. Transcripts were coded line by line, similar codes were grouped into subthemes, and five main themes were generated. Trustworthiness was ensured through repeated readings, peer checking, and direct quotations.

Results: Five main themes were identified: (1) Risk perception and experiences related to retained surgical items, (2) Contribution of the scale to clinical practice and patient safety, (3) Opinions on the content and items of the scale, (4) Organizational difficulties in implementation, and (5) Recommendations for development and system integration. Nurses perceived retained surgical items as a constant and serious patient safety risk, particularly during long surgeries, staff fatigue, team changes, and communication failures. The scale was reported to enhance awareness, improve systematic counting, and provide legal and professional protection.

Conclusion: The Retained Surgical Item Risk Assessment Scale is perceived as a valuable tool for increasing risk awareness and supporting patient safety in the operating room. However, successful implementation requires organizational support, workload regulation, interdisciplinary collaboration, and digital system integration. Institutional commitment and regular training programs are essential for sustainable use.



413 Enhancing Perioperative Safety Through Standardized Instrument Organization

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Background

Effective instrument organization is a critical factor influencing perioperative workflow and patient safety. In our operating theatre, we observed inconsistencies in the arrangement of surgical instruments, which varied depending on the nurse preparing the set. These variations created delays during preparation and increased the risk of misplacement or omission of instruments. The need for a more reliable and standardized approach became evident.

Goals

The aim of this project was to enhance patient safety and improve the efficiency of operating room preparation through the implementation of a standardized instrument layout

Conclusion

Introducing a standardized instrument layout proved to be a simple yet highly effective intervention. The change led to shorter preparation times, improved clarity for the entire surgical team, and reduced the risk of errors associated with inconsistent setup. This intervention demonstrates that even small organizational improvements can significantly enhance perioperative safety and may serve as a model for other operating theatres seeking practical, low-cost solutions

418 Knowledge Levels of Operating Room Nurses on Intraoperative Pressure Injuries

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Background: Intraoperative pressure injuries are a major patient safety concern in surgical settings, where prolonged immobility, anesthesia-related sensory loss, and positioning-related factors increase risk. Operating room nurses have a crucial role in preventing these injuries through appropriate positioning, skin assessment, and preventive interventions. Evaluating nurses' knowledge in this area is essential to identify educational needs and improve patient outcomes.

Objectives: This study aimed to determine the knowledge levels of operating room nurses regarding intraoperative pressure injuries and to examine differences according to sociodemographic and professional characteristics.

Methods: This descriptive, cross-sectional study was conducted with 50 operating room nurses. Data were collected using a Demographic Information Form and a 25-item knowledge assessment scale related to intraoperative pressure injury prevention. Each correct answer was scored as one point, with total scores ranging from 0 to 25. Non-parametric statistical tests were used for data analysis.



Results: The mean total knowledge score was 22.46 ± 2.63 , indicating a high level of knowledge among participants. Most items were answered correctly by the majority of nurses. However, lower correct response rates were observed in some items related to risk assessment and specific preventive strategies, indicating targeted knowledge gaps. No statistically significant differences were found in total knowledge scores according to gender, marital status, education level, professional experience, operating room experience, or working position ($p > 0.05$).

Conclusion: Operating room nurses demonstrated a high level of knowledge regarding intraoperative pressure injury prevention, particularly in patient positioning, pressure redistribution, and prevention of device-related injuries. Nevertheless, item-level analysis revealed gaps in distinguishing evidence-based practices from non-recommended interventions. These findings emphasize the need for targeted, guideline-based educational programs to strengthen evidence-based intraoperative nursing practices and enhance patient safety.

421 Stage II Burns Developed Due to the Use of an Intraoperative Warming Device in Long-Duration Surgeries: Two Case Reports

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Background

Unwanted perioperative hypothermia may cause complications such as surgical site infection, increased blood loss, cardiovascular events, delayed recovery. Active warming systems, particularly warm air blowers, are widely used to maintain normothermia; however, improper use may cause iatrogenic thermal injuries during prolonged surgery. This report presents two cases of Stage II thermal burns related to inappropriate intraoperative use of warming devices. The first case involved a 6-year-old male patient who underwent atrial septal defect repair lasting 5 hours and 15 minutes. The second case involved a 65-year-old male patient who underwent hand surgery lasting 6 hours and 40 minutes. In both cases, a warm air blower was used; however, the device hose was placed directly under the surgical drapes without a compatible warming blanket, resulting in direct skin contact. This caused localized heat accumulation and thermal injury. A 10×10 cm bullous Stage II burn was observed extending from the femoral head to the right upper abdominal quadrant in the pediatric patient, while a 5×6 cm bullous Stage II burn was observed on the ankle of the adult patient. These findings highlight the critical role of device safety and continuous nursing surveillance in the operating room.

Objectives

The aim of this study is to present two cases of thermal burns caused by misuse of intraoperative warming devices and to raise awareness of safe device use in perioperative and operating room nursing.

Conclusion

Warming device hoses under surgical drapes might harm tissue during protracted procedures. Correct device positioning, periodic inspection of high-risk areas without compromising sterility, effective team communication, and active incident reporting are essential to prevent such complications. Establishing standardized device safety protocols and reinforcing nursing vigilance can significantly enhance patient safety. Reporting preventable iatrogenic burns contributes to patient safety awareness and supports the development of evidence-based perioperative nursing practice.



460 Advantages and Limitations of RFID Used in Surgical Instruments: A Narrative Literature Review

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Background

Traceability of surgical instruments is a central component of patient safety, risk management, quality assurance and regulatory compliance in perioperative and sterile processing workflows. Radiofrequency identification (RFID) technology has been explored to enhance real-time instrument tracking throughout the reprocessing cycle. However, adoption remains inconsistent across healthcare systems, reflecting uncertainty regarding added value, technical feasibility and cost-effectiveness.

Objective

To critically analyse the benefits and limitations of RFID use in surgical instruments based on current scientific evidence and international guidance.

Methods

A narrative literature review was conducted using PubMed, CINAHL and EBSCOhost databases. Articles published between 2015 and 2025 were analysed, focusing on benefits, technical and organisational limitations, costs, and implications for patient safety and process efficiency.

Results

The literature indicates that RFID offers relevant advantages but also significant challenges. A key benefit is the reduction of retained surgical items, particularly when combined with manual counting protocols, contributing to improved patient safety (Peng et al., 2023; Kusuda et al., 2024). RFID improves operational efficiency by enabling faster instrument identification compared to barcode systems, reducing workload and dependence on operator proficiency. Individualised tracking supports monitoring of usage, reprocessing cycles and maintenance history, facilitating predictive maintenance and procurement planning (Yoshikawa et al., 2019). Intraoperative RFID use has been associated with surgical tray optimisation, decreasing unnecessary instruments and reprocessing demands (Olivere et al., 2021). When appropriate cleaning protocols are followed, RFID does not appear to increase corrosion risk (Yamashita et al., 2019). Limitations include high initial implementation costs, potential electromagnetic interference, reduced detection accuracy in high-density environments and the need to adapt workflows.

Conclusion

RFID enhances traceability and efficiency in surgical instrument management but should be considered a complementary rather than standalone solution. Implementation requires assessment of technical, economic and organisational factors. Further cost-effectiveness and implementation studies are needed to support wider perioperative adoption.



36 Professional frustration among operating room nurses performing organ procurement versus those involved in both procurement and transplantation

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Background

Organ transplantation is a life-saving medical procedure that often arouses significant public and media attention, highlighting the dramatic, emotional and sometimes ethical aspects of transplant surgery. In contrast, the essential phase of organ procurement receives less visibility. Operating room (OR) nurses who are involved only in organ procurement surgery may experience unique emotional and professional challenges including lack of appreciation, professional satisfaction and underestimation.

Objectives

This study aims to assess the professional experience and emotional responses of OR nurses involved in organ procurement only, compared to those participating in both procurement and transplantation, identifying differences in perceived professional meaning, satisfaction and frustration.

Methods

A descriptive, multi-center, cross-sectional study was conducted among 9 Israeli hospitals. The survey included 240 OR nurses, divided into two groups: (1) 120 nurses from hospitals conducting both procurement and transplantation surgeries (e.g. Rabin, Hadassah Ein Kerem, Ichilov); (2) 120 nurses from hospitals conducting procurement surgery only (e.g., Assuta Ashdod, Emek, Kaplan, Assaf Harofeh, Nahariya, Meir).

Data was collected via a validated, anonymous self-report questionnaire comprising demographic variables, professional background, and emotional attitudes. Ethical approvals were obtained from participating institutions.

Results

Preliminary findings show that nurses performing only procurement surgery report higher levels of professional frustration and emotional strain. Those involved in both procurement and transplantation describe greater professional satisfaction and meaningfulness, likely due to their exposure and participation in the whole process of transplantation.

Conclusion



The study highlights a professional-emotional gap among OR nurses based on their level of involvement in the transplant process. Organizational and educational and professional value.

125 Silent Threat: Operating Room Nurses' Mental Health and Its Impact on Patient Safety and Nursing Care

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Background

Operating room (OR) nurses are at significant mental risk due to various physical and psychological challenges within the complex nature of the surgical environment. These include time pressure, continuous attention to multi-step procedures, decision-making that directly impacts human life, physically and mentally demanding care practices, and interdisciplinary coordination. Empathic responsibility, care burden, exposure to traumatic scenes, workplace violence, demanding shift work, healthcare issues, imbalance in support systems and staff and equipment shortages adversely affect nurses' mental health. These effects not only impact nurses on an individual level but also pose serious threats to the care quality and patient safety.

Objectives

This review aims to examine the factors affecting the mental health of OR nurses and to evaluate their impact on nurses' psychosocial well-being, patient safety, and nursing care.

Conclusion

Mental health problems faced by nurses have numerous physiological and psychological effects. Chronic illnesses, sleep and eating disorders are among the primary physiological consequences. Additionally, deterioration in personal well-being, loss of self-esteem and self-efficacy, job dissatisfaction, decreased motivation for patient care, and reduced professional fulfillment may occur. These effects may result in compassion fatigue, empathic exhaustion, social withdrawal, burnout, anxiety, depression, and advanced psychiatric problems. These outcomes, though often considered individual, significantly affect team dynamics. The most destructive reflection of these effects is on patient care and safety. In this process, the risk of errors in patient safety practices increases, the nurse-patient relationship deteriorates, and the loss of core nursing values—such as patient-centered, holistic, and humanistic care—leads to negative impacts on patient outcomes, satisfaction, and healthcare delivery. Therefore, preserving the psychosocial and mental well-being of OR nurses is crucial. Ensuring staff safety in surgical care is a key component of effective patient safety practices, and a healthy work environment must be ensured.

143 Silencing the Strong: A Systematic Review of Leadership Harassment and the Degradation of Nursing Identity

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Background

In the hierarchical structure of healthcare institutions, head nurses serve as a vital link between front-line staff and senior management. While their role demands leadership skills, communication, and emotional intelligence, many face persistent psychological challenges from higher authorities. Abuse and harassment from senior management—such as hospital administrators or department executives—are increasingly recognized issues in nursing. These behaviors may include unjust criticism, exclusion from decision-making, verbal humiliation, or unrealistic demands that erode professional autonomy. Although workplace bullying has received growing attention, top-down abuse of head nurses remains underexplored, posing risks to professional identity and healthcare system stability.

Objectives

This systematic review investigates the nature and impact of psychological harassment by senior management toward head nurses. It examines how such abuse damages professional identity—through reduced self-worth, role ambiguity, and impaired leadership confidence—and leads to emotional exhaustion, dissatisfaction, and turnover. By synthesizing findings from international studies, the review exposes an often-overlooked form of organizational toxicity. Its goal is to inform leadership development, shape policy, and foster psychologically safe environments for nursing leaders.

Conclusion

Findings from 38 international peer-reviewed studies (2010–2024) show that over 65% of head nurses who reported harassment identified senior management as the main source. In 71% of studies, abuse was linked to harm in professional identity, and in 52% it correlated with turnover intentions. Victims commonly reported reduced autonomy, ethical stress, fear of retaliation, and emotional fatigue. These findings highlight the urgent need for anti-harassment protocols, leadership ethics training, confidential support mechanisms, and stronger organizational accountability. Safeguarding the mental well-being and dignity of head nurses is essential to sustaining effective leadership and ensuring continuity in patient care.

171 Ergonomics in the operating room is not a luxury, but a necessity — for staff well-being and patient safety.

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Workplace ergonomics in the operating theatre is crucial for ensuring efficiency, safety, and comfort for medical personnel—especially perioperative nurses—and for optimizing the surgical process. It involves various factors, including appropriate equipment, room layout, environmental conditions, and workflow procedures.

The role of a perioperative nurse involves significant physical and mental strain. It demands high levels of concentration, precision, teamwork, and the ability to manage stressful situations. From an ergonomic perspective, key elements include adapting workstations to human physical capabilities, organizing space efficiently, and using medical equipment that supports both comfort and safety for the entire surgical team.

Prolonged static positions, frequent lifting of heavy objects (e.g., patients or equipment), and repetitive motions can lead to musculoskeletal overload and occupational diseases.

Ergonomics in this context aims to improve working conditions to increase comfort, safety, and efficiency during instrument handling and specific surgical procedures. Mental strain often results from the responsibility for patient



life, the need to act quickly in emergencies, and time pressure. Therefore, providing proper psychosocial conditions—such as team support, adequate staffing, and opportunities for rest—is essential.

Applying ergonomic principles can significantly enhance nurses' job quality. Key factors include optimal staffing levels and support personnel for tasks like transporting instrument containers.

Ergonomics should be an integral part of operating room management and workforce planning.

How to achieve optimal ergonomics in the OR?:

- Appropriate layout and storage space design
- Clear safety procedures for OR work
- Task distribution among nursing staff
- Smart surgical scheduling
- Technical support roles in the OR
- Proper OR equipment
- Reducing adverse events through safe devices

228 The Role of Social Media in the Lives of Perioperative Nurses During the COVID-19 Crisis: Findings from Surveys and Interviews

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Background

The COVID-19 crisis brought about dramatic shifts in the routines and emotional experiences of healthcare workers, particularly perioperative nurses. Amid these changes, social media emerged as a prominent channel for staying connected, exchanging information, and seeking emotional relief. However, its widespread use also raised concerns about its influence on job performance and the quality of patient care.

Objectives

This study set out to understand how perioperative nurses utilized social networking platforms during the pandemic, and how this interaction shaped their mental health, professional efficiency, and attitudes toward clinical practices.

Methods

A mixed-methods approach was used, combining quantitative surveys with qualitative, semi-structured interviews. Participants included 78 perioperative nurses from two prominent hospitals. Statistical techniques were applied to the quantitative data, while qualitative responses were examined through thematic analysis.

Results

Four primary themes were identified:

1. **Usage Behaviors:** Frequent engagement with platforms like Facebook and Instagram for professional communication and peer connection.
2. **Emotional Outcomes:** A dual effect—social media served both as a source of comfort and a trigger for anxiety, particularly when false or conflicting information was encountered.
3. **Workplace Impact:** Experiences varied, with some nurses reporting improved communication and others citing distraction from their duties.
4. **Perceived Care Quality:** Online conversations appeared to shape nurses' perceptions of effective care delivery and patient-centered approaches.



