

Patients' understanding of their upcoming anaesthetic after attending Pre-Operative Assessment Clinic Appointment

Maria Spiteri Zammit, Johann Scicluna, Sara Farrugia,
Julian Camilleri, Elissa Sultana

Background: Patients attending the Preoperative Assessment Clinic (POAC) should be empowered to make informed clinical decisions. Clear, evidence-based anaesthetic information must be provided in an accessible format before consent is obtained. A telephone questionnaire was conducted to assess patients' understanding of the information given at POAC regarding their anaesthetic management and associated risks.

Methods: Following ethical approval, 227 adult POAC patients were consented over four weeks. They were conducted within 48 hours post-appointment and asked simple questions about the discussed anaesthetic modality and its complications.

Results: A total of 203 patients completed the questionnaire. Of these, 122 (60.1%) patients were aware of their planned anaesthetic modality and 125 (60.6%) patients recalled being informed about anaesthetic complications. However, 28 of the latter could not specify any complications. The most remembered complications were nausea and vomiting, death, and non-specific cardiac or respiratory issues. Additionally, 91 (44.8%) patients stated they were not informed about complications related to their comorbidities. 43 patients desired more information, but only 12 had asked the POAC doctor questions.

Conclusions: Communication of anaesthetic information at POAC requires improvement. Many patients struggle to retain critical details, and barriers might prevent them from asking questions. Addressing these issues could enhance patient understanding and engagement, ultimately improving shared decision-making and perioperative care.

Dr Maria Spiteri Zammit, MD

Department of Anaesthesia & Intensive Care,
Mater Dei Hospital,
Msida, Malta

Dr Johann Scicluna, MD, FRCA

Department of Anaesthesia & Intensive Care,
Mater Dei Hospital,
Msida, Malta

Dr Sara Farrugia, MD, MRCP(UK)

Department of Anaesthesia & Intensive Care,
Mater Dei Hospital,
Msida, Malta

Dr Julian Camilleri, MD

Department of Anaesthesia & Intensive Care,
Mater Dei Hospital,
Msida, Malta

Dr Elissa Sultana, MD

Department of Surgery,
Mater Dei Hospital,
Msida, Malta

In recent years, patients have become increasingly engaged in clinical decision-making regarding their medical care, particularly in the perioperative setting. They frequently seek reliable information about medical conditions, surgical interventions, and anaesthetic options but are also influenced by 'ad hoc' information from friends, family and social media. The latter is readily accessible and widely disseminated, however it can be inaccurate and unreliable. Non-medical individuals often lack the skills to critically appraise this information, leading to misconceptions.

As a result, during appointments with healthcare professionals - especially at Pre-Operative Assessment Clinics (POAC) - patients may challenge medical recommendations based on inaccurate or incomplete prior knowledge. This underscores the need for medical personnel to possess a strong foundation of evidence-based knowledge and the ability to communicate it effectively. Clear and comprehensible dialogue is essential to ensure that patients give a valid and informed consent.

The Association of Anaesthetists of Great Britain and Ireland published guidelines in 2017, which are widely regarded as the gold standard for delivering anaesthetic information.¹ These guidelines were developed to build an ethical and legal framework within which anaesthetists, intensivists, and pain specialists operate. While addressing these changes, the guidelines uphold fundamental principles, including respect for patient autonomy and the necessity of providing clear, comprehensive, and adequate information.

Anaesthesia has advanced significantly in recent years, enabling numerous successful surgical outcomes. Despite the expanding role of anaesthetists in areas such as resuscitation, intensive care and pain management, public understanding of anaesthetic practices and the responsibilities of anaesthetists remains limited.²

The POAC plays a critical role in preparing patients for surgery by assessing their medical condition and providing detailed guidance to optimise their health and readiness for anaesthesia. As part of this process, a thorough medical review is conducted by a doctor, during which patients receive instructions on optimising their medical status and preparing for anaesthesia in the days or weeks preceding their procedure.³

To evaluate patients' understanding and expectations of their upcoming anaesthesia, a telephone questionnaire was conducted within 48 hours of their POAC visit. This assessment aimed to identify any gaps in understanding and ensure that patients were adequately informed about their perioperative care.

