# Perioperative education

Perioperative education refers to the educational and training programs provided to healthcare professionals who work in the perioperative setting. The perioperative period encompasses the time before, during, and after surgery, including preoperative preparation, the surgical procedure itself, and postoperative recovery and care. Perioperative education is crucial for ensuring the safety and well-being of patients undergoing surgical procedures and for the professional development of healthcare providers involved in the surgical process.

Here are some key aspects of perioperative education:

Preoperative Assessment: Healthcare providers, such as nurses and anesthesiologists, receive education on conducting thorough preoperative assessments. This includes evaluating the patient's medical history, performing physical exams, and ordering appropriate diagnostic tests to assess the patient's overall health and suitability for surgery.

Surgical Techniques: Surgeons and surgical teams undergo extensive education and training in surgical techniques and procedures specific to their specialties. This includes learning the latest advancements in surgical technology and equipment.

Infection Control: Infection prevention and control are critical in the perioperative setting. Healthcare professionals are educated on proper aseptic techniques, sterilization methods, and hand hygiene to minimize the risk of surgical site infections.

Anesthesia: Anesthesia providers, such as anesthesiologists and nurse anesthetists, undergo specialized education and training to administer anesthesia safely. This includes understanding the pharmacology of anesthetic agents and monitoring patients throughout surgery.

Patient Safety: Perioperative education emphasizes patient safety protocols, including the “time-out” procedure before surgery to verify patient identity, surgical site, and procedure, as well as the prevention of wrong-site surgery.

Communication: Effective communication among members of the surgical team is vital. Healthcare providers are trained to communicate clearly and collaborate efficiently to ensure the best possible patient outcomes.

Postoperative Care: Education also extends to postoperative care, including monitoring patients in the recovery room, managing pain, and recognizing and addressing complications.

Ethical and Legal Considerations: Perioperative education includes discussions on ethical and legal aspects of surgery, such as informed consent, patient confidentiality, and respecting patients' rights.

Continuing Education: Healthcare providers in the perioperative setting are often required to engage in continuing education to stay current with advances in surgical techniques, equipment, and best practices.

Interdisciplinary Training: Collaboration among various healthcare professionals, such as surgeons, nurses, anesthesiologists, and support staff, is emphasized to promote teamwork and enhance patient care.

Simulation and Skills Training: Many healthcare institutions use simulation and skills training

programs to allow practitioners to practice and refine their perioperative skills in a safe and controlled environment.

Perioperative education is an ongoing process that ensures healthcare professionals are well-prepared to provide safe and effective care to surgical patients. It plays a vital role in improving patient outcomes, reducing surgical complications, and maintaining high standards of care in the operating room.

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A trial aimed to compare effectiveness in terms of pain, quality of life, pain cognition, surgical experience, healthcare use, work resumption, and cost-effectiveness of perioperative pain neuroscience education (PPNE) vs. traditional biomedical education (perioperative biomedical education [PBE]) in people undergoing surgery for lumbar radiculopathy.

Methods: In this multicentre RCT (ClinicalTrials.gov: NCT02630732), patients undergoing surgery for lumbar radiculopathy in three Belgian hospitals were randomized to receive PPNE or PBE. Both groups received one preoperative and one postoperative one-to-one education session and a booklet (balanced interventions), with essentially different content (PPNE: biopsychosocial; PBE: biomedical). Pain was the primary outcome (Visual Analogue Scales+quantitative sensory testing). Assessments were at 3 days, 6 weeks, and 6 and 12 months after surgery.

Results: Between March 2016 and April 2020, participants were randomly assigned to PPNE (n=58) or PBE (n=62). At 12 months, PPNE did not lead to significantly better pain outcomes, but it did result in more favorable 36-item Short Form Health Survey physical component (additional increase: 46.94; 95% confidence interval [CI]: 14.16-79.73; medium effect), Tampa Scale of Kinesiophobia (additional decrease: 3.15; 95% CI: 0.25-6.04; small effect), and Pain Catastrophising Scale (additional decrease: 6.18; 95% CI: 1.97-10.39; medium effect) scores. Females of the PPNE group showed a higher probability for work resumption (95% vs 60% in the PBE group). PPNE was cost-effective compared with PBE (incremental costs: €-2732; incremental quality-adjusted life years: 0.012).

Conclusions: Perioperative pain neuroscience education showed superior clinical and cost-effectiveness than perioperative biomedical education in people undergoing surgery for lumbar radiculopathy.

Clinical trial registration: NCT02630732 [1)]

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Huysmans E, Goudman L, Coppieters I, Van Bogaert W, Moens M, Buyl R, Nijs J, Louw A, Logghe T, Putman K, Ickmans K. Effect of perioperative pain neuroscience education in people undergoing surgery for lumbar radiculopathy: a multicentre randomised controlled trial. Br J Anaesth. 2023 Sep;131(3):572-585. doi: 10.1016/j.bja.2023.05.007. Epub 2023 Jun 19. PMID: 37344337.