Conclusion

In conclusion, social media played a multifaceted role in the perioperative nursing environment during the pandemic. The findings highlight the importance of institutional support and clear digital communication guidelines to ensure social media serves as a helpful resource rather than a source of disruption.

259 The Relationship Between Biological Rhythm, Chronotype, Fatigue, and Quality of Life in Operating Room Nurses

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Background

[Operating room nurses face challenges such as shift work and limited natural light exposure, which can disrupt circadian rhythms and result in misalignment with their chronotype. These factors may contribute to fatigue, sleep disturbances, and decreased quality of life.]

Objectives

[This study aimed to explore the relationship between biological rhythm and chronotype characteristics, fatigue levels, and quality of life among operating room nurses.]

Methods

[A descriptive and correlational study was conducted from June to December 2025 with 109 operating room nurses who had been actively working in the field for at least one year. Data collection tools included the Descriptive Information Form, Biological Rhythm Interview of Assessment, Morningness-Eveningness Questionnaire, Chalder Fatigue Scale, and EUROHIS WHOQOL-8.Tr. Statistical analyses were performed using SPSS 25.0, employing descriptive statistics, parametric tests, and Pearson correlation analysis.]

Results

[Preliminary analysis based on 84 complete responses revealed a mean participant age of 36.21 ± 7.12 years and an average of 13.70 ± 7.57 years of operating room experience. Mean sleep duration was 6.79 ± 1.47 hours, and daily caffeine intake averaged 3.69 ± 1.55 cups. Biological rhythm scores averaged 45.90 ± 6.12 ; fatigue 14.33 ± 3.21 ; quality of life 3.13 ± 0.35 ; and chronotype 52.54 ± 5.45 (indicating an intermediate type). Biological rhythm irregularity correlated positively with fatigue ($r = 0.266$; $p = 0.015$), while regular exercise was negatively associated with fatigue ($r = -0.256$; $p = 0.019$). Caffeine intake was positively correlated with quality of life ($r = 0.276$; $p = 0.011$). Having children was negatively associated with caffeine consumption and sleep duration.]

Conclusion

[Circadian rhythm disruptions were associated with increased fatigue. Lifestyle factors such as exercise and caffeine consumption also influenced fatigue and quality of life. These findings support the need for shift planning based on individual chronobiological traits and promotion of healthy lifestyle habits.]



262 Under the Surgical Lights: Light-Related Stress in Operating Room Nurses, A Systematic Review

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Background

[Operating room nurses work for prolonged periods in enclosed environments under intense artificial lighting, often without access to natural daylight. These environmental conditions can negatively impact both the psychological and physiological well-being of nurses, with light-related stress emerging as a prominent factor. Existing literature frequently emphasizes the therapeutic benefits of light, although its potential role as a stressor remains underexplored. In order to reevaluate nurses' working conditions, it is crucial to investigate the impact of lighting on stress levels in high attention and physical endurance requiring environments such as the operating room.]

Objectives

[The aim of this systematic review was to identify and holistically evaluate scientific studies that examine the role of lighting as a source of stress among operating room nurses. This study was designed and conducted in accordance with the PRISMA2020 guidelines. A systematic search was carried out in the PubMed, ScienceDirect, and Google Scholar databases for studies published between 2000 and 2025. Studies that addressed lighting as a stressor and involved operating room nurses were included. A total of three studies that met the inclusion criteria were evaluated, and their methodological quality was assessed using the Joanna Briggs Institute (JBI) Critical Appraisal Checklist. The reviewed studies indicated that exposure to low light levels, intense artificial lighting, and a lack of natural light were associated with increased stress levels among operating room nurses. These lighting-related factors were found to influence both psychological stress (decreased job satisfaction, distraction, tension) and physiological stress (elevated blood pressure, anxiety). These findings highlight the potential benefits of optimizing lighting conditions to enhance nurses' comfort and functionality in the workplace.]

Conclusion

[Light in the operating room is not merely a mean of lightning, but a significant environmental stressor that necessitate consideration. To support the well-being of nurses, factors such as access to natural light, lighting ergonomics, and environmental design must be reconsidered. However, given the limited number of studies in this area, further research is encouraged.]



284 Psychometric Validation of the Chinese Version of Comprehensive Assessment of Acceptance and Commitment Therapy Processes (CompACT) in Nasopharyngeal Cancer Patient

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Background

[Psychological flexibility is crucial for cancer coping, necessitating validated Acceptance and Commitment Therapy (ACT) measures for nasopharyngeal carcinoma (NPC) patients. The psychometric properties of the Chinese version of the CompACT (CompACT-C) in this population remain unestablished.]

Objectives

[To evaluate the reliability and validity of the 23-item CompACT-C for measuring psychological flexibility among Chinese NPC patients for utilisation of ACT-based interventions.]

Methods

[In a cross-sectional study, 350 patients with NPC were enrolled. The construct validity and convergent validity (with experiential avoidance) of the CompACT-C were examined. The reliability of the instrument was tested by examining the internal consistency and test-retest reliability (two-week interval).]

Results

[A total of 270 NPC patients were included, 198 (73.3%) of whom were male and had a mean age of 46.99 ± 11.22 years. The CompACT-C consisted of three dimensions: Openness to Experience (OE), Behavioural Awareness (BA) and Valued Action (VA), as indicated by Cronbach α coefficients of the CompACT and its 3 factors were 0.615, 0.223, 0.820 and 0.802, and the test-retest reliability (ICC) was 0.776, 0.552, 0.747 and 0.811, respectively. The confirmatory factor analysis showed that the 3-factor structure fitted well [structural equation model analysis, $\chi^2 = 590.951$, $df = 227$, $NC (\chi^2/df) = 2.603$, $RMSEA = 0.064$, $CFI = 0.804$, $TLI = 0.781$, $SRMR = 0.098$]. The Pearson's correlation test results showed that the CompACT-C and its dimensions were significantly negatively correlated with the AAQ-II ($r = -0.301 \sim -0.547$). Three subscales were also significantly correlated with the total CompACT-C, with moderate correlation coefficients of 0.406, 0.745 and 0.551, accordingly.]

Conclusion

[The CompACT-C demonstrates acceptable reliability and validity for assessing ACT processes in NPC patients. It should be noted that the low results observed in the OE subscale suggest opportunities for improvement. Further revisions will be made to the scale to enhance its utility as a reliable tool for assessing psychological flexibility in Chinese cancer patients.]



378 Invisible struggles in perioperative nursing: A case study from Colombia

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Background

The perioperative process encompasses the entire patient experience before, during, and after surgery. It begins with the surgical indication and continues until the patient has fully returned to their daily activities without postoperative complications. In Colombia, this process has been largely ignored in both science and clinical practice, as evidenced by the lack of specialized training and the fragmentation of roles and functions within the surgical team. This reality poses a challenge to ensuring safe, coordinated, and humanized care that adequately addresses the clinical, social, and emotional complexities of the surgical patient.

Objectives

Analyze the current situation of perioperative nursing in Colombia.

Conclusion

Perioperative care in Colombia faces structural challenges that require urgent attention. Although some progress has been made, gaps remain in the safe administration of medications and patient education for postoperative recovery. The shortage of nursing staff further aggravates this situation, compromising quality and surgical care. With high levels of burnout among professionals and a lack of quality surgical patient care, it is imperative to invest in adequate education and training, as well as improve the equitable distribution of the workforce.

In this context, it is essential to enhance the continuing education of nursing professionals, ensure decent working conditions, and promote an equitable distribution of human resources. These actions are crucial for implementing care models that prioritize humanized care responding to the individual needs of surgical patients and facilitating the timely identification of risk factors, as well as the prevention of complications in the perioperative setting.

389 Improving surgical acceptance among rural cancer patients through targeted perioperative counselling

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Background

In rural communities, deeply rooted cultural beliefs often shape patients' understanding of cancer and its treatment. In my perioperative practice, a recurring challenge has been the refusal of life-saving cancer surgery due to the misconception that "cancer spreads once touched by a knife." This belief contributes to significant fear, emotional distress, and delays in curative treatment. Addressing these myths is essential for improving psychological readiness and surgical acceptance. **Objectives**

The purpose of this case study is to describe a structured counselling approach used to support rural cancer patients who initially declined surgery due to cultural misconceptions. The objective was to enhance their understanding of



the disease, reduce anxiety associated with surgical intervention, and promote informed decision-making that maximizes opportunities for curative outcomes. **Conclusion**

Targeted, culturally sensitive counselling proved effective in helping patients overcome fear-based beliefs surrounding cancer surgery. By using simple language, visual explanations, family involvement, and continuous emotional support, many patients shifted from refusal to acceptance of surgery. This approach not only improved psychological preparedness but also increased the likelihood of receiving timely, potentially curative treatment. The case highlights the critical role perioperative nurses play in addressing mental health, cultural beliefs, and health literacy to create healthier, more supportive perioperative environments—especially for vulnerable rural populations.

391 Supporting Perioperative Nurses Experiencing Compassion Fatigue in Cancer Surgery

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Background: Perioperative nurses working in cancer surgery are frequently exposed to high-stress environments, witnessing patient suffering, complex surgical procedures, and life-altering outcomes. This repeated exposure increases the risk of compassion fatigue, which can negatively affect nurses' well-being, patient care, and workplace retention.

Objectives: This study aims to identify the prevalence of compassion fatigue among perioperative nurses in cancer surgery settings and evaluate strategies to support their mental health and resilience.

Methods: A descriptive cross-sectional study was conducted among 120 perioperative nurses in tertiary cancer surgery centers. Data were collected using the Professional Quality of Life Scale (ProQOL) and semi-structured interviews exploring coping mechanisms, support systems, and organizational interventions. Quantitative data were analyzed using descriptive statistics and correlation tests, while qualitative data underwent thematic content analysis to identify recurring patterns and themes.

Results: Preliminary findings indicate that 68% of nurses reported moderate to high levels of compassion fatigue, with burnout and secondary traumatic stress significantly correlated with years of experience and workload intensity ($p < 0.05$). Qualitative analysis highlighted the importance of peer support, access to mental health resources, structured debriefing sessions, and leadership engagement as key protective factors. Nurses emphasized the need for tailored interventions, including resilience training, mindfulness practices, and supportive organizational policies, to mitigate the psychological impact of caring for cancer patients.

Conclusion: Compassion fatigue is a prevalent issue among perioperative nurses in cancer surgery, with implications for both staff well-being and patient care quality. Implementing structured support systems, promoting self-care, and fostering a healthy workplace culture are critical strategies to enhance resilience and reduce the impact of compassion fatigue. Future research should focus on longitudinal interventions and their effectiveness in sustaining nurse mental health in high-stress surgical environments.



409 THE RELATIONSHIP BETWEEN ERGONOMIC ISSUES IN OPERATING ROOM NURSES AND LUMBAR DISC HERNIATION

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Background: The International Council of Nurses (ICN) defines the nursing profession's working environment as one of the areas with the highest risk in terms of occupational diseases and accident frequency. Operating room nurses face various ergonomic risks due to their workload. These risks stem from activities such as prolonged standing, strenuous body positions, repetitive movements, equipment and table arrangements that do not comply with ergonomic standards, and equipment and patient transfers. These ergonomic risks can cause musculoskeletal disorders, particularly back pain. Back pain is a significant occupational health problem commonly seen among operating room nurses, negatively affecting quality of life by reducing work efficiency. The persistence of ergonomic problems and prolonged back pain in operating room nurses poses a potential risk for the development of lumbar disc herniation as a result of disc degeneration.

Objective: Studies measuring the direct and long-term prevalence of “lumbar disc herniation” specifically in operating room nursing are limited. However, the frequency of musculoskeletal complaints and the high level of ergonomic risks observed in the same environment suggest that the risk of disc disease may be elevated in this group. This review is planned to investigate the relationship between ergonomic risks in operating room nurses and the development of back pain and lumbar disc herniation.

Conclusion: Operating room nursing is a professional discipline with high ergonomic risks for the musculoskeletal system, particularly in the lower back (lumbar) region. The incidence of lumbar disc herniation among operating room nurses poses a significant risk. In this context, ergonomic risks should be identified and assessed at an early stage. Assistive equipment should be used for high-risk tasks such as patient transfer and lifting, and ergonomic environment design and adequate staffing levels should be ensured. Ergonomic training should be conducted regularly without fail.

410 Social Passport for New OR Nurses: A Novel Model for Social Integration Behind Closed Doors

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Background

Operating rooms (ORs) are highly demanding, closed clinical environments where new nurses often experience social isolation, emotional overload, and hesitation to ask questions. These challenges negatively affect confidence, learning, and long-term retention. Literature indicates that 20–30% of new nurses leave their position within two years, largely due to insufficient social integration and a lack of structured support. In response, our OR department designed an innovative model to strengthen belonging, emotional well-being, and team connection.

Objectives



To improve social integration, reduce early turnover, and enhance both the professional and emotional support provided to new OR nurses through a structured social mentoring framework.

Methods

A multi-layered onboarding intervention was implemented. A designated Social Mentor was appointed to provide consistent emotional and social guidance. Additionally, the department created a “Social Passport”—a passport-style booklet containing light, interpersonal tasks (such as guided introductions, team interactions, and shared breaks). Each completed task earned a stamp, turning the onboarding period into an engaging social process. After six months, a satisfaction survey was administered to all new staff members (N=6).

Results

A 100% response rate was achieved. All participants reported that the Social Passport significantly improved their integration into the OR team. All nurses described the Social Mentor as accessible, supportive, and essential during moments of difficulty. They reported increased confidence, stronger relationships, and reduced stress during their transition. Senior staff noted improved teamwork, a more positive departmental atmosphere, and renewed professional pride.

Conclusion

The Social Passport initiative effectively enhances social integration and emotional support for new OR nurses. By transforming a stressful entry process into a positive and empowering experience, the model contributes to improved retention and strengthens the sense of belonging within the OR environment. This framework can be adapted by other departments seeking structured, human-centered onboarding solutions.

435 Frustration and Emotional Numbness Among OR Nursing Staff in Hospitals Performing Organ Procurement Without Transplantation

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Background

[Please rOrgan transplantation is a life-saving procedure requiring a complex multi-stage process. The process begins with organ procurement (harvesting from brain-dead donors) and ends with transplantation into recipients. In Israel, organ procurement occurs in all hospitals, but transplantation is performed only in 6 major medical centers. This creates a unique situation where nursing staff in non-transplant hospitals experience only the emotional burden of procurement without witnessing the life-saving outcome. Key Issue: Nurses who participate only in procurement experience death and emotional difficulty without "closure" — never seeing the transplant that saves lives. Media coverage focuses on transplant teams, leaving procurement-only teams feeling undervalued.eplace your content here]

Objectives

[• Compare attitudes and feelings between OR nurses who perform procurement only vs. those who perform procurement AND transplantation • Assess the impact of "closure" (witnessing transplantation outcomes) on staff wellbeing • Identify factors contributing to frustration and emotional numbness • Inform development of intervention programs for procurement-only teamsPlease replace your content here]

Conclusion

Lack of “closure” (procurement without transplantation) drives frustration and emotional numbness, reflected by many procurement-only nurses wanting to join transplantation. • Procurement-only nurses reported lower procedural response, professional value, and team dynamics, suggesting a less meaningful and more emotionally distancing



work experience. • Reduced training and hands-on instruction in procurement-only teams amplify stress and detachment during high-stakes cases.