MATERIALS AND METHODS

Data protection clearance was obtained from the Data Protection Office of Mater Dei Hospital (MDH), and ethical approval was granted by the Faculty Research Ethics Committee of the University of Malta (UREC-DP2307001MED - MED-2022-00407). Nurses at the POAC acted as intermediaries, facilitating participant consent by providing patients with an information letter followed by a consent form.

Data collection was conducted over a four-week period in August 2023. All consenting adult patients (aged 18 years and older) attending the POAC clinic at MDH were eligible to participate in the telephone questionnaire. Consequently, patients younger than 18 years and those lacking capacity were excluded from the study. Additionally, patients who underwent their pre-operative assessment at locations other than the POAC clinic were not included.

The questionnaire included a combination of 'yes' or 'no' questions and simple short-answer questions. These questions focused on topics such as the type of anaesthesia, potential complications discussed, and the information provided regarding pre-operative preparations and possible intra-operative interventions ([Table 1](#)).

During the four-week study period, 227 patients provided consent to participate. Of these, 203 telephone questionnaires were successfully completed. The remaining 24 patients were excluded due to 21 being unreachable after multiple call attempts and 3 having undergone their surgical procedure within 48 hours of their POAC appointment. The sample was not randomised. No formal statistical methodology was applied in this analysis. The results are expressed as a percentage of completed questionnaires.

Table 1 Questionnaire used in the study

General Anaesthesia Questions
What was your planned procedure?
Were you made aware of what type of Anaesthesia you are expected to undergo?
If not specifically told, what type of anaesthesia do you expect?
Were you made aware that anaesthesia has its own complications?
If yes, which complications are you aware of?
Were you made aware that complications from anaesthesia may arise due to previous/pre-existing medical conditions?
Were you made aware that a cannula will be inserted
Were you told what time should you start fasting? If yes, how much time before the procedure should you fast?
Regional Anaesthesia Questions (only eligible patients)
Were you made aware that you can be given Regional Anaesthesia?
If yes, what do you think the complications are? (patient's perception)
Were you made aware of what the complications are?
Were you made aware that general anaesthesia may still be given?
Other POAC-related Questions
During the pre-op, did you have any questions specifically regarding Anaesthesia?
If yes, did the doctor answer satisfactorily? Answer 1 (unsatisfied) to 5 (satisfied)
Do you wish that the doctor at POAC discussed your anaesthesia more?
Was the doctor clear when explaining these things to you during POAC?
Were you given a leaflet during your pre-op to read more about Anaesthesia?
If yes, did you feel that you understood better after reading the leaflet?

RESULTS

A total of 203 questionnaires were completed during the data collection period and were used for the purposes of this study. The ages of the patients ranged from 20 to 85 years, with the majority falling within the 40–49 year age bracket (Figure 1). Most participants were scheduled for general surgery, followed by gynaecology, orthopaedics, and ENT surgeries. A small proportion of patients were undergoing procedures in ophthalmology, plastic surgery, and vascular surgery.

When patients were asked about the type of anaesthesia they were informed they would receive—general anaesthesia, regional anaesthesia, or local anaesthesia — 81 (39.9%) patients indicated that they were not informed. Of these, 68 patients assumed they would be receiving general anaesthesia.

