



# Patient satisfaction with the perioperative care by anesthesiologists: pilot study at four surgical departments

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## Abstract

**Background:** The aim of this pilot study was to measure the outcomes of perioperative care by anesthesiologists and patient satisfaction at four surgical departments. **Methods:** We designed an original 25-item questionnaire and used it to complete structured interviews of 80 consenting, alert, adult surgical patients during their 1st to 3rd post-operative day. **Results:** Although >70% were satisfied with the information sharing, 43% patients were unsure or not informed about the possible complications of anesthesia. Similarly, >75% positively rated the anesthesiologists' bedside manner; however 69% were either unsure or sure that an anesthesiologist did not visit them after surgery. Interestingly, this lack of continued care had no overall effect on patient satisfaction. Majority reported receiving immediate post-operative analgesia (65%). The Oncological Surgery patients reported highest (and the Orthopedic patients the lowest) satisfaction with their postoperative nausea and pain management. Majority of responders were overall satisfied with their care. **Conclusions:** Our data indicate a high level of patient satisfaction with nearly all aspects of perioperative anesthesiology care. However, anesthesiologists need to more thoroughly inform patients about possible complications of anesthesia. A larger survey is needed to fully assess the patient care and satisfaction trends discussed above.

## Citation

Springer J, Dudzińska K, Nurkowska M, Hasak L, Dylczyk-Sommer A. Patient satisfaction with the perioperative care by anesthesiologists: pilot study at four surgical departments. Eur J Transl Clin Med. 2018;1(2):58-63.  
DOI: 10.31373/ejtcmed/102747

## Background

Due to the technological and pharmacological

advancements, major negative clinical outcomes such as mortality, myocardial infarction or brain injury became too rare in anesthesia practice to be analyzed in

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No external funds.

Available online: [www.ejtcmed.gumed.edu.pl](http://www.ejtcmed.gumed.edu.pl)

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multicenter studies [1]. Furthermore, the clinical outcomes are increasingly being evaluated regarding the patient's quality of life, instead of the technical success of the intervention [2]. Increasing attention is also paid to the patient's informed consent, which according to some authors includes not just consent for the particular procedure but also for specific complications and discomfort associated with the suggested treatment method [3]. Another patient-centered outcome is satisfaction, defined as the degree of compatibility between the patient's expectation and the health care provider's achievement [4]. Therefore, a growing number of anesthesiology research and principles of healthcare management focus on the patient-doctor information sharing, patient patients' quality of life and satisfaction from care received with the goal of increasing the quality of perioperative care.

## Aim

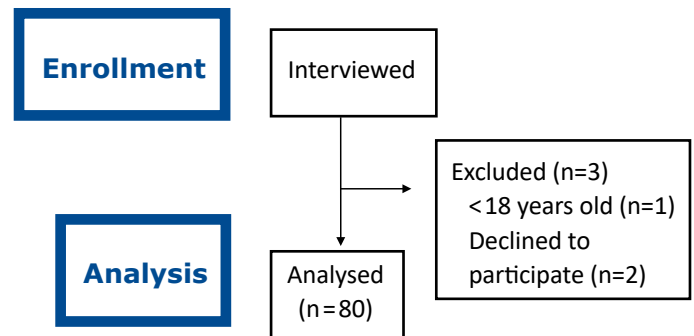
The aim of this pilot study was to measure the outcomes of perioperative care by anesthesiologists and patient satisfaction at four surgical departments of the University Clinical Centre (UCC) in Gdańsk.

## Methods

After a review of literature on anesthesiology satisfaction questionnaires we developed a 25-item questionnaire. It covered 5 dimensions: preoperative consultation (9 questions), bedside manner (5), pre-operative fear & discomfort (4), pre & post-operative care (5) and the overall patient satisfaction (2). To ensure clarity, all questions were neutrally worded and did not contain medical jargon. Except for questions about demographics and specific fear/s, the responses were rated using a 5-point Likert scale [5]. Scores were assigned on the scale as follows: Yes or Very Satisfied (4), Rather Yes or Satisfied (3), Hard to say (2), Rather Not or Dissatisfied (1), No or Very Dissatisfied (0).

After obtaining the permission of the local Bioethics Commission (NKBBN/61/2012), we used the questionnaire to complete systematic, in-person interviews at the bedside of consenting and alert adult patients during their 1st-3rd post-operative day at 4 in-patient surgical departments of the UCC. The interviews were conducted by medical student volunteers, who were not directly involved in the interviewed patient care. A total of 80 interviews were analyzed, twenty from each of the following four departments: General, Endocrine and Transplant Surgery, Oncological Surgery, Orthopedic and Trauma Surgery, Plastic Surgery (Figure 1).

Figure 1. Inclusion of interviews