449 Exposure to disruptive behavior is associated with turnover intentions and motivates actual turnover

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Background

Disruptive intraoperative behavior harms patients, clinicians, and institutions. Turnover intentions (a desire to leave one's current position) foreshadows turnover. Identifying the causes of turnover is critical to mitigate clinician shortages. While previous studies have linked experiencing discrimination and violence to turnover, the impact of disruptive behavior that is witnessed or less egregious is understudied.

Objectives

To examine whether different types of exposure predict turnover intentions among operating room clinicians.

Methods

Surgeons, nurses and perfusionists were surveyed across Canada, New Zealand, and the British Isles through professional medical associations. Data was collected online using validated scales measuring turnover intentions, five types of exposure (i.e., personal, ingroup, outgroup, patient, and undirected), and covariates including socio-demographics, personality factors, and safety attitudes. The association between exposure and turnover intentions was examined using mixed effects models with medical association as a random effect. To test whether witnessed exposure improved model fit, we compared nested models (personal exposure alone vs all 5 types included) using information criteria and likelihood ratio tests. Additionally, the cost of turnover due to exposure was estimated using profession-specific costs associated with one turnover event.

Results

362 responses were analyzed. Personal exposure to disruptive behavior was associated with turnover intentions after adjusting for covariates ($\beta=0.06$, $p<0.001$). Adding the remaining exposure types trended toward worsening model fit (AIC 2723 vs 2726, $X^2=4.99$, $p=0.289$), with personal exposure remaining significant ($\beta=0.06$, $p<0.001$), and the only form of witnessed exposure independently predictive was undirected ($\beta=0.027$, $p=0.041$). 67/362 (18.5%, 95%CI=14.9-22.8%) clinicians reported leaving a position because of disruptive behavior. The estimated cost of turnover due to disruptive behavior in this sample was ~\$7,600,000 USD.

Conclusion

Personal exposure showed the most robust association with turnover intentions. Nearly one in five clinicians reported leaving a position due to disruptive behavior, which is associated with significant financial burden.



15 Raising Awareness of Hand Hygiene in the Operating Room

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Background

Hand hygiene is a critical component in preventing healthcare-associated infections, especially in sensitive environments such as the operating room (WHO, 2009; CDC, 2020). This project focuses on increasing awareness of the importance of hand hygiene among operating room staff – anesthesiologists, nurses, support staff, and surgical technologists.

Objectives

The aim of this work was to assess the level of awareness, identify gaps between knowledge and actual behavior, and examine means to enhance adherence to hand disinfection practices (Pittet & Boyce, 2001).

Methods

A literature review was conducted, and dedicated training sessions were held for various teams on the topic of hand hygiene, with the goal of reinforcing knowledge, increasing commitment, and changing current practices (Erasmus et al., 2010). After the training, data was collected through questionnaires and observations to assess the impact of the intervention on behavior and awareness. In addition, the number of hand sanitizer dispensers was increased, and dispensers were placed at key points in the operating rooms (Kampf & Kramer, 2004). Stickers and visual reminders were also prepared and placed throughout the rooms to encourage frequent use of hand sanitizers.

Results

An improvement in staff awareness and a positive change in behavior were observed. Compliance with hand hygiene increased from 61.4% in 2024 to 79.1% in 2025.

Conclusion

The project is still in progress, and final conclusions will be drawn following continued intervention and monitoring. Preliminary conclusions emphasize the importance of training, accessibility of hygiene facilities, reinforcement through visual messages, and ongoing awareness and consistency.

167 Breaking the Bottleneck: Tackling Operating Room Traffic Chaos During Surgical Procedures

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Background

Operating room (OR) traffic during surgical procedures remains a persistent issue with significant implications for patient safety, workflow efficiency, and infection control. The presence of unnecessary personnel, frequent door openings, and disorganized movement within the OR contribute to distractions, increased risk of surgical site infections (SSIs), and reduced staff performance. Despite these risks, OR traffic is often overlooked in surgical planning and multidisciplinary team coordination.



Objectives

This systematic review aims to investigate the causes, consequences, and potential solutions to OR traffic during surgical procedures, with a focus on multidisciplinary strategies. The objective is to synthesize evidence-based practices that can inform hospital protocols and support the development of safer, more efficient surgical environments.

Conclusion

Fifteen (15) peer-reviewed studies were analyzed, revealing that 80% identified excessive OR traffic as a contributing factor to compromised sterile environments and a 15% rise in SSIs. Additionally, workflow disruptions increased by 25%, often linked to poor coordination among surgical, anesthesia, and support teams. Studies implementing multidisciplinary interventions—such as personnel access restrictions, real-time traffic monitoring, staff education, and scheduled supply deliveries—achieved an average 30% reduction in unnecessary movement. These interventions correlated with a 20% improvement in team efficiency, a 12% reduction in surgical time, and a 70% increase in staff-reported satisfaction. Furthermore, operating theatres that adopted formal traffic control policies showed enhanced intra-team communication and fewer procedural interruptions. The evidence highlights the need for hospitals to adopt structured, multidisciplinary approaches to OR traffic management. By prioritizing environmental discipline and teamwork, institutions can reduce bottlenecks, lower infection risks, and improve surgical outcomes across the board.

217 Surgical instruments become contaminated with bacteria in the sterile field regardless of the type of ventilation system

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Background

Postoperative wound infections are a feared complication of surgical procedures and are the reason why surgeries are performed aseptically. Although the literature addresses many infection prevention measures, there have been limited studies focusing on instrument contamination.

Objectives

This study investigates whether sterile, unused instruments that lie exposed on the instrument table in an operating room become contaminated.

Methods

Two different sections at a surgical department at a university hospital participated in the project. Data were collected during actual operations, divided into 12 operations at each section. The sections used different types of ventilation systems, laminar airflow (LAF) and conventional overpressure ventilation (COV). Slides were used as models for instruments in an experimental instrument tray. This tray was sterilized and handled in the same way as the ordinary trays, and placed together with the ordinary trays on the instrument table. Slides were removed from the tray every hour for up to 4 hours or more during the course of the operation and placed in culture dishes. The culture dishes were then incubated, and possible bacterial growth was recorded.



Results

Bacterial growth was recorded in 36.7% of the 180 samples taken from the operating rooms with COV, compared to 12.2% of the 180 samples taken from the operating rooms with LAF (Student's t-test - $p < 0.001$). Regression analysis showed an increase in the number of slides with growth from hour 1 to hour 4. Other variables examined were the number of door openings and the number of people present in the operating rooms. In the COV operating rooms, a strong correlation was found between the number of door openings and bacterial growth.

Conclusion

Sterile, unused instruments that are opened and left uncovered are exposed to contamination during the course of the operation. The risk is greatest with COV.

448 From Complexity to Confidence: Safe Reprocessing of Robotic Surgery Devices — A Case Study

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Background

The introduction of a robotic surgical system brought new challenges to infection prevention in the perioperative setting. Robotic instruments are complex devices with articulated joints, narrow lumens, and internal mechanisms that are often difficult to access during cleaning. When reprocessing is inadequate, these characteristics increase the risk of retained organic material and ineffective decontamination, with potential consequences for patient safety (World Health Organization [WHO], 2016). During the initial implementation phase, variability in practice was identified, together with the need to review existing workflows, analyse the manufacturer's instructions for use, and assess available equipment and staff experience. These findings highlighted the importance of adapting reprocessing processes to the specific demands of robotic technology.

Objectives

To describe the implementation of a structured and validated reprocessing workflow for robotic surgical instruments and to explore its contribution to perioperative infection prevention and patient safety.

Conclusion

Implementing robotic surgical instrument reprocessing required detailed analysis, time, and close multidisciplinary collaboration. The manufacturer's instructions for use were reviewed in accordance with international requirements for medical device reprocessing (International Organization for Standardization [ISO], 2018), and specific cleaning accessories were acquired. Existing workflows were adapted to include standardized cleaning steps, validated washing parameters, and appropriate packaging methods for complex devices. Traceability was strengthened to enable monitoring of each instrument throughout the entire reprocessing cycle, supporting quality assurance and compliance. Targeted training improved staff confidence, reduced variability in practice, and promoted consistent adherence to perioperative best practices (European Operating Room Nurses Association [EORNA], 2023). This implementation shows that a structured and well supported approach can reduce infection risks associated with complex surgical devices and highlights the importance of maintaining a consistent, validated reprocessing process to ensure patient safety when new technologies are introduced.



459 Point-of-use Treatment of Reusable Surgical Instruments: A Narrative Literature Review

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Background

Point-of-use (POU) treatment of reusable surgical instruments is recognised as a critical early step in the decontamination pathway, aiming to reduce organic soil, prevent drying of contaminants and facilitate subsequent cleaning and sterilisation. International standards and perioperative guidelines emphasise compliance with manufacturers' instructions for use and integration of POU practices into perioperative infection prevention and control strategies.

Objectives

Identify and synthesise recent recommendations regarding POU treatment of reusable surgical instruments reported in the scientific literature and guidance published by international professional orders and societies.

Methods

A narrative literature review was conducted using EBSCOhost, PubMed and CINAHL Complete. Guidance documents published by international organisations and professional orders related to the operating room and sterile processing were also analysed. The review focused on recommended practices, implementation challenges and organisational implications.

Results

The literature indicates substantial convergence regarding key POU principles, including immediate removal of visible contamination, avoidance of saline solutions, and maintenance of moisture until cleaning (Atwood et al., 2024). However, despite clear international recommendations, multiple sources report significant variability and inconsistencies in POU practices across institutions, particularly in product selection, timing of interventions and responsibility attribution among perioperative staff (Panta et al., 2022). These inconsistencies are more pronounced for complex and lumened devices, where practices often diverge from manufacturers' instructions. Organisational guidelines highlight the need for standardised protocols, adequate POU resources, staff education, competency-based training, and audit and feedback mechanisms.

Conclusion

Although international guidance provides clear recommendations for point-of-use treatment, inconsistencies in clinical practice remain evident. Addressing this gap requires procedure standardisation, strengthened compliance with manufacturers' instructions and integration of POU practices into quality improvement and governance frameworks. Enhancing education and organisational accountability may contribute to improved reprocessing quality and patient safety in operative settings.



462 Risk Mapping for Safe Reprocessing of Robotic Surgical Devices: A Narrative Literature Review

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Background

The increasing adoption of robotic surgery in operating theatres introduces challenges for infection prevention and device reprocessing. Robotic instruments contain complex joints, narrow lumens, and internal mechanisms that complicate effective cleaning and sterilization. Inadequate reprocessing increases the risk of residual organic material and device malfunction, compromising patient safety (World Health Organization [WHO], 2016). Although international standards define general requirements for medical device reprocessing, few structured tools address risks specific to robotic instruments (International Organization for Standardization [ISO], 2018). Developing a risk map grounded in scientific evidence and professional guidelines may enhance reliability and safety within the Central Sterile Services Department (CSSD).

Objectives

The objective of this review was to identify the main risks associated with reprocessing robotic surgical instruments and to examine how a narrative literature review can support the development of a structured risk map to strengthen perioperative infection prevention and patient safety.

Methods

A narrative literature review was conducted using PubMed, CINAHL, EBSCO, Google Scholar, WHO, and ISO sources covering 2015–2025. Keywords included *robotic surgery*, *reprocessing*, *sterilization*, *infection prevention*, *traceability*, and *medical devices*. Guidelines, reviews, and professional standards addressing cleaning, disinfection, sterilization, staff training, and quality assurance were analysed.

Results

Identified risks included inadequate cleaning (WHO, 2016), inconsistent adherence to manufacturers' instructions for use (ISO, 2018), insufficient traceability (European Operating Room Nurses Association [EORNA], 2023), and variability in staff training (Costa et al, 2019). These factors highlight the need for standardized workflows and continuous education.

Conclusion

Organizing these risks into a structured risk map supports evidence-based decision-making, promotes standardized practices, and strengthens patient safety. Systematic risk identification aligned with international guidelines can improve reliability in reprocessing complex robotic surgical devices and contribute to safer perioperative care.



3 Improving surgical smoke awareness and operation room setting to provide a pollution free environment by GYN operation room nurses.

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Background

Surgical smoke poses health risks on surgical team and the patients, thus knowing how to prevent surgical smoke is important. Firstly, a questionnaire for “Surgical smoke awareness and local smoke evacuator usage rate” was used to analyze surgical smoke awareness and local smoke evacuator usage rate. Surgical smoke awareness of operating room nurses was investigated from five perspectives: cognition, policy, smoke evacuator usage rate and environment setting. Secondly, correct usage rate of local smoke evaluator was evaluated via “Local smoke evacuator operation checklist”. 17 operation room nurses and 3 registered nurse first assistants from the gynecological operation room were evaluate. The scores of “Surgical smoke awareness and local smoke evacuator usage rate” and correctly usage rate of “Local smoke evacuator operation checklist” were 39/100 and 45.1% prior to the project.

Objectives

Increased the score of the “surgical smoke awareness and local smoke evacuator usage rate” questionnaire, and correct usage rate on the “Local smoke evacuator operation checklist”.

Main Findings

Score of “surgical smoke awareness and local smoke evacuator usage rate” questionnaire increased from 39 to 92/100; and correct usage rate of the “Local smoke evacuator operation checklist” increased from 45.1% to 94% after this project.

Conclusion

The project includes three stages: planning, implementation and evaluation. In the planning stage, poster, E-learning and lecture for surgical smoke awareness were designed, operating procedures and operation checklist were standardized with relative troubleshooting cards. In the implementation stage, lectures and conferences were conducted, videos of local smoke evacuator and lecture contents were displayed on E-learning platform of operation room, standardized operating procedures were introduced, and troubleshooting cards were placed on local smoke evacuators. The methods introduced in this project have proven to increase surgical smoke awareness effectively in OR, in order to provide a pollution free environment for both healthcare personnel and patients.

66 AN INNOVATIVE SUSTAINABILITY PROJECT: WASTE SEGREGATION AND RECYCLING IN THE SURGICAL UNIT OF HOSPITAL UNIVERSITARI MUTUA TERRASSA

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Background

Hospital Universitari Mútua Terrassa (HUMT) launched an innovative Project in its Surgical Unit (SU) aimed at reducing its carbón footprint, through responsible waste management practices.

Objectives

The main objective was to assess the impact of an intervention promoting the segregation of non-hazardous plastic and paper waste in the perioperative setting over a six-month period.

Secondary objectives included quantifying the volumen of segregated waste and evaluating staff engagement and motivation towards sustainable practices.

Methods

A quasy-experimental pre-test/post-test study was conducted involving 350 professionals from the SU. A multidisciplinary team led the intervention, which included surveys, staff training sessions, visual awareness campaigns, and a comprehensive waste inventory. Designated containers for paper and plastic were installed in all operating theatres (n=17), recovery rooms (n=3), and procedure rooms (n=2).

The intervention was implemented in three consecutive phases:

1. Phase 1 (1 week-pilot): training on clean plastic and paper segregation in the pre-incision, without recycling.
2. Phase 2 (4 months): active recycling of pre-incision waste to consolidate segregation practices.
3. Phase 3 (1 month): full segregation and recycling waste throughout the entire surgical procedure.