Based on the procedure names collected during the initial consent process, some procedures were eligible for neuraxial regional techniques, such as single-shot spinal or epidural anaesthesia, either alone or in combination with general anaesthesia. A total of 22 (10.8%) patients were eligible for these techniques; however, only 4 patients were aware of

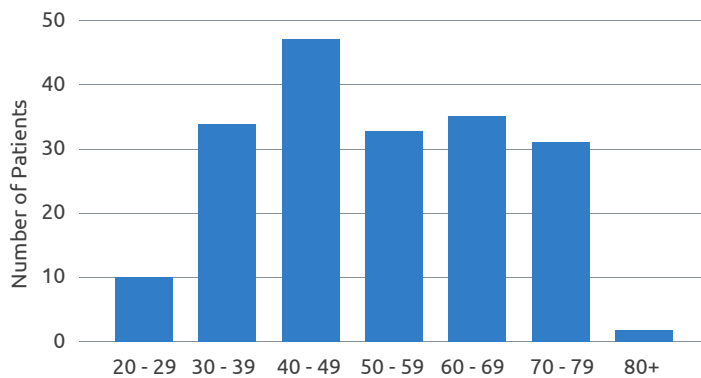


Figure 1 Number of patients per age group (20-85)

this option, and none were informed about the potential complications associated with neuraxial anaesthesia. 1 of these 4 patients mentioned awareness of back pain as a possible complication.

When asked whether they were informed of potential anaesthetic complications, 125 (61.6%) patients reported that complications were discussed. The most frequently recalled complication was postoperative nausea and vomiting, followed by death, non-specific cardiac or respiratory problems, stroke, and allergic reactions. Some patients also mentioned surgical complications, such as bleeding and infection. Notably, 28 patients did not recall any anaesthetic complications, despite reporting that such complications had been discussed during their POAC consultation (Figure 2).

Among the 78 (38.4%) patients who were not informed of anaesthetic complications, 43 expressed a desire for more information about their upcoming anaesthesia. However, only 12 patients actively asked the doctor any questions. In contrast, of the 125 (61.5%) patients who were informed about potential complications, 45 still desired additional information, although only 19 patients asked follow-up questions.

An increased risk of anaesthetic complications is well recognised in the presence of comorbidities. A total of 112 (55.1%) patients demonstrated awareness of this fact, although it should be noted that the presence or absence of comorbidities was not specifically addressed in the questionnaire.

Only 16 (7.9%) patients expressed dissatisfaction about the clarity of the information provided, citing the use of medical jargon, insufficient explanations, and language barriers as factors that hindered their understanding and did not meet their expectations. Lastly, only 44 (21.7%) patients reported that they received some kind of written information about their anaesthetic process.

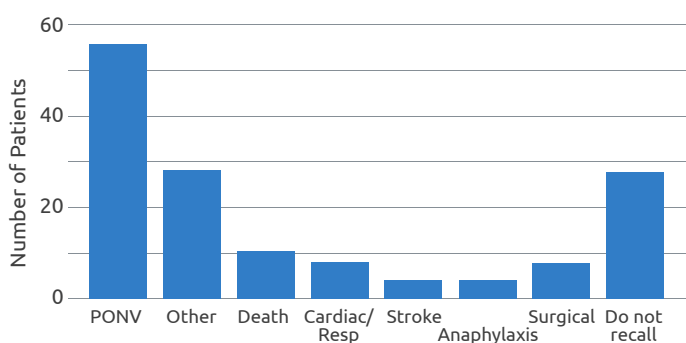


Figure 2 Number of patients recalling complications

This study aimed to assess patients' understanding and expectations regarding their upcoming anaesthesia following their pre-operative visit, and to evaluate our local informed consent process in relation to anaesthesia. In 2023, a total of 18,344 patients underwent procedures requiring anaesthetic care. Of these, 10,800 patients attended the POAC prior to their elective surgery.⁴ Despite the relatively small sample size of our study cohort (1.9% of all patients seen at POAC), the data collected can be considered a snapshot of the current situation at the POAC.