Each phase was evaluated through checklists and surveys (Likert scale 0–10), requiring a minimum score of 7 to proceed. The final stage included waste weighing, compacting, and transport.

Results

A total of 267 responses were collected (267/350): 60% from nursing staff and assistants, 29% from physicians, and 11% from other roles. Staff showed strong support (average 9), project satisfaction (8.8), infrastructure adequacy (7.5), belief in segregation (9.3), and consensus that hospitals should implement such systems (10). Daily segregation reached 63 kg of paper and 55 kg of plastic, reducing the carbon footprint by 85%.

Conclusion

The Project was successfully implemented, achieving high levels of staff engagement and effective waste segregation practices.

113 The Carbon Footprint of Postoperative Intensive Care in Oncologic Colorectal Surgery: A Prospective Observational Study

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Background

The healthcare sector is a significant contributor to global carbon emissions, particularly in intensive care units (ICUs). These units represent high-impact areas owing to their substantial energy consumption and production of medical



waste. Despite the growing awareness of this problem, empirical data on the environmental burden of postoperative intensive care are lacking.

Objectives

This study aimed to quantify the carbon footprint of patients receiving intensive care after oncologic colorectal surgery.

Methods

A prospective observational study was conducted in the surgical ICU of a hospital in Istanbul between July and December 2024. The sample comprised 10 patients who underwent oncological colorectal surgery. Data pertaining to the utilization of medical devices, energy consumption of the room (lighting, heating, and cooling), and weight and type of medical waste were collected using a carbon footprint observation form. Emission factors for electricity, gas, and material production were applied to calculate the carbon dioxide equivalent (CO₂e) emissions per patient per day.

Results

The mean total carbon footprint was 39.40 ± 14.18 kg CO₂e/day per patient. The most significant contributor was medical waste, with a daily emission of 31.62 kg CO₂e, followed by energy consumption (3.36 kg CO₂e/day) and medical device use (4.42 kg CO₂e/day). The total daily carbon footprint ranged from 28.04 to 75.85 kg CO₂e. The primary sources of emissions were identified as single-use plastics, cotton-based textiles, mechanical ventilators, and room climate control systems.

Conclusion

The postoperative intensive care unit (ICU) has been shown to be a significant contributor to environmental impact, with the utilization of disposable materials and the employment of energy-intensive practices being the primary factors. Nurses and ICU professionals play a crucial role in implementing sustainable practices, including optimizing device utilization and advocating the use of reusable or low-impact materials.

224 GreenCare: Perception and Behaviour of the Perioperative Team in Outpatient Surgery

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Background

Outpatient surgery currently accounts for around 70% of surgical activity in Portugal, known for its accessibility, quality, and cost-effectiveness. However, Operating Rooms (ORs) remain among the main sources of hospital waste and greenhouse gas emissions, significantly contributing to the carbon footprint of healthcare organisations. In this context, it is imperative to rethink care delivery and integrate sustainable practices into surgical activity. Transitioning to green surgery requires not only structural changes, but also the mobilisation of the perioperative team as active agents in the sector's decarbonisation.

Objectives

To understand the perceptions and behaviors of the perioperative team in reducing their environmental footprint, promoting a roadmap for eco-friendly practices in outpatient surgery.



Methods

A quantitative, descriptive, cross-sectional study was conducted with a non-probabilistic sample of 102 perioperative professionals. Data collection was performed using a questionnaire validated by 11 experts through the e-Delphi technique. The instrument covered topics such as sustainability knowledge, waste sorting, resource management, medication handling, low-carbon anaesthetic practices, and environmental motivation.

Results

Participants demonstrated high environmental awareness: 88% valued effective waste sorting, 75% supported replacing disposables with reusables, and 61% preferred low-impact anaesthetic techniques. Main barriers identified were the lack of training and institutional protocols. The GreenCare Checklist consolidates these practices into a clear and actionable format aligned with green surgery principles. The GreenCare Checklist was developed as a guiding tool for sustainable practices in the perioperative setting, currently in testing phase, with potential for future implementation across other ORs.

Conclusion

The perioperative team plays a critical role in decarbonising surgical care. While structural and educational gaps persist, the GreenCare Checklist emerges as a strategic tool to support internal audits, standardise sustainable actions, and integrate environmental criteria into daily practice. Outpatient surgery must evolve towards sustainability with the perioperative team leading the way.

261 Sustainability Practices in Operating Rooms: Where Are Nurses in These Practices?

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Background: Climate change poses an urgent and widespread threat to global health systems, with direct and indirect effects on healthcare infrastructure, resource allocation, and patient outcomes. Within this context, operating rooms are among the most resource-intensive and environmentally burdensome units in hospitals. They consume large amounts of energy, generate substantial waste, and rely heavily on single-use materials and high-emission anesthetic gases. A growing body of research (2010–2024) underscores the need for sustainable transformation in surgical environments to mitigate healthcare’s carbon footprint and build climate-resilient systems.

Objectives: This review aims to explore how operating rooms can adopt evidence-based sustainability strategies that are both practical and impactful. The goal is to highlight the potential of integrating environmentally responsible practices without compromising patient safety or surgical outcomes. Key themes emerging from the literature include the reduction of single-use products, the implementation of reusable surgical instrument programs, the substitution of low-emission anesthetics, and the digitalization of documentation systems. Furthermore, the review emphasizes the critical role of perioperative nurses as frontline leaders in driving sustainable change. Nurses actively contribute to environmental stewardship through waste segregation education, sustainable procurement advocacy, and interprofessional collaboration within climate action initiatives.

Conclusion: Sustainability in surgical practice is no longer a luxury—it is a necessity grounded in ethical, professional, and planetary responsibility. Perioperative nurses, with their close involvement in clinical workflows and patient care, are well-positioned to champion environmentally conscious practices. Institutional support, continuous



education, and collaborative efforts are essential to empower nurses and surgical teams to embed sustainability into the heart of perioperative care. By transforming operating rooms into climate-smart environments, healthcare systems can play a pivotal role in addressing the climate crisis while ensuring high-quality, future-ready surgical care.

309 Terminal Turnover: A Project Towards Net Zero in the Operating Room

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Background

The Operating Room (OR) is one of the most energy-intensive and waste-generating areas in hospitals, directly contributing to the carbon footprint of healthcare institutions. Improper shutdown of surgical rooms, such as leaving equipment running 24/7, active oxygen outlets, and poor waste segregation results in unnecessary resource consumption and carbon emissions. In response, this project proposes a strategic intervention: the creation of a *Terminal Turnover* checklist, aligned with environmental sustainability principles and healthcare decarbonisation targets.

Objectives

To develop a practical and sustainable checklist to guide the proper shutdown of operating rooms, enhancing energy efficiency, waste management, and ecological accountability in perioperative routines.

Methods

The project followed the PDCA (Plan-Do-Check-Act) continuous improvement model, led by perioperative nurses in collaboration with technical assistants. In the "Plan" phase, inefficiencies were identified, such as energy waste and improper waste handling. The "Do" phase involved designing a simple, visual checklist including actions like switching off ventilators, monitors, lights, suction systems, and oxygen; using ISO 14024-certified cleaning products; and ensuring waste segregation according to Portuguese legislation (Order No. 242/96). An additional energy-saving measure was the implementation of night-mode operation for the HVAC system (heating, ventilation, and air conditioning), reducing consumption during inactive periods. The project also includes training sessions, staff engagement, and future audit.

Results

The checklist was developed in response to concrete needs identified by the team. Still under internal validation, it serves as a guiding tool to standardise end-of-day procedures, reduce environmental impact, and promote a culture of sustainability in OR surgery.

Conclusion

Transitioning to a Net Zero Operating Room involves replicable, low-complexity interventions. The Terminal Turnover checklist, together with HVAC night-mode programming, represents a meaningful and actionable step towards greener surgical practices uniting safety, operational efficiency, and environmental stewardship.



349 Sustainability in the operating rooms of the University Hospital Center Rijeka, Croatia

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Background: Concept of sustainability in operating rooms encompasses the application of practices that reduce negative environmental impacts without compromising patient safety. Despite this, research on the implementation level of sustainable practices in Croatian operating rooms remains limited.

Objectives: To examine and describe sustainable practices applied in the operating rooms and to identify opportunities for improving environmentally responsible behavior.

Methods: This research was descriptive. Surgical clinic employs two head nurses in the operating rooms, both of whom participated in the study. Data was collected using a standardized form based on the “Greening the OR Checklist,” which was adapted and translated for the needs of the Croatian context. The questionnaire contains four main domains: organizational development, waste reduction and prevention in the operating room, environmentally preferable purchasing in the operating room, and use of materials and built environment.

Results: Fourteen items (30.4%) from the checklist have been in place for over a year, primarily within the domain of waste reduction and prevention. Currently, nurses are actively working on implementing items in the environmentally preferable purchasing domain. The organizational development domain has not yet been widely recognized in Croatia; however, the checklist is raising awareness among nurses about the importance of forming green teams and educating staff on the benefits of sustainable practices. This increased awareness has the potential to support the implementation of all checklist items over time.

Conclusion: This was a single-center study, providing an initial insight into the implementation of environmentally sustainable practices among all operating room nurses. In the future, the study will be extended to operating rooms across Croatia. The checklist used in this study can serve as a practical orientation tool for all operating room nurses. It offers a structured approach to support the development of greener operating rooms and the promotion of environmentally responsible healthcare practices.

350 Surgical Waste Management in Operating Rooms: A Bibliometric Analysis of Global Research

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Background

Surgical waste management in operating rooms is essential for ensuring patient safety and promoting environmental sustainability. The growing number of surgical procedures globally has intensified medical waste generation, underscoring the critical role of nurses in safe and effective waste practices.



Objectives

This study aimed to perform a bibliometric analysis of nursing-related publications on surgical waste management in operating rooms to identify research trends, highlight dominant themes, and expose gaps in the literature.

Methods

A bibliometric analysis was conducted using the Scopus database on July 2, 2025. The search included publications containing “Operating Room,” “Perioperative Nursing,” “Surgical Waste,” “Waste Management,” and “Nursing” in the title, abstract, or keywords. A total of 46 nursing-related articles were identified and analyzed using the Biblioshiny application within the Bibliometrix R package. Key metrics included publication trends, journal and country distribution, citation performance, author productivity, keyword co-occurrence, and thematic mapping.

Results

Between 1973 and 2025, 46 nursing-focused publications were identified. The publication rate peaked in 2021 (n=7). The Association of periOperative Registered Nurses Journal was the leading source (n=11), followed by Perioperative Care and Operating Room Management (n=6). The United States contributed the most articles (n=21), with Türkiye (n=4) and United Kingdom (n=4) also contributing significantly. The most frequent keywords were “operating room,” “waste disposal,” and “human.” Thematic analysis revealed a central focus on clinical and human-centered issues, with emerging interest in environmental sustainability.

Conclusion

Despite its significance, surgical waste management remains an underexplored topic in nursing literature. The limited number of sustained author contributions and low international collaboration suggest a fragmented research structure. There is an urgent need for interdisciplinary, nurse-led initiatives that integrate clinical, environmental, and managerial perspectives. Future studies should address policy development, staff training, and the implementation of standardized sustainable practices in perioperative settings.

394 Evaluation of waste generation and disposal in Operating Rooms

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Background

In hospitals, the Operating Rooms (OR) are one of the sectors that produces the most healthcare waste, and for waste management to be optimized, both generation and disposal need to be conscious and accurate. It is necessary to understand the difficulties and barriers related to the generation, segregation, and disposal of waste.

Objectives

To observe the process of waste generation and disposal in OR, considering the assembling of the OR, the surgical procedure execution, and the period following the patients’ exit from the OR.

Methods

A quantitative, observational, and cross-sectional study was done, which included a sample of 50 surgeries observed during a period of six months. Data collection encompassed the type and duration of procedures, the number of staff in the OR, as well as data related to waste generation, including the amount of adequate and inadequate disposals made per unit in each type of container. Information regarding the physical structure and organization of the OR, including the arrangement and availability of waste containers, was also recorded.

Results

The study showed that waste generation and disposal vary according to the stage of the surgical procedure,



suggesting that factors such as specific occupational assignments and the physical arrangement of the collectors directly influence compliance with adequate disposal. Furthermore, more than half of the disposals made in infectious waste containers were carried out inadequately because they could have been discarded as ordinary waste and even recycled.

Conclusion

The segregation of healthcare waste represents a significant challenge in the OR, given the barriers observed in its segregation. The findings highlight the need for targeted interventions that encompass educational initiatives, reorganization of internal workflow processes, in order to reduce waste generation and optimize the segregation of healthcare waste in the OR, which is one of the largest generators of waste within hospitals.

403 THE SUSTAINABLE TRANSPLANTATION JOURNEY: A SAFE, INNOVATIVE, NURSING-LED AND ENVIRONMENTALLY RESPONSIBLE PERIOPERATIVE CARE MODEL

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Background

Organ transplantation is a complex, continuous care pathway extending from donor evaluation to operating room practices, immunosuppression management, and long-term follow-up. This process requires coordinated patient safety, quality of care, and continuity across perioperative stages. A sustainable transplantation approach integrates surgical excellence, patient engagement, self-management, and ongoing assessment.

Operating rooms, due to high energy use, waste generation, and significant carbon footprint, are central to environmental discussions. Reducing single-use materials, adopting low-impact anesthetic practices, and using sustainable supply strategies support ecological stewardship and safe perioperative care.

Meanwhile, digital health innovations including tele-monitoring, mobile applications, and integrated electronic records enhance post-transplant continuity, improve adherence, enable early complication recognition, and strengthen patient–team communication. Nurses' ability to use digital systems, interpret data, educate patients, and support clinical decisions depends on standards, competencies, and structured training.

Together, these elements reinforce nursing assessment, interdisciplinary communication, and the reliability of perioperative care, shaping a safe, innovative, sustainable, and nursing-led transplantation model for modern practice.

Objectives This review aims to present organ transplantation as a multidimensional sustainability ecosystem; to highlight the contributions of perioperative nursing to patient safety and the quality of care; to describe the role of digital monitoring and innovative technologies in supporting continuity of care; and to emphasize the importance of environmentally responsible perioperative practices within transplant surgery.

Conclusion Sustainable transplantation requires the integrated management of patient safety, quality of care, environmental responsibility, innovation, and nursing excellence. Perioperative nurses serve as key providers of safety, communication, education, and adherence to standards from operating room admission through to post-discharge follow-up. The use of digital monitoring tools, structured educational approaches, and environmentally conscious operating room practices contributes to improved patient outcomes while reducing the long-term burden



on the healthcare system. This comprehensive approach represents a safe, innovative, sustainable, and nursing-led model of transplant care.

412 Sterile Barrier Association's Hospital Survey: Managing Sterile Packaging Waste

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Background

Sustainability is increasingly vital in the sterile barrier system (SBS) industry, prompting the Sterile Barrier Association to launch the Managing Sterile Packaging Waste Survey. This initiative, in collaboration with EORNA and WFHSS, aims to gather global insights from healthcare professionals on the use, disposal, sorting, and recycling of SBS materials. The survey's rationale is to understand current practices and challenges in hospitals worldwide, with a focus on environmental responsibility and patient safety.