Surgery and anaesthesia can have a significant impact on a patient with pre-existing comorbidities. Given the high volume of surgeries performed, there is a good potential for the occurrence of adverse operative complications, highlighting the critical role of the POAC. During their visit, patients undergo a comprehensive history and examination, their medical records are reviewed, and they are investigated using blood, radiological, cardiology and lung function tests as indicated. Thereafter, they are referred to a specialist if necessary to optimise any pre-existing medical conditions.^{5,6}

The POAC clinic also serves as the setting where patients should receive education regarding their upcoming procedure, including anaesthesia. It is here that both nurses and doctors have the opportunity to inform patients about the risks and potential complications of anaesthesia, ensuring that they are fully aware of their options and able to make an informed decision.⁵

Informed consent is a process, not merely the signing of a form. It is designed to provide patients with the necessary information and understanding to authorize a medical procedure.⁷ Legally and ethically, informed consent is required prior to undertaking invasive or high-risk clinical interventions. It is defined as a communication process between a patient and a physician that culminates in the patient's authorization, agreement, or refusal to proceed with a specific medical intervention.⁸

For consent to be valid, the patient must fully understand the proposed intervention, including its potential risks, benefits, and available alternatives. The decision must be made freely,

without undue influence, and the patient retains the right to refuse treatment. Failure to obtain informed consent compromises patient autonomy, jeopardizes patient safety, and may legally constitute negligence or battery.⁸⁻¹⁰

In cases where the patient is unable to provide consent—such as minors, unconscious individuals, patients under general anaesthesia or sedation, those who are mentally incapacitated or intoxicated, or in emergencies where relatives are unavailable—substitute consent or refusal of treatment may be undertaken on their behalf.¹¹

Unfortunately, doctors undergoing their foundation programme may receive little training in how to conduct informed consent discussions. They themselves may not be privy to the procedure, its complications or the anaesthetic involved. Several other factors also hinder the informed consent process, including misunderstanding about consent requirements and goals, differing legal standards of disclosure, time pressures and competing demands of clinical medicine.⁹

In addition, it is vitally important to recognize that patients often do not view the consent process as primarily serving their interests or as a means to communicate their wishes. Instead, it is often seen as a protective measure for the hospital, which may lead to patients feeling disempowered and lacking control.¹² Although written consent specifically for anaesthesia is not currently mandated, our consent form incorporates key aspects of anaesthetic care.¹ It outlines the type of anaesthesia the patient will receive, ensures their right to discuss anaesthetic options with an anaesthetist, and includes information on potential dental damage.

The questionnaire provided valuable insights, including whether patients were informed about the type of anaesthesia they would receive. 81 patients reported not being informed about their anaesthesia type, with most assuming they would undergo general anaesthesia. However, 22 of these patients were scheduled for procedures that could be effectively performed using neuraxial techniques. Concerningly, only four of the patients surveyed were aware of this option, as they had been specifically informed during the POAC. This lack of communication is concerning, as it leaves patients insufficiently informed and unprepared for the

anaesthesia they may receive. This gap in patient awareness may be addressed with more teaching in anaesthesia during medical school.

According to the guidelines from the AAGBI, it is not acceptable to provide elective patients with such information only immediately prior to induction in the anaesthetic room since there will be insufficient time for patients to make informed and free decisions. Instead, this information should be conveyed as early as possible, ideally at the time of booking or during the POAC.¹ In cases where both a general anaesthetic and a neuraxial technique are viable options—depending on patient comorbidities and the anaesthetist's preference—patients should be informed about both possibilities in advance. This would enable them to make an informed decision and provide consent for either option on the day of the procedure.¹

Out of 125 patients who claimed to have been told about anaesthetic complications, 28 patients did not recall a single complication mentioned during the appointment. It has been previously studied that patients retain very little of the information provided, especially that concerning anaesthesia.¹³⁻¹⁵ Factors contributing to this limited recall include the use of complex medical terminology, the mode of information delivery (spoken versus written), and patient-specific factors such as education level and expectations.

It is commonly assumed that older patients have poorer information recall compared to younger individuals. Research indicates that, over time, medical information aligning with pre-existing beliefs is more likely to be remembered than information that contradicts these beliefs. Furthermore, patients with higher educational levels tend to recall information more accurately than those with lower educational attainment.¹⁶

The acquisition of new information is generally easier to retain than the correction of pre-existing knowledge. In stressful or emotional situations, attentional narrowing can occur, where patients focus primarily on one specific aspect of the experience. As a result, other important information—such as instructions regarding therapy adherence or follow-up appointments—may not be stored in memory and, consequently, cannot be recalled.^{14,17}

Importantly, patients are more likely to remember information they perceive as significant or directly relevant.¹⁴ For example, surgical complications are more readily recalled than anaesthetic complications. This discrepancy may arise because patients are less likely to view anaesthetic discussions as an integral part of the consent process, particularly in settings where these discussions are conducted by foundation doctors rather than the anaesthetists themselves.¹³ Additionally, patients' limited understanding of anaesthesia and the roles of anaesthetists beyond the operating theatre may contribute to this lack of recall as such uncertainty increases anxiety levels.¹⁸ Furthermore, as patients typically have no pre-existing relationship with their anaesthetist until the day of the procedure, their fears are often more focused on the surgical procedure itself rather than the anaesthetic process. This is unless their concerns are influenced by prior experiences or a personal familiarity with an anaesthetist.¹⁹⁻²¹

In line with these findings, 28 patients did not recall a single complication, a trend observed across all age groups. The most recalled complication was post-operative nausea and vomiting. While this memory may stem from prior personal experiences or those of relatives, it aligns with findings from other studies that indicate fear of nausea and vomiting, along with concerns about awareness and pain, is a common anxiety among patients.^{22,23}

Only 31 patients asked questions, regardless of whether they had been informed about complications or not. This represents a relatively low number, especially considering that 88 patients expressed a desire to know more. This may reflect issues such as time constraints, language barriers, or gaps in knowledge, where patients may be unaware of potential problems or techniques and, therefore, do not know what questions to ask. For patient-centred communication to occur, a two-way dialogue between patients and care providers is essential. Both parties should actively engage in the conversation, with each having the opportunity to speak and be heard without interruption. Questions should be encouraged for clarification, opinions expressed, and information exchanged in an environment free of verbal abuse, disrespect, or barriers to inquiry. Encouraging the active

involvement of relatives in decision-making is also an important aspect of fostering patient-centred care.²⁴ The traditional paternalistic approach to informed consent is gradually being replaced by a more collaborative and inclusive model.²⁵

A total of 88 patients expressed a desire for more information, potentially prompted by the questionnaire itself, which may have made them aware that additional information could have been provided. While most patients are interested in learning about the complications of their procedure and wish to know all potential risks, others prefer not to be informed about any complications or procedural details. This variation highlights the challenge of gauging what individual patients want or do not want to know.²⁵

Variation in practice based on individual patient preferences is appropriate; however, variation arising from differences between practitioners is more difficult to justify. Such discrepancies may lead to patient confusion and hinder the establishment of a standard, for what legally constitutes adequate risk disclosure.²⁶

A total of 112 patients reported being informed about increased risks associated with the presence of comorbidities. Although the questionnaire did not specifically address patients' comorbidities, this response indicates a general awareness that medical conditions predispose individuals to greater risk. Patients with comorbidities require a tailored approach to their pre-operative assessment, including the optimisation of their medical conditions and personalised disclosure of risks and complications. Beyond discussing the procedural details, the intended outcomes, and any additional post-procedure requirements, it is vital to address realistic treatment outcomes and the potential for significant morbidity or mortality.²⁵

This raises the question of whether foundation doctors are the most appropriate individuals to engage in such detailed discussions with patients, given their lack of specialist expertise in anaesthesia.

To enhance the delivery of information and improve the informed consent process, the information provided to patients should be clear, specific, and concise, emphasizing the most common and significant risks and complications. This focused

approach ensures that patients receive essential information without feeling overwhelmed. Furthermore, a second explanation should be provided on the day of surgery, even if consent was initially obtained during the POAC appointment.²⁶

To improve patients' recall of information, a structured approach should be adopted, supported by supplementary written or visual materials such as brochures, booklets, videos, or audio resources. This methodology not only enhances understanding but also helps to reduce anxiety and improve overall patient satisfaction with their care.^{14,17}

Various interventions, including revised consent forms, the provision of additional written materials, enhanced consent discussions, and the integration of audiovisual technology, have been developed and evaluated.⁹ These strategies can further support foundation doctors by bridging language barriers, minimizing the impact of medical jargon, and offering accessible reference materials for both patients and healthcare providers.