Objectives

- Capture hands-on experiences in managing sterile packaging waste streams.
- Identify best practices for separating and recycling non-hazardous hospital packaging, ensuring safety for both patients and staff.
- Support SBA's global initiative by fostering collaboration and knowledge sharing.
- Influence future guidance, training, and resources for healthcare professionals.
- Shape the future of hospital sustainability and patient safety, amplifying the voices of professionals worldwide.

Conclusion

Early survey results reveal that over half of respondents work in public institutions, with most employed at large hospitals (over 200 beds and numerous operating rooms). Waste management reporting is primarily by weight. About half of the institutions have a designated "Green Champion" for sustainability. Disposal methods vary, including landfill, incineration, recycling, and autoclave treatments. Dedicated waste streams for different packaging materials are present in some facilities, but not all. The estimated percentage of sterile packaging waste ranges widely, with some facilities reporting over 30%. Regulatory approaches differ, with some facing strict requirements and others operating under general guidelines. Compliance is ensured through training, audits, and dedicated teams. Facilities express strong commitment to sustainability, with initiatives like recycling, waste segregation, and sustainable procurement. Key challenges include limited resources, regulatory constraints, and infrastructure gaps, while opportunities lay in staff education and implementing recycling programs. The survey highlights the importance of ongoing support, training, and collaboration to advance sustainable waste management in healthcare. Full report when available: sterilebarrier.org



458 SUSTAINABLE DEVELOPMENT IN THE OPERATING ROOM: WASTE SORTING

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OBJECTIVES

Improving the management of waste sorting in the operating room and enhancing the recovery and valorization of the waste produced.

CONTEXT AND CHALLENGES

The operating room is a “major producer” of waste, which requires a specific organization and prior reflection on waste sorting.

Teamwork is essential to optimize this approach. In 2021, we were a team of healthcare professionals sensitive to Sustainable.

Development and motivated to change our department’s practices in order to meet the expectations of our institution’s management.

IMPLEMENTATION OF WASTE SORTING

- Appointment of multidisciplinary referents
- Delivery in sustainable development
- Collaborating with technical waste management teams, the hospital hygiene team, and the purchasing department
- Increased awareness of existing protocols and waste management streams
- Participation in working groups to harmonize practices
- Communication and sharing of information within the team
- Adaptation of sorting resources and validation of the organization of sorting
- Display of sorting guidelines in strategic locations

RESOURCES AND BEST PRACTICES

- Maximising the use of existing systems
- Simplifying of sorting to avoid slowing down patient care or hindering the process
- Changes in practices: limiting the number of bags, avoiding systematic replacement, adapting bag size to the type of surgery, etc

WASTE VALORIZATION AND COST REDUCTION

- Maximum reduction of infectious healthcare waste (very high incineration cost)
 - Disposal of non-recoverable waste in general household waste streams (lower cost)
 - Maximizing waste recycling
 - Giving a second life to sterilized or expired medical devices whenever possible
- QUANTITATIVE AND ECONOMIC IMPACT Between 2023 and 2024 at the CHRU of Tours, the quantity Healthcare Waste with Infectious Risk decreased by 181 tonnes, generating savings of €153,850 (calculated on the basis of €850 per tonne).

5R STRATEGY*

- “REFUSE – REDUCE – REUSE – RECYCLE – ROT”
THESE ARE THE 5 FUNDAMENTAL PRINCIPLES TO ADOPT IN ORDER TO MOVE TOWARDS A ZERO-WASTE LIFESTYLE. (B.JOHNSON 2011)



306 Ethical challenges in the perioperative treatment of a ruptured abdominal aortic aneurysm: a case study in Bogotá, Colombia

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Background

Ruptured abdominal aortic aneurysms (AAAs) are one of the most lethal vascular emergencies, with a perioperative mortality rate of up to 90%. Surgical treatment of abdominal aortic aneurysms (AAA) is associated with complex clinical and ethical dilemmas, especially in regions with limited resources such as Colombia. Social inequalities, limited access to care, and systemic barriers influence perioperative decisions and outcomes. Previous studies have highlighted inequalities in hospital infrastructure, limited knowledge for early detection, absence of protocols for managing this type of pathology, and lack of specialized vascular surgery units. This delays timely interventions and raises ethical concerns about equity, effectiveness, and justice in medical care.

Objectives

Analyze the ethical conflicts and social determinants that influence the decision-making process in the surgical treatment of AAA in a tertiary hospital in Bogotá.

Conclusion

This case illustrates the recurring ethical tensions in AAA management in Colombia. First, surgical urgency often conflicts with patient autonomy in contexts of low health literacy, compromising truly informed consent. Second, institutional constraints, such as a lack of intensive care beds and surgical supplies, lead to triage decisions influenced not only by clinical need but also by resource availability. Third, healthcare professionals experience moral distress when weighing the individual benefit of the patient against systemic constraints, particularly when caring for vulnerable populations. This case highlights the importance of developing context-sensitive perioperative protocols. These include culturally appropriate communication strategies, access to ethics consultation, and systematic recognition of the social determinants of health. These measures are essential to promoting more fair, equitable, and patient-centered perioperative care in Colombia and similar healthcare settings.

22 Perioperative Privacy and Affecting Factors in Surgical Patients: A Cross-Sectional Study

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Objectives This study was conducted to determine surgical patients' perceptions of privacy in the perioperative process and the factors affecting them.

Methods This study is descriptive cross-sectional type. The study was conducted with 294 patients between October 2024 and May 2025. The data of the study were collected with a questionnaire form consisting of a twenty-four-question first part including patients' descriptive information and clinical characteristics and a sixteen-question second



part including the Perioperative Privacy Scale (PPS). Parametric tests were used to compare the mean PPS scores of surgical patients.

Results The mean age of the patients who participated in the study was 57.97 ± 17.14 years and 56.8% of the patients were female. It was determined that 36.4% of the patients were hospitalised in orthopaedics and traumatology service and 22.4% in general surgery service. It was determined that 55.5% of the patients had privacy concerns mostly in the intraoperative period. The mean PPS score of the patients was 69.6 ± 12.12 . It was determined that the mean PPS scores of the patients who were hospitalised in the orthopaedics and traumatology service, who underwent surgery with spinal anaesthesia and whose body mass index was 30 kg/m² and above were statistically significantly higher than the others ($p < 0.05$). There was no statistically significant difference between the mean PPS scores according to the variables of gender, age, educational level, and type of surgery ($p > 0.05$).

Conclusion In this study, it was observed that the perioperative privacy of the patients was well protected. In addition to this, it was shown that the characteristics of the ward, type of anaesthesia and body mass index of the patients affected the protection of their privacy.

Keywords: Nursing care, perioperative period, privacy, surgical patients.

107 ERAS Protocol in Colorectal Cancer Surgery: Comfort and Postoperative Recovery Outcomes

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Background: Enhanced Recovery After Surgery (ERAS) protocol seems to be instrumental in the recovery of the patient, shortening the hospital stay and reducing surgical stress reaction.

Objective: The research was planned as an interventional study to determine the effect of Enhanced Recovery After Surgery (ERAS) protocol on recovery parameters and comfort in colorectal surgery. **Method:** The study was conducted with 60 patients who underwent elective colorectal surgery at a Training and Research Hospital in Kocaeli between January 1 and December 31, 2019. Enhanced Recovery Protocol Checklist, Standard Care Checklist, Perianesthesia Comfort Scale (PCS), General Comfort Scale (GCS), and Visual Analog Scale (VAS) were used for data collection. The enhanced recovery protocol was implemented for the patients in the intervention group. The control group received standard care. Pain level, time to first flatulence and defecation, time to first oral intake, time to first mobilization, catheter removal time and duration of hospital stay as well as perianesthesia comfort and general comfort of both patient group were compared.

Results: Data were evaluated with the SPSS software using means, standard deviation, frequency, percentile, t-test, and Mann-Whitney U test. The intervention group's mean scores from PCS and GPS were significantly higher than the control group ($p < 0.05$). The patients in the intervention group had shorter time to first postoperative flatulence and defecation, first oral intake, first mobilization time, catheter removal time and discharge time compared to the control group and had a lower pain level.



Conclusion: ERAS application in colorectal cancer surgery improves healing parameters and increases perianesthesia comfort and general comfort.

145 Surgical Intensive Care Unit Nurses' Attitudes and Behaviors Toward End-of-Life Care and Identification of Barriers to End-of-Life Care

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Background: End-of-life (EOL) care in surgical intensive care units (ICUs) aims to improve the quality of life and ensure a dignified death by addressing the physical, psychological, social, and spiritual needs of terminally ill patients and their families. However, knowledge about nurses' attitudes, behaviors, and barriers to EOL care, as well as the impact of these barriers, remains limited.

Aim: This study aimed to examine surgical ICU nurses' attitudes and behaviors toward EOL care, identify barriers, and determine how these barriers influence attitudes and behaviors.

Methods: This multicenter cross-sectional study was conducted between December 2023 and May 2024 in the surgical ICUs of three hospitals in Türkiye. The sample included 248 nurses with at least one year of ICU experience. Data were collected using the "Attitude and Behavior Scale for Intensive Care Nurses Toward End-of-Life Care" and the "Barriers to End-of-Life Care in Surgical ICUs Form." Analyses were performed using SPSS 25.0 with descriptive statistics, t-tests, ANOVA, correlation, and multiple linear regression. A p-value <0.05 was considered statistically significant.

Results: Nurses' mean age was 31.1±5.0 years, and 52.4% were female. They highly agreed on the importance of being present with dying patients (3.89±1.02) and allowing families time to say goodbye (3.91±0.95). Excessive workload (77.8%) was reported as the most common barrier. Regression analysis showed that age ($\beta=-0.196$, $p=0.016$) and male gender ($\beta=-0.136$, $p=0.035$) significantly predicted attitudes. Language-related communication problems ($\beta=-0.401$, $p<0.001$), cultural beliefs about death ($\beta=0.281$, $p=0.001$), lack of managerial awareness ($\beta=-0.225$, $p=0.037$), and insufficient in-service training ($\beta=0.152$, $p=0.022$) significantly influenced attitudes and behaviors. **Conclusion:** Surgical ICU nurses generally show positive attitudes toward EOL care; however, organizational and communication barriers negatively affect practice. Reducing workload, improving communication skills, and providing regular EOL care training could enhance care quality and support dignified death in ICUs.



215 The Effect of Cold Vapor on Postoperative Intubation-Related Symptoms and Comfort in Varying Surgical Positions: A Randomized Controlled Study

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Background

The postoperative symptoms of sore throat, cough, dysphagia, and hoarseness are common after various surgical positions and contribute to patient dissatisfaction.

Objectives

To examine the effect of cold vapor on postoperative intubation-related symptoms and comfort after supine and prone surgical procedures.

Methods

This randomized controlled study was conducted with 120 patients undergoing surgery in different positions, including 30 patients each in the supine intervention, prone intervention, supine control, and prone control groups. Cold vapor was applied to the supine and prone experimental groups for 15 min in the post-anaesthesia care unit. The patients were evaluated in terms of sore throat, cough, dysphagia, and hoarseness at 0 min and 30 min in the post-anesthesia care unit and at 6h, 12h, and 24h after the cold vapor application in the postoperative service.

Results

In the prone position, the intervention group reported significantly less sore throat, cough, and hoarseness than the control group; no difference was found in swallowing difficulty. In the supine position, the intervention group had significantly lower cough and hoarseness, while sore throat and swallowing difficulty showed no significant difference. Compared to the supine group, the prone intervention group had more severe cough, swallowing difficulty, and hoarseness, but less sore throat. No significant differences were found in comfort scores between any groups.

Conclusion

Cold vapor was effective in reducing post-intubation sore throat, cough, and hoarseness, particularly in patients undergoing surgery in the prone position. While it had limited impact on swallowing difficulty, it provided symptom relief in both prone and supine groups to varying degrees. Cold vapor can be considered a simple, inexpensive, and reliable non-pharmacological method for alleviating intubation-related symptoms in the early postoperative period.

227 Enhancing Patient Experience in the Operating Room: Insights from Patients and Nursing Staff at Hadassah Mount Scopus Medical Center

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Background

Patient experience (PX) is increasingly recognized as a key component of care quality, safety, and clinical outcomes (Doyle et al., 2013). Hadassah Mount Scopus Medical Center has prioritized operating room (OR) PX as part of its strategic commitment to person-centered care and service excellence (Hadassah, 2024). The definition of PX includes all interactions shaped by organizational culture that influence patient perceptions across the care continuum (Wolf et al., 2014).

Objectives

This study aimed to assess perceptions of PX among post-operative patients and OR nursing staff at Hadassah Mount Scopus, to identify gaps and propose improvements

Methods

A qualitative study was conducted using semi-structured interviews with 37 post-operative patients from four departments and a survey among OR nursing staff. Patient interviews explored their experiences. The staff survey evaluated awareness, perceived barriers, and the impact of PX. Data underwent content analysis.

Results

Patients reported high overall satisfaction, particularly related to interpersonal communication and clear explanations. However, gaps were identified in physical comfort, privacy (especially during reception), and waiting times. Day hospitalization patients expressed a need for post-procedure shower facilities. Nursing staff demonstrated strong PX awareness and emphasized empathy and clear communication. Challenges cited included high workload, limited time for patient interaction, and environmental noise. Recommendations focused on staff training, improved physical conditions, and addressing basic patient needs.

Conclusion

This study provides meaningful dual-perspective insights into OR patient experience from both patients and nursing staff. The findings highlight the importance of consistent, high-quality interaction, effective communication, and better environmental conditions (comfort and privacy). Addressing infrastructure gaps, such as access to showers for short-stay patients, is essential. While staff show willingness to improve PX, systemic barriers call for a comprehensive, organizational approach to enhance patient satisfaction.

236 The Effect Of Music Medicine With Virtual Reality Glasses On Patient's Surgical Anxiety And Comfort During Ureteroscopy

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Background It is a randomized controlled trial examining the effect of music medicine application with virtual glasses on the surgical anxiety and comfort status of patients during urethroscopy.

Objectives

The aim of this study was to examine the effect of virtual reality (VR) glasses and music medicine on the patient's operating room anxiety and comfort during ureteroscopy. Our hypotheses were tested in line with the purpose of the study.

Methods

The study included 60 patients, 30 control and 30 experimental group patients. In the study, music medicine was applied to the experimental group patients with virtual glasses during surgery. Patient identifying information,



information about the surgical period, perianesthesia comfort scale and surgical anxiety scale were used to collect the data.

Results

In our study, although there was no significant difference in the mean scores of the surgical anxiety scale ($p < 0.05$), the perianesthesia comfort scale scores showed a significant difference in the experimental group ($p < 0.001$).

Conclusion

It was concluded that the application of music medicine with virtual glasses during surgery increased patient comfort.

303 Beyond Words: Individualized Post-Anesthesia Care with Olfactory Stimulation in a Patient with Hearing and Speech Impairment: A Case Report

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Background

Older adults with hearing and speech impairments are at increased risk of communication-related complications during the perioperative period, especially in post-anesthesia care. Inadequate communication can lead to increased anxiety, delayed symptom reporting, and reduced patient safety. Tailored nursing care is essential to ensure that these patients receive safe, effective, and respectful care during recovery.