LIMITATIONS

Our study did not account for participants' prior experiences with general anaesthesia, which may have introduced bias into some responses, despite the questions being specifically focused on the recollection of information provided during the POAC consultation. Additionally, the study did not consider participants' educational levels, which could influence their understanding and recall of medical information. Prior to the study we did not test the general comprehension and recall ability across the age groups. However, this should still reflect the typical patient cohort attending POAC.

Furthermore, we did not assess the foundation doctors' knowledge regarding the conduct of pre-operative assessments, their awareness of anaesthetic risks and complications, or their familiarity with anaesthetic techniques beyond general anaesthesia. This limitation highlights the need for further evaluation of the training and preparedness of foundation doctors involved in the pre-operative assessment process.

RECOMMENDATIONS

Our findings indicate that although patients are receiving a considerable amount of information from foundation doctors, a gap persists in the delivery or retention of essential details. Therefore, we primarily recommend enhancing the training and education of foundation doctors, with a particular focus on pre-operative assessment, anaesthetic procedures, techniques, and associated risks and complications.

We acknowledge the effort that has been made before to provide written anaesthetic information. This material should be made available to patients by ensuring that there are enough copies. Health providers need to know of the availability of this material. This can be revised to concise, clearer and medical jargon-free version. A pictogram may also help those patients who have limited literacy skills. It may also help the understanding and retention of information.

The information can also be made available in different locally spoken languages, in Braille and large print versions. A digital format might also be helpful, as it would be readily available for distribution by email. Translator services should be easily accessible for those who need it.

The amount of information disclosed should be tailored to what is relevant to each individual patient. If a patient expresses a preference not to receive detailed information about their procedure, including its risks and potential complications, this choice should be respected and documented in writing.¹ However, it remains important to inform patients and make them aware that there are potential risks and complications associated with the procedure.

To support this, we are currently developing interactive workshops and formal teaching sessions for foundation doctors to improve their ability to communicate this knowledge effectively. Additionally, we propose displaying a slideshow or short informational video in the POAC clinic's waiting area to gradually and clearly convey key information.

CONCLUSION

This study highlights significant gaps in patients' understanding of anaesthesia and the informed consent process following their pre-operative assessment. Although patients generally receive information regarding their procedure, many remain unaware of key aspects such as anaesthetic options, associated risks, and potential complications. These findings suggest that the current approach, particularly when conducted by foundation doctors, may not fully meet the standards of informed consent required for patient-centred care. Enhancing the education and training of foundation doctors, improving the clarity and consistency of information delivery, and supplementing verbal explanations with written or audiovisual materials could substantially improve patient comprehension, satisfaction, and autonomy. By strengthening communication within the POAC setting, healthcare providers can ensure that patients are better informed, more engaged, and truly empowered to participate in decisions about their anaesthetic care.

REFERENCES

1. Yentis SM, Hartle AJ, Barker IR, et al. AAGBI: consent for anaesthesia 2017. *Anaesthesia* 2017;72:(1)93–105.
2. Arefayne NR, Getahun AB, Melkie TB, et al. Patients' knowledge and perception of anesthesia and the anesthetists: cross-sectional study. *Ann Med Surg* 2022;78.
3. Goldenberg E, Saffary R, Schmiesing C. New role for the anesthesia preoperative clinic: helping to ensure that surgery is the right choice for patients with serious illness. *Anesth Analg* 2019;129:(1)311–5.
4. Janulova L. Annual surgical operations report 2023. MA/OPS Annual Report; 2024.
5. Avendano JP, Monica J, Varghese B. Revisiting the importance of the pre-operative assessment – a case report. *J Orthop Case Rep* 2023;13:(7)52–5.
6. Asthana U, Anshumali N, Sharma S. An assessment of the patient's understanding and knowledge of the relevance of pre-anesthetic check-up. *Panacea J Med Sci* 2023;13:(1)82–7.
7. Rosique I, Pérez-Cárceles MD, Romero-Martin M, et al. The use and usefulness of information for patients undergoing anesthesia. *Med Law* 2006;25:715.
8. Tait AR, Teig MK, Voepel-Lewis T. Informed consent for anesthesia: a review of practice and strategies for optimizing the consent process. *Can J Anaesth* 2014;61:(9)832–42.