Objectives

This case report aims to present the individualized nursing care of a 67-year-old female patient with hearing and speech impairment following unilateral cataract surgery under general anesthesia. The report emphasizes the use of sensory stimuli, particularly olfactory cues, as an alternative method for assessing emotional responses and promoting postoperative comfort.

Conclusion

The patient exhibited a noticeable calming response to the scent of lavender, indicating its potential as a meaningful sensory stimulus in postoperative care. This case highlights the importance of innovative, patient-centered approaches—such as olfactory stimulation—for enhancing comfort and communication in patients with sensory and communication impairments. Such strategies support emotional well-being, facilitate nurse-patient interaction, and contribute to a more dignified recovery process in the post-anesthesia care unit.

420 Risk Factors and Outcomes of Postoperative Pulmonary Embolism in Patient Underwent Major Surgery

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Background Postoperative pulmonary embolism (PE) is a severe complication following major surgery, carrying high morbidity and mortality, yet incidence data and specific risk factors, remain varied.

Objectives This study was performed to investigate the incidence and independent risk factors of postoperative PE.

Methods This was a retrospective case-control study conducted at a major Asian medical center, analyzing 560 consecutive perioperative patients who underwent major surgery. The diagnosis of PE was confirmed by attending radiologists using computed tomographic pulmonary angiography. Multivariate logistic regression was used to identify independent risk factors and calculate Adjusted odds ratio (AOR) and 95% confidence intervals (CI). The primary outcome was the identification of independent risk factors, and the secondary outcome was 90-day mortality.

Results The overall incidence of postoperative PE was approximately 0.12%. Multivariate analysis identified the following as the strongest independent risk factors active cancer (AOR: 11.744, 95% CI 5.964 - 23.123, $p < .001$), emergency surgery (AOR: 3.374, 95% CI 1.468 - 7.755, $p=0.004$), Orthopedic surgery (AOR: 2.377, 95% CI 1.040 - 5.432, $p=0.040$), prolonged bed rest (AOR: 2.328, 95% CI 1.136 - 4.770, $p=0.021$). A significant prophylaxis paradox was observed heavy reliance on intermittent pneumatic compression was insufficient (AOR: 0.602, 95% CI 0.302 - 1.20, $p=0.15$), whereas active ambulation was the most powerful protective factor (AOR: 0.093, 95% CI 0.035 - 0.247, $p < 0.001$). The 90-day mortality rate in the PE group was catastrophic at 32.86% compared to 2.14% in controls ($p < 0.001$).

Conclusion The catastrophic outcomes necessitate the integration of electronic medical record-driven Caprini risk stratification to mandate dual prophylaxis and promote aggressive, early active ambulation. Furthermore, the acute clustering of fatalities requires the implementation of digitally-enabled ultra-rapid diagnostic protocols. These evidence-based strategies are essential for advancing nursing excellence and mitigating preventable postoperative mortality.

77 Small hands, big challenges - understanding surgical glove fit

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Background

Surgical glove literature documents performance and safety evidence. Studies investigating glove fit show performance and safety impacts but remain underreported.

Objectives

To understand user perceptions of surgical glove fit considering hand size.

Methods

An online survey investigating aspects of surgical gloving practice was administered (Aug-Sept 2023) to scrubbed staff in USA, UK, Germany, Sweden, and Japan using market research databases. Fully anonymized data, aggregated and segmented by hand size (small = glove size ≤ 7.0 ; large = glove size ≥ 7.5), was processed for frequency and percentage.

Results

Actively practicing surgeons (195) and surgical staff (105) across specialties were surveyed. 124 were small-handed (75% female); 174 were large-handed (7% female); 2 non-reporting.



Respondents ranked importance of 8 factors for choosing gloves. The most important factor was fit, and 63% of small-hand respondents ranked it within the top 3.

The most important issue related to fit was loose or tight areas (19% ranked first; 48% ranked top 3); small-hand group reported loose finger fit more frequently. 32% of the small-hand and 20% of the large-hand group suggested more adequate/customized glove sizing as an improvement. 91% of respondents took action to achieve better glove fit. Decreasing glove size was more frequent for small-hand (40% vs 24%); whereas large-hand group more frequently increased size (31% vs 25%).

Conclusion

In choosing a surgical glove, fit was the most important factor. Despite most respondents seeking better glove fit, many still need improved sizing and experience areas of poor fit. While this impacts all users, those with small hands (primarily female) more often prioritize fit, identify issues of loose fingers, and identify needs for customized sizing. This suggests many surgical staff could benefit from improved glove fit to support safety and performance. Designs should consider differences in users, such as hand size and females.

97 The Effect of Virtual Reality Application on Pain Reporting, Anxiety Status, and Vital Parameters of Patients During the First Dressing Change After Open Heart Surgery: A Randomised Controlled Study

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Background

Pain and anxiety reports are common during the first dressing change in patients who have undergone open heart surgery.

Objectives

This study aimed to investigate the effect of virtual reality application on pain, anxiety reports, and vital signs of patients who have undergone open heart surgery during their first dressing change.

Methods

This study was a two-arm parallel-group randomized controlled trial registered at <https://www.clinicaltrials.gov> and reported according to the Consolidated Standards of Reporting Trials checklist. This study was conducted between September 2022 and September 2023 with the participation of 140 patients (Intervention=70, Control=70). Data were collected using the Patient Information Form, State-Trait Anxiety Inventory, and Visual Analogue Scale. Before data collection began, patients' demographic information, pain levels, anxiety levels, and vital signs were recorded. VR glasses were applied to the intervention group immediately before the dressing change procedure began, and patients were instructed to keep the glasses on until the dressing change was complete. Pain and vital signs were recorded during the procedure. After the procedure, the patients' pain, anxiety, and vital signs were reassessed. The control group received routine care administered in the ward during the dressing change.

Results

It was found that pain and anxiety levels were lower in the intervention group patients after the first dressing change. In addition, it was found that the intervention group patients had lower pulse rates during the procedure and higher saturation levels after the procedure compared to the control group patients.



Conclusion

The virtual reality application is an innovative application that can be used to reduce pain and anxiety in patients during the first dressing change after surgery and to improve vital signs.

Key Words: Anxiety, nursing care, pain, postoperative period, virtual reality.

121 Construction and Application of an Automatic Collection System for Operating Room Nursing Information Based on Speech Recognition Technology

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Background

Efficient and standardized collection of operating room nursing information is crucial for ensuring nursing quality and work efficiency, but traditional manual recording often faces issues such as low efficiency, poor standardization, and high error rates.

Objectives

To construct an automatic collection system for operating room nursing information based on speech recognition technology and evaluate its application effect.

Methods

The system, with speech recognition technology as the core, integrated modules for speech collection, speech recognition, text processing, and data storage and management. It realized functions such as surgical instrument counting and vital sign monitoring through voice interaction, supporting real-time recording and intelligent reminders. From July to November 2024, the system was operated in the operating room of a tertiary hospital in Nanjing, and indicators including standardization, completion time, timeliness of surgical nursing records, and nurses' user experience were compared before and after system application.

Results

After the system was used, the standardization of surgical nursing records significantly improved, with a reduced error rate. The completion time of records was significantly shortened, and their timeliness was enhanced. Nurses reported that the system was easy to operate, effectively reducing their workload and improving recording efficiency.

Conclusion

The automatic collection system for operating room nursing information based on speech recognition technology can significantly reduce the error rate of document recording, improve the efficiency of surgical nursing document recording, and optimize nurses' work experience.



128 Innovative Developments in Preventing Pressure Injuries: An Examination of the Turkish Patent System

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Background: Perioperative pressure injuries are preventable complications that occur within the first 72 hours after surgery. It has been reported that all hospitalised patients are at risk of potential pressure injuries¹. Within the scope of preventive approaches, early identification of individuals at risk, implementation of effective nursing interventions, and use of innovative products are of great importance.

Objectives: The aim of this study is to examine innovative products developed in Turkey for the prevention of pressure injuries and to highlight their potential contributions to perioperative care processes.

Methods: A search was conducted using the keywords 'pressure injury,' 'pressure ulcer,' 'bed sore,' and 'pressure sore' in the official database of the Turkish Patent and Trademark Office². Inventions with patents or utility model certificates between 2005 and 2025 were included.

Results: The review resulted in a total of 10 applications; six of these were registered as patents and four as utility models. The details of the patents or utility models will be presented during the conference.

Conclusion: These inventions were evaluated within the scope of innovative approaches developed in the field of health, and it was concluded that they have the potential to contribute to the prevention of perioperative pressure injuries.

Keywords: Pressure injuries, innovation, innovative approach, perioperative care

References

1. Han, M. J., & Ko, S. (2021). Comparison of Interface Pressures and Subjective Comfort of Pressure-Reducing Covers on Operating Tables for Healthy Volunteers. *International Journal of Environmental Research and Public Health*, 18(5), 2640. <https://doi.org/10.3390/ijerph18052640>
2. Turkish Patent and Trademark Office. (Accessed date: 10 June 2025). Patent search and utility model database. <https://www.turkpatent.gov.tr/>

144 The Digital Scalpel: How AI Is Transforming Perioperative Nursing Roles Worldwide

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Background

Artificial intelligence (AI) is revolutionizing healthcare delivery, particularly in perioperative environments where precision, efficiency, and rapid decision-making are essential for patient safety and optimal outcomes. Perioperative nurses, who coordinate complex surgical workflows and provide critical intraoperative support, are at the forefront of this technological transformation. As AI-driven tools and systems become increasingly integrated into operating rooms worldwide, understanding their impact on nursing roles, workflows, and professional identity is vital.



Objectives

This systematic review aims to explore the global influence of AI technologies on perioperative nursing practice. It investigates how AI adoption affects clinical responsibilities, interprofessional team dynamics, ethical considerations, and workforce readiness. The motivation for this study stems from the need to inform nursing education, leadership strategies, and policy frameworks that support successful AI integration while preserving the unique contributions of perioperative nurses.

Conclusion

Analysis of 41 international studies reveals that AI applications—such as predictive analytics for surgical scheduling, enhanced intraoperative patient monitoring, and decision-support algorithms—improve operational efficiency and patient safety. Surgical scheduling accuracy increased by up to 30%, and intraoperative monitoring efficiency improved by 25–40%, according to reported data. However, the integration of AI also presents challenges, including reduced clinical autonomy reported in 45% of studies and heightened dependence on technology. Nearly 70% of studies highlight significant gaps in AI-related education and training for perioperative nurses. Nurses express mixed feelings, balancing enthusiasm for innovation with concerns about potential role displacement. The findings emphasize that AI is reshaping perioperative nursing responsibilities and competencies, necessitating proactive leadership, development of inclusive policies, and tailored educational programs. Recognizing perioperative nurses as key stakeholders is crucial to ensure that AI-driven surgical care advances safely and ethically while supporting nursing professionalism.

218 Artificial intelligence as an educational tutor in perioperative nursing: pilot implementation of a real-time support system

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Background Maintaining updated knowledge in perioperative nursing is a growing challenge due to the constant evolution of surgical techniques, technologies, and institutional protocols. Traditional educational approaches are not always agile enough to provide immediate, individualized support at the point of care. Digital innovation, particularly artificial intelligence (AI), offers new opportunities to complement existing learning models and enhance clinical practice.

Objectives To present the implementation and early outcomes of an AI-based educational tool designed to assist perioperative nurses by offering real-time answers to clinical and procedural questions. The system aims to support newly incorporated professionals and those seeking to review complex or infrequently used content, contributing to safer, more autonomous and efficient practice in the operating room.

Conclusion

The AI tutor is currently undergoing pilot testing with a selected group of perioperative professionals across various roles and experience levels. It retrieves information primarily from locally uploaded institutional documents, training protocols and guidelines; when relevant answers are not found, it supplements responses with validated general knowledge. The assistant communicates using a scientific yet accessible language, adapting explanations according to the user's background. A dedicated team of healthcare professionals continuously reviews and updates the AI's source material to ensure consistency with evolving standards and local practices.



Preliminary qualitative feedback highlights high levels of satisfaction, particularly regarding the availability of a non-judgmental and always-accessible support tool. Users report increased confidence in clinical decision-making and greater ease during onboarding processes. Additionally, the tool reduces dependency on colleagues for basic procedural guidance, freeing up time and resources within the team.

This innovative use of AI demonstrates strong potential as a sustainable, cost-effective and scalable solution for continuous education in the perioperative setting. Its flexible, evidence-based structure positions it as a valuable long-term component in the educational infrastructure of surgical services

266 Advanced Technologies in Treatment and Care Management in Burn Injuries: Reflections of Innovative Technologies on Nursing Care

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Background: Burn injuries remain among the most complex and resource-intensive conditions in acute and perioperative care. They require comprehensive, multidisciplinary interventions that address pain management, infection control, tissue regeneration, and long-term rehabilitation. In recent years, technological innovations have significantly advanced the landscape of burn treatment. Emerging tools such as artificial intelligence (AI)-based wound assessment, smart wound dressings, nanotechnology, 3D bioprinting, and virtual reality therapies have introduced new dimensions to clinical practice. These technologies not only enhance healing outcomes but also influence workflows, patient engagement, and nursing responsibilities.

Objectives: This narrative review explores the integration of advanced technologies in burn injury management and their implications for nursing care. The review draws upon a wide range of literature encompassing pharmacological interventions, surgical procedures, and device-based therapies such as negative pressure wound therapy (NPWT) and extracorporeal shock wave therapy (ESWT). In addition, nurse-led strategies for pain control, wound surveillance, and infection prevention are examined. The review emphasizes the evolving role of perioperative nurses in adopting these technologies—particularly in dressing selection, digital monitoring, interdisciplinary communication, and patient education.

Conclusion: While technological progress in burn care continues to accelerate, its successful application in clinical nursing practice remains limited due to barriers such as cost, infrastructure gaps, and training deficiencies. Nurses play a pivotal role in bridging this gap by acting as implementers, educators, and advocates. Institutional investment in structured training programs and interprofessional collaboration is essential to support nurses in adapting to these innovations. Ultimately, integrating advanced technologies into nursing practice will lead to safer, more efficient, and patient-centered perioperative burn care.



296 Predictive models used by nurses in clinical practice: A systematic review protocol

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Background

[Predictive models are increasingly used in healthcare to support clinical decision-making. However, their integration into nursing practice remains inconsistent, with limited evidence on how nurses apply such tools in real-world settings to improve care quality and patient outcomes.]

Objectives

[To identify and analyze how predictive models are being implemented by nurses in clinical practice, and what impact these tools have on decision-making and care delivery.]

Methods

[This systematic review follows the JBI methodology. Studies are being identified through searches in MEDLINE, CINAHL, Scopus, Embase and Cochrane Library. Eligible studies include observational studies, quasi-experimental designs and implementation studies reporting the use of predictive models by nurses in clinical decision-making. Two independent reviewers are conducting screening, quality appraisal using JBI critical appraisal tools, and data extraction. Key variables include type of predictive model, clinical setting, predicted outcomes, and observed impact on clinical practice or patient outcomes.]

Results

[The review is currently in progress. Preliminary searches reveal growing interest in nurse-applied predictive tools, particularly in risk stratification, early warning systems, and surgical or post-operative care planning. However, substantial gaps remain in the inclusion of nursing-specific variables and in evaluating usability, acceptance and real-world effectiveness.]

Conclusion

[This review will provide evidence on how predictive models are used by nurses in clinical practice and highlight barriers and facilitators to their implementation. The findings will support the development of AI-based tools that are nurse-sensitive, practical and aligned with the reality of perioperative and hospital-based care.]

315 Attitudes of Operating Room Teams Towards Black Box Technology: Digital Traces in Surgical Processes

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Background

[Black box technology is a digital monitoring system that enhances surgical safety by synchronizing



video, audio, environmental, and patient data in the operating room. It identifies errors and distractions and provides feedback on team performance. Its effective and sustainable use depends on both technical competence and the attitudes of healthcare professionals.]

Objectives

[This study aims to identify potential barriers and facilitators to implementing black box technology in the operating room from the perspective of team members.]

Methods

[This descriptive, cross-sectional study will be conducted at three hospitals between June and December 2025, and the sample will consist of 160 healthcare professionals who have worked in intraoperative processes for at least one year. Data will be collected using a descriptive form and a 27-item, 5-point likert-type attitude survey. Results will be analyzed using SPSS 25.0 using numerical, percentage, and Pearson correlation analyses.]

Results

[According to preliminary results (n=64), 62.5% of participants were female, 68.8% were operating room nurses, 26.6% were surgeons, and 60.9% worked in general surgery. All participants stated that they had not heard of black box technology before. The majority believed the system would support patient safety (65.6%), operating room safety (84.4%), and objective assessment of surgical errors (100%). They also stated that it would be easy to use and could improve communication and efficiency within the team. However, 64% reported that it could increase stress levels and 51.6% expressed concerns about patient privacy. All participants emphasized the need for patient consent and the need for anonymity of data. Fifty percent of participants wanted to receive feedback based on black box data, and all participants stated that the system would contribute to performance evaluation. Data collection is ongoing.]

Conclusion

[Participants' attitudes toward black boxes are generally positive, acknowledging their positive impact in improving patient and operating room safety, preventing errors, ensuring objective evaluation of errors, and strengthening team communication. However, supportive regulations addressing ethical concerns and stress factors are needed before using black boxes.]

347 Public Awareness and Attitudes Toward Robotic Surgery: A Descriptive Study

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Background

As robotic-assisted surgical techniques become increasingly integrated into modern healthcare, it is essential for patients to possess accurate knowledge of this technology to make informed decisions. Understanding public awareness and attitudes toward robotic surgery is particularly important in regions with limited access to advanced surgical modalities.



Objectives

This study aimed to assess the awareness, knowledge, and attitudes of individuals residing in southeastern Turkey regarding robotic surgery.

Methods

A descriptive, cross-sectional study was conducted between January and March 2025 with 513 adult volunteers attending the General Surgery outpatient clinic of a district hospital. Data were collected via a 15-item structured questionnaire designed to capture participants' sociodemographic characteristics, awareness, and perceptions of robotic surgery. Descriptive statistics, including mean, standard deviation, frequency, and percentage, were used in data analysis.

Results

Of the participants, 46% were women, with a mean age of 37.71 ± 14.43 years. While 41.7% had previously heard of robotic surgery, only 22.2% were able to correctly define the term. A minority (13.2%) recognized its use in general surgery, and 30.7% were unaware of its application across surgical specialties. Notably, 21.1% reported having no knowledge about robotic surgery. When asked about future treatment preferences, 33.5% indicated a willingness to consider robotic surgery, whereas 54.4% were undecided.

Conclusion

The findings highlight limited public awareness and understanding of robotic surgery in this region. While interest in robotic surgery exists, significant knowledge gaps persist. These results underscore the need for targeted educational interventions to improve public literacy regarding advanced surgical technologies, ultimately supporting informed decision-making and equitable access to innovative care.

352 mHealth in nursing approaches to perioperative patient care

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Background

Mobile health (mHealth) is increasingly integrated into perioperative patient care, offering tools for education, monitoring, and communication. Nurses play a critical role in implementing mHealth interventions throughout the perioperative period to enhance patient outcomes. A comprehensive review was needed to summarize current evidence on these nursing-led mobile application interventions.

Objectives

To review and synthesize the evidence on nursing interventions using mobile applications for adult patients in the perioperative setting.

Methods

A scoping review was conducted following Joanna Briggs Institute (JBI) methodology. A Population-Concept-Context (PCC) framework defined the inclusion criteria: adult surgical patients (Population), nursing interventions involving mobile applications (Concept), and perioperative care settings (Context). Databases were systematically searched for studies published from 2016 to 2024. Eleven studies met the inclusion criteria. Extracted data were analyzed using thematic synthesis to identify key themes of mHealth utilization.

Results

The 11 included studies spanned various perioperative phases and intervention types. Mobile apps were used for preoperative patient education, postoperative monitoring and follow-up, and enhancing communication between patients and healthcare providers. Five overarching themes emerged from the synthesis, including patient education,



patient engagement, adherence to perioperative protocols, communication, and support for patient recovery. These nursing-driven mHealth interventions were generally associated with positive patient experiences and improved self-management during the perioperative journey.

Conclusion

mHealth interventions led by nurses demonstrate potential to improve perioperative care through enhanced patient education, communication, and self-management support. Successful implementation requires careful consideration of ethical issues (e.g., patient privacy) and adaptation to the clinical context. This review underscores the importance of integrating mHealth ethically and contextually into perioperative practice. Further research is needed to evaluate long-term outcomes and address remaining gaps.

371 The Relationship Between Operating Room Nurses' Technostress Experiences and Their Burnout and Job Satisfaction Levels

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Background

Advanced technologies such as robotic surgery have significantly changed operating room workflows, increasing nurses' workload and stress levels. Technostress, defined as stress related to adapting to technological systems, can negatively impact nurses' burnout and job satisfaction. Due to inconsistent findings and the potential influence of demographic and institutional factors, a more comprehensive study in technology-intensive surgical settings is needed.

Objectives

This study aims to examine the impact of technostress on burnout and job satisfaction among operating room nurses in high-technology surgical environments and to evaluate the role of demographic and professional factors in this relationship to develop strategies that improve nurses' well-being.

Methods

A descriptive and cross-sectional study is being conducted from June to December 2025 in three hospitals. The sample includes 160 operating room nurses who meet inclusion criteria and consent to participate. Data are collected through a descriptive information form, a 22-item Technostress Assessment Questionnaire, the Maslach Burnout Inventory, and a 5-item Job Satisfaction Scale. Analyses are performed using SPSS 25.0 with descriptive statistics, correlation, t-tests, ANOVA, chi-square, and multiple regression.

Results

Preliminary data (n=20) show that 68% of participants experience moderate to high technostress. A significant positive correlation exists between technostress and emotional exhaustion ($r = .68, p < .01$). Night shifts increase stress by about 20%. Job satisfaction is low (35%) and inversely correlated with technostress. Nurses who exercise regularly show a 24% decrease in burnout, and those with postgraduate education have higher job satisfaction. Notably, 35% considered leaving the profession, highlighting the urgent need for interventions.

Conclusion

Many nurses in high-tech surgical settings face moderate to high technostress, which elevates burnout and reduces job satisfaction. Night shifts worsen stress and increase turnover intentions. To address this, technostress management education and support programs should be implemented, shift scheduling optimized, healthy lifestyle habits promoted, and professional development opportunities expanded.



395 How artificial intelligence is affecting the reprocessing of medical devices? A scope review

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Background

Artificial intelligence (AI) in healthcare has advanced on different fronts, such as in the creation and adaptation of medical devices and in learning support, promoting more efficient and safer practices.

Objectives

To analyze how artificial intelligence has impacted the reprocessing of medical devices.

Methods

This is a scoping review, following the Joanna Briggs Institute Reviewer's Manual. The Cochrane Library and the Web of Science, SCOPUS, CINAHL, EMBASE, PubMed, and Scielo databases were searched using descriptors with different strategies. A search of the gray literature was also conducted using Google Scholar with the question: "How is artificial intelligence impacting medical device reprocessing?". The references of the selected articles were analyzed in search of articles that answered the review question. There were no restrictions on language or year of publication. The research was conducted in May 2025, with four independent reviewers. Retracted articles or articles that did not demonstrate the practical use of AI in medical devices reprocessing were excluded.

Results

A total of 236 articles were selected for title and abstract screening, and only seven were selected for full-text reading. Of these, only one answered the research question. The selected article, conducted in the United States of America, investigated the use of AI to improve the inspection of endoscope channels through videos using a borescope, with a deep learning algorithm.

Conclusion

Although AI has great potential to optimize medical devices reprocessing, the topic is under-explored and there is still little experience with the implementation of AI in medical devices reprocessing. Thus, it is understood that studies recognize the potential for transformation in the safety, effectiveness, and accuracy of reprocessing with the future use of AI in reprocessing. Currently, articles discuss future possibilities and theoretical benefits, but without real applications and empirical evidence in Sterile Processing Departments.



425 Use of Laser Technology In The Perioperative Process: Pros And Cons

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Background

Laser technology is a modern surgical method that enables the controlled application of monochromatic, coherent, and high-intensity light energy, obtained through stimulated emission, to biological tissues (Azadgoli & Baker, 2016; Yun & Kwok, 2017). The non-diffusive and directional nature of the laser beam enables high-precision cutting, coagulation, and ablation procedures by creating a selective effect on the tissue (Khalkhal et al., 2019; Winter, 2017). With the proliferation of minimally invasive surgical approaches, laser surgery is now widely used in many surgical disciplines due to its advantages, such as effective bleeding control, shorter recovery times, and preservation of surrounding tissues (Kircher & Graetzer, 2025).

Objective

The aim of this study is to evaluate the clinical efficacy and safety of laser surgery by summarizing its current applications in different surgical disciplines. It also aims to highlight the advantages provided by laser applications, their current limitations, and key points to consider in terms of patient and healthcare worker safety

Conclusion

Laser surgery has become an important component of modern surgery due to its controlled energy delivery, minimal tissue damage, and effective hemostasis (Winter, 2017; Azadgoli & Baker, 2016). Laser applications have been reported to yield successful clinical outcomes in many fields, including ophthalmology, general surgery, urology, otolaryngology, gynecology, and plastic surgery (Khalkhal et al., 2019; Kircher & Graetzer, 2025). However, it is crucial that laser use is performed with appropriate patient selection, the correct device and wavelength choice, sufficient training, and standard safety precautions (FDA, 2023; American Society for Laser Surgery and Medicine [ASLMS], 2026). Future developments in laser technology are expected to further enhance the effectiveness of surgical procedures and patient comfort (Yun & Kwok, 2017; Durmuş, 2024).

4 The Nursing Profession from the Perspective of Journalism Students

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Background

The media play a significant role in the perception of nursing profession in the public. Journalists report on nurses according to their observations and personal perceptions, as well as their knowledge of the field they cover and thus generate information. Insufficient information and knowledge of the work of nurses may affect attitudes which can reflect on the dynamics and manner of reporting on nurses.

Objectives

To evaluate the attitudes of journalism students towards the profession of nurses, their competencies and work, the



status of nurses in society, the need for the nursing profession to be represented in the media, and personal experience in the work of nurses.

Methods

The research was carried out by an anonymous survey which included 68 undergraduate students of journalism (60 female and 8 male).

Results

The results of the research showed that a significant number of journalism students believe that nurses are assistants to doctors and that they are not independent in performing healthcare activities. However, the attitudes of journalism students towards the representation of nurses in the media showed that the majority (80.88%) were open in terms of the importance of the media appearance of nurses. However, at the same time, journalism students do not see a reason or are undecided regarding the claim that the experiences of nurses could be interesting content for the media (82.82%). When it comes to the work of nurses, which is related to the personal experience of journalism students, it is shown that about one half of the students have positive experiences (45.52%), while a significant number have opposing views.

Conclusion

The research indicated that there is a significant lack of understanding of the nursing profession and its scope of work among students of future journalism careers.

30 The surgical hero: can a children's book intervention inspire interest in future perioperative nursing careers?

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Background

The global shortage of nurses, including perioperative nurses, is a growing concern for healthcare systems. Research shows that children begin forming occupational identities and internalising gender-based career stereotypes between the ages of 4 and 8, often influenced by societal norms and limited exposure to diverse professional roles (Gottfredson, 1981; Howard & Walsh, 2010). Despite their crucial role in surgical care, perioperative nurses are rarely presented in children's literature or early educational material. This lack of exposure reinforces traditional gender norms and may contribute to low awareness and declining interest in surgical nursing careers.

Objectives

This project presents the concept of developing an illustrated children's book as a communication tool to introduce the role of the perioperative nurse to children aged 4-8. The project aims to (1) promote perioperative nursing as a valuable and aspirational career, particularly for children who may not otherwise encounter this role due to cultural, social or gender-related barriers, planting seeds for long-term interest in the surgical nursing (Howard & Walsh, 2010). (2) Prepare young patients for surgical experience in a psychologically supportive and developmentally appropriate way (Cordray et al., 2022). (3) Strengthen patient safety by improving procedural understanding and reducing anxiety.

Conclusion

Although still in its conceptual phase, the children's book represents an innovative dual-purpose strategy that bridges



patient-centred communication and long-term workforce development. By portraying the perioperative nurse as competent, clinically skilled, compassionate and heroic figure, the project aims to support paediatric patient preparedness while challenging gendered occupational assumptions. The book is designed for use in clinical waiting areas, paediatric units and educational outreach. By engaging children through age-appropriate storytelling and illustrations, the project promotes patient safety, inclusion and early health education. Future steps include piloting the book in surgical care settings and evaluating its impact on patient experience and occupational interest.

102 The Role of Cultural and Spiritual Beliefs in the Surgical Care Process of Surgical Patients: A Cross-sectional Study

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Arka

Spiritual beliefs contribute to the psychological dimension of recovery by influencing patients' outlook on hope, coping with stress, and pain management during the surgical process *[Lütfen içeriğinizi buraya değiştirin]*

Amaçlar

[Lütfen içeriğinizi buraya değiştirin] This study investigates the cultural and spiritual expectations and experiences of patients undergoing surgical procedures and examines how these factors relate to their perceived spiritual care needs.

Yöntemler

[Lütfen içeriğinizi buraya değiştirin] Data were collected through face-to-face interviews using a structured questionnaire and the Spiritual Care Needs Scale. Descriptive statistics, Mann-Whitney U, Kruskal-Wallis, and Spearman correlation analyses were conducted.

Sonuçlar

[Lütfen içeriğinizi buraya değiştirin] 402 adult patients who underwent elective surgery met the inclusion criteria. The participants' mean age was 51.17±17.78 years, and 51.5% were female. While 18.4% requested particular care due to religious beliefs, 51.0% desired respect toward their cultural and spiritual values. Communication that acknowledged patients' beliefs occurred more frequently with nurses (61.9%) than with physicians (41.8%). Significant differences in spiritual care needs were observed based on marital status and occupation ($p < 0.05$). Married individuals and homemakers scored higher on the total scale. No significant relationship was found between spiritual care needs and factors such as age, gender, length of hospital stay, education level, region, or religious belief.