9. Schenker Y, Fernandez A, Sudore R, Schillinger D. Interventions to improve patient comprehension in informed consent for medical and surgical procedures. *Med Decis Making* 2011;31:(1)151–73.
10. Potgieter HE. Authenticity of informed consent in anaesthesia: ethical reflection on the dilemma of informed consent in anaesthesia. Stellenbosch: Stellenbosch University; 2020.
11. Shinde SS, Parak SC, Bhati S, et al. Medico-legal and ethical issues in anaesthesiology profession. *Indian J Anaesth* 2021;65:(1)54–60.
12. Akkad A, Jackson C, Kenyon S, et al. Patients' perceptions of written consent: questionnaire study. *BMJ* 2006;333(7567):528.
13. Zarnegar R, Brown MR, Henley M, et al. Patient perceptions and recall of consent for regional anaesthesia compared with consent for surgery. *J R Soc Med* 2015;108:(11)451–6.
14. Kessels RPC. Patients' memory for medical information. *J R Soc Med* 2003;96:(5)219–22.
15. Laws MB, Lee Y, Taubin T, et al. Factors associated with patient recall of key information in ambulatory specialty care visits: results of an innovative methodology. *PLoS One* 2018;13:(2)e0191940.
16. Gerada M, Xuereb LB, Fava G, Cortis PA. The intrapartum struggle: recalling risks and neuraxial negatives. *Int J Obstet Anesth* 2024;58:104083.
17. Langewitz W, Ackermann S, Heierle A, et al. Improving patient recall of information: harnessing the power of structure. *Patient Educ Couns* 2015;98:(6)716–21.
18. Yalçın Solak M, İzgi M, Tümer M, Uzun Ş. Duties of anaesthetists and assessment of awareness, concerns, and expectations on anaesthesia practices. *Turk J Anaesthesiol Reanim* 2023;51:(6)477–84.
19. Emmanuel E, Fatungase O, Shoyemi R. Patients' perception of anaesthesia, the anaesthetist and experience of anaesthesia care. *Ann Health Res* 2022;8:(3)229–43.
20. Jovanovic K, Kalezić N, Grujicic SS, et al. Patients' fears and perceptions associated with anesthesia. *Medicina (Kaunas)* 2022;58:(11)1577.
21. Wu X, Li H, Li X, Yang Y. Knowledge, attitude, and practice of non-emergency surgical patients toward anesthesia. *Sci Rep* 2024;14.(1)
22. Peng F, Peng T, Yang Q, et al. Preoperative communication with anesthetists via anesthesia service platform (ASP) helps alleviate patients' preoperative anxiety. *Sci Rep* 2020;10.(1)
23. Royston D, Cox F. Anaesthesia: the patient's point of view. *Lancet* 2003;362(9396):1648–58.
24. Kwame A, Petrucka PM. A literature-based study of patient-centered care and communication in nurse-patient interactions: barriers, facilitators, and the way forward. *BMC Nurs* 2021;20.(1)
25. Jamjoom A, White S, Walton S, et al. Anaesthetists' and surgeons' attitudes towards informed consent in the UK: an observational study. *BMC Med Ethics* 2010;11.(1)
26. Gillies A, Gillies R, Weinberg L. Patient recollections of perioperative anaesthesia risks. *Anaesth Intensive Care* 2013;41:(2)247–50.
27. Tylee MJ, Rubenfeld GD, Wijesundera D, et al. Anesthesiologist to patient communication. *JAMA Netw Open* 2020;3:(11)e2023503.