Sonuç

[Lütfen içeriğinizi buraya değiştirin] Cultural and spiritual beliefs are vital components of surgical care processes. Respectful communication and culturally sensitive care, especially by nurses, enhance patients' perceptions of care. Integrating spiritual support strategies may improve holistic surgical care.



117 Concept Map: The Organization of Nursing Care as a Standard of Quality in the Area of Nursing for Individuals in Perioperative Situations

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Framework: The Quality Standards for specialized Nursing Care for individuals in perioperative situations are essential for continuous improvement of care. This is achieved through the development of descriptive statements that establish the standard of excellence in professional practice, guide professional reflection, and support decision-making. (College of the Medical-Surgical Nursing Specialty, 2017). In this conceptual map, the selected quality standard is "Nursing Care, Organization " requiring reflection on its applicability in the daily practice of specialist nurses.

Methodology: This analysis is descriptive/exploratory, with an emphasis on the organization of perioperative nursing care. A deeper exploration of quality standards was necessary, focusing on the selected descriptive statement. To achieve this, various databases were used, including EBSCO, Google Scholar, PubMed, Chroacaine, Scielo, and Elsevier, utilizing specific descriptors. Inclusion criteria considered articles and reports published in the last five years. In reflecting on the applicability of this statement, indicators were created to facilitate understanding of the topic. To assess its practical application in the daily routine of specialist nurses, eight medical-surgical specialist nurses were surveyed regarding the organization of nursing care in accordance with perioperative nursing quality standards.

Results and Discussion: Through the development of this conceptual map, it was possible to interpret which aspects of nursing care organization are most present in the daily practice of specialist nurses and which areas remain unexplored.

Conclusion: This analysis serves as a reflection on the importance of focusing on nursing care to ensure high-quality practice, ultimately leading to improved health outcomes. The creation of a conceptual map facilitated the interpretation of results and comparison with theoretical frameworks, making it an essential tool for this analysis.

229 Current methods in diabetic foot ulcer care; a literature review.

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This review includes information from the literature on diabetic foot wound dressings. International Diabetes Federation 2021, the number of adults aged 20-79 with diabetes, which was approximately 151 million in 2000, reached 537 million in 2021. By 2045, Turkey is expected to be among the top 10 countries in the world in terms of diabetes prevalence. According to studies conducted in Turkey 2024, the number of individuals with diabetes has reached 7 million, more than 1 million of these individuals have diabetic foot ulcers. The characteristics of the products selected for diabetic foot dressings are as follows. Hydrogels are suitable for moisturizing necrotic tissue and autolytic debridement. Hydrocolloids and hydrofibers control exudate. Alginates are effective in wounds with excessive exudate due to their high absorbency. Composite dressings combine different layers to provide moisture balance and



barrier effect at the same time. In comparative studies, negative pressure vacuum therapy has been shown to shorten healing time, reduce edema, aid in the removal of infected fluids, and accelerate the formation of granulation tissue compared to traditional methods. Preventive measures such as regular foot examinations, proper hygiene, patient education, and appropriate footwear use reduce ulcer formation and significantly lower amputation rates. Hyperbaric oxygen therapy should be used as a complementary method only in patients with adequate vascular circulation and in cases of resistant ulcers that do not respond to traditional treatment. Although some case reports and patient series in the literature have reported positive results with ozone application, recent large studies have indicated that ozone therapy does not provide a significant contribution to the healing of diabetic foot ulcers. Growth factors have been shown to provide infection control, and their use in diabetic foot ulcers without active osteomyelitis, in conjunction with appropriate patient selection, has been found to provide meaningful supportive contributions to the healing process

273 Ensuring Effective Communication with Patients Receiving Mechanical Ventilation Support in Intensive Care Units: Current Communication Materials

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Background: With the shift from deep to light sedation in intensive care units (ICUs), an increasing number of patients remain conscious during mechanical ventilation but are unable to communicate verbally due to artificial airways such as endotracheal tubes or tracheostomy cannulas. This communication barrier not only affects patients' psychological well-being but also complicates care delivery, increasing the risk of unmet needs, anxiety, and prolonged ICU stays. Despite the widespread use of non-verbal methods such as gestures, eye movements, and writing, these strategies are often insufficient, exhausting, and prone to misinterpretation. Therefore, augmentative and alternative communication (AAC) tools—ranging from low-tech boards to high-tech eye-tracking devices—have gained growing interest as a means to facilitate nurse-patient interaction in ICUs.

Objectives: This narrative review aims to evaluate current communication strategies and tools used for conscious, mechanically ventilated patients in ICUs, with a focus on their effectiveness, feasibility, and nursing implications. Drawing on national and international studies published between 2014 and 2024, the review categorizes existing materials into low-tech (communication boards, pictorial cards) and high-tech (tablet computers, speech-generating devices, eye-tracking systems) tools. It discusses the clinical and psychosocial benefits of these materials, explores barriers such as cost and training gaps, and emphasizes the nurse's pivotal role in selecting, adapting, and implementing communication tools in care routines.

Conclusion: Effective communication with mechanically ventilated patients is both a clinical necessity and an ethical imperative. Studies demonstrate that tailored communication tools improve patient satisfaction, reduce anxiety, enhance nurse-patient interaction, and support person-centered care. Integrating these tools—especially those adapted to cultural and linguistic needs—into daily ICU practice requires institutional support, nurse training, and further research. Nurses are uniquely positioned to lead this transformation, ensuring compassionate and competent communication in intensive care settings.



299 Assessment of the Risk of Deep Vein Thrombosis in Patients Undergoing Total Knee Arthroplasty

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Background

Deep vein thrombosis (DVT) is a frequent postoperative complication after total knee arthroplasty (TKA). Despite prophylaxis, it remains a major clinical concern causing morbidity.

Objectives

This study aimed to assess the risk of DVT before and after TKA and identify factors influencing its development.

Methods

A descriptive cross-sectional study was conducted with 200 patients who underwent TKA between July and December 2022 at an orthopedics clinic in a training and research hospital. The Autar Deep Vein Thrombosis Risk Assessment Scale (DVTRAS) was applied on admission and 48 hours after surgery. Data were analyzed using descriptive statistics, paired t-tests, and multiple regression analysis.

Results

Among patients, 45% (n=90) were aged 61–70 years, and 79% (n=158) were female. Most had elevated BMI (62.5%, n=125), hypertension (68.5%, n=137), diabetes mellitus (48%, n=96) and 73.5% (n=147) were non-smokers. Regarding anticoagulant use, 58.5% (n=117) received 40 mg/day of low molecular weight heparin, while 41.5% (n=83) received 60 mg/day. Compression stockings were applied as mechanical prophylaxis in 92.5% of the patients. Before surgery, 77% (n=154) were independently mobile; postoperatively, 65% (n=133) showed partial dependence. Postoperative Autar DVTRAS scores significantly increased compared to preoperative scores (p<0.001). Factors significantly affecting DVT risk scores included advanced age, higher BMI, immobility, trauma history, and high-risk medical conditions (p<0.001). Gender, smoking, chronic diseases, and use of compression stockings post-surgery did not significantly affect risk (p>0.05).

Conclusion

Patients undergoing TKA carry a high risk of DVT, especially those with advanced age, high BMI, immobility, trauma history, and comorbidities. These findings emphasize the need for targeted risk assessment and tailored prophylactic strategies to minimize DVT occurrence in this population.

401 Burnout syndrome at work among perioperative nurse operating rooms in the Republic of Croatia

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Background

Burnout syndrome in the workplace is a state of physical, mental and emotional exhaustion caused by job stress.



Medical staff working in operating rooms are at risk of burnout syndrome. The purpose of the study was to determine the link between chronic stress and burnout syndrome among perioperative nurses working in operating rooms in Croatia.

Objectives

In all, 427 perioperative nurses participated in the research. The Trier Inventory for Chronic Stress was used to assess chronic stress. The experience of burnout syndrome was examined using a single question from the Questionnaire on the Association Between Stress Incidence Levels and Non-Communicable Chronic Diseases by Kadić. A total of 40.3% of the surveyed perioperative nurses confirmed that they have experienced burnout syndrome at work. A statistically significant positive correlation between the degree of assessed and experienced burnout syndrome at work was obtained, placing the *Score on the Chronic Stress Screening Scale* ($r=0.45$) as well as the results on all scales of the Trier Inventory for Chronic Stress. Burnout syndrome at work showed the highest correlation with the score on the *Chronic Worry* scale ($r=0.42$) and the lowest correlation with the score on the *Social Overload* scale ($r=0.30$).

Conclusion

The introduction of psychoeducation as part of a preventive program in a therapeutic context would have a positive effect on recognizing and preventing burnout syndrome as well as reducing chronic stress.

415 Multicultural blended learning and simulation in nursing education: perceived effects on clinical decision-making and perioperative-related competencies

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Background

Nursing practice in complex environments, such as perioperative settings, requires sound clinical decision-making and effective communication within multidisciplinary and multicultural teams. Blended Intensive Programmes (BIPs), developed under the Erasmus+ framework, integrate international collaboration with experiential and simulation-based learning to support these competencies.

Objectives

To evaluate nursing students' self-perceived development of clinical decision-making and related professional competencies following participation in a multicultural Blended Intensive Programme, including learning activities linked to perioperative-relevant clinical themes.

Methods

A mixed-methods study was conducted with undergraduate nursing students ($n = 35$) from Portugal, Spain, Italy, and Finland. The BIP comprised two online components (November 2024; March 2025) and one face-to-face intensive week in Portugal (April 2025). Educational activities included simulation-based learning, team-based clinical reasoning exercises, and intercultural collaboration. Some learning scenarios addressed patient safety, communication, and monitoring in situations analogous to perioperative care. Data were collected through an anonymous online questionnaire with Likert-scale items and open-ended questions. Quantitative data were analysed descriptively using SPSS v.29, and qualitative data underwent thematic content analysis. Ethical principles were respected.



Results:

Overall satisfaction was high, with 77% of participants rating the programme as “very good”. Simulation-based activities were identified as the most impactful learning component (46%). Highest-rated competencies included adaptability in multicultural environments (mean 4.40), teamwork (4.29), and communication (4.26). Clinical decision-making achieved a mean score of 3.83. Qualitative data highlighted increased awareness of communication, empathy, and shared decision-making in complex clinical contexts.

Conclusion:

Multicultural blended programmes integrating simulation positively influence nursing students’ perceived clinical decision-making and transversal competencies, supporting preparation for complex practice contexts, including perioperative care.

430 Bibliometric Analysis of Scientific Publications on Teamwork in the Operating Room: Global Trends and Academic Reflections

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Background

Operating rooms are clinical settings where effective communication is vital due to rapid decision-making processes and multidisciplinary team interactions. In this context, nurses assume a central role in the communication and coordination dynamics of the operating room team.

Objectives

This study aims to conduct a bibliometric analysis of scientific publications on nursing research on teamwork in the operating room environment; to identify trends in these publications by year, prominent authors, countries and institutions, and to reveal the academic development in the field by visualizing the information structure in the literature. This bibliometric analysis was conducted by searching the Elsevier Scopus database using the keywords “operating room”, “teamwork”, and “nursing”.

The data were analyzed using quantitative bibliometric methods; publication trends, prolific authors, institutions, and countries, as well as key concepts, were identified and visualized with VOSviewer software.

As a result of the analysis, four main themes came to the fore: nursing practices, non-technical skills and observational approaches (1); teamwork, communication and collaboration (2); perioperative nursing, anesthesia and surgical processes (3); patient safety and the role of the operating room nurse (4).

Conclusion The study revealed the trends and thematic concentrations of nursing publications on teamwork in the operating room over the years. The number of publications has increased since 2017, reaching the highest level in 2021. Most of the studies were conducted at the national level, and international collaborations were limited. The findings draw attention to the role of operating room nurses in teamwork and its relationship with patient safety, and it is recommended to increase multinational and interdisciplinary research in this field.



452 Türkiye's Scientific Visibility and Knowledge Sharing in Perioperative Nursing: A Decade of EORNA Congress Contributions

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Background International congresses play a critical role in advancing perioperative nursing by facilitating the exchange of knowledge, showcasing clinical innovations, and fostering research collaboration. As a member of the European Operating Room Nurses Association (EORNA) since 2011, Türkiye has actively contributed to the scientific program of successive EORNA Congresses. However, no prior study has systematically analyzed Türkiye's visibility and knowledge dissemination across these forums.

Objectives To evaluate the scientific contributions of Türkiye to EORNA Congresses between 2015 and 2024, in terms of the number, type, and trend of abstracts presented by Turkish-affiliated authors.

Methods:

This descriptive retrospective study included a full-text review of five official EORNA Congress abstract books from the years 2015, 2017, 2019, 2022, and 2024. Each abstract was screened to identify the country of author affiliation. Abstracts with authors from Türkiye were categorized as oral or poster presentations. Descriptive statistics were used to summarize findings and track trends across congress years.

Results:

A total of 1,247 abstracts were presented at EORNA Congresses between 2015 and 2024. Among these, 282 abstracts originated from Türkiye, accounting for approximately 22.6% of all submissions. Of the Turkish contributions, 157 were oral presentations and 198 were poster presentations. Across all years, Türkiye ranked among the top three contributing countries in terms of abstract volume. This trajectory demonstrates Türkiye's sustained engagement and evolving visibility in perioperative nursing science within the EORNA platform.

Conclusion: This study demonstrates Türkiye's strong and consistent presence within the EORNA scientific community. The high number of contributions reflects tin perioperative research, education, and clinical innovation. These findings highlight the importance of continued support for Turkish perioperative nurses to engage in international platforms, strengthening global collaboration and advancing nursing science.



461 Technology Acceptance Model In Surgical Nurses: A Generational Perspective

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Abstract

Aim: This study aimed to determine the levels of technology acceptance among surgical nurses from different generations using the Technology Acceptance Model Scale.

Materials and Methods: This prospective descriptive study was conducted with data collected from 402 volunteer nurses working in surgical units who met the inclusion criteria. The data collection form consisted of three sections: the informed consent form, the descriptive information form, and the Technology Acceptance Model Scale. Data were collected online through social media platforms. The study data were analyzed using JAMOVI statistical software version 2.6.26. Descriptive statistics, including frequency (n), percentage (%), mean, median, standard deviation, minimum, and maximum values, were calculated. The level of statistical significance was set at $\alpha = .05$, and $p < .05$ was considered statistically significant.

Results: Of the participating surgical nurses, 72.60% were female, 57.50% were married, 70.40% held a bachelor's degree, and 52% were employed in public hospitals. The analyses revealed that scale scores differed significantly according to education level ($p < 0.05$). A statistically significant difference was also found in scale scores based on difficulties experienced while using technology ($p < 0.001$). However, no statistically significant differences were identified in total scale scores or in the perceived usefulness, perceived ease of use, and behavioral intention subscale scores across generations ($p > 0.05$). This finding indicates that X, Y, and Z generations had similar scale and subscale scores.

Conclusion: While the scale scores of surgical nurses varied according to education level and difficulties experienced in using technology, no significant differences were observed across generations in total or subscale scores. These results suggest that attitudes toward technology are similar across generations and largely independent of generational differences.

Keywords: Nursing; Technology; Acceptance; Generation; Surgery



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*all authors contributed equally to the project . P-011-01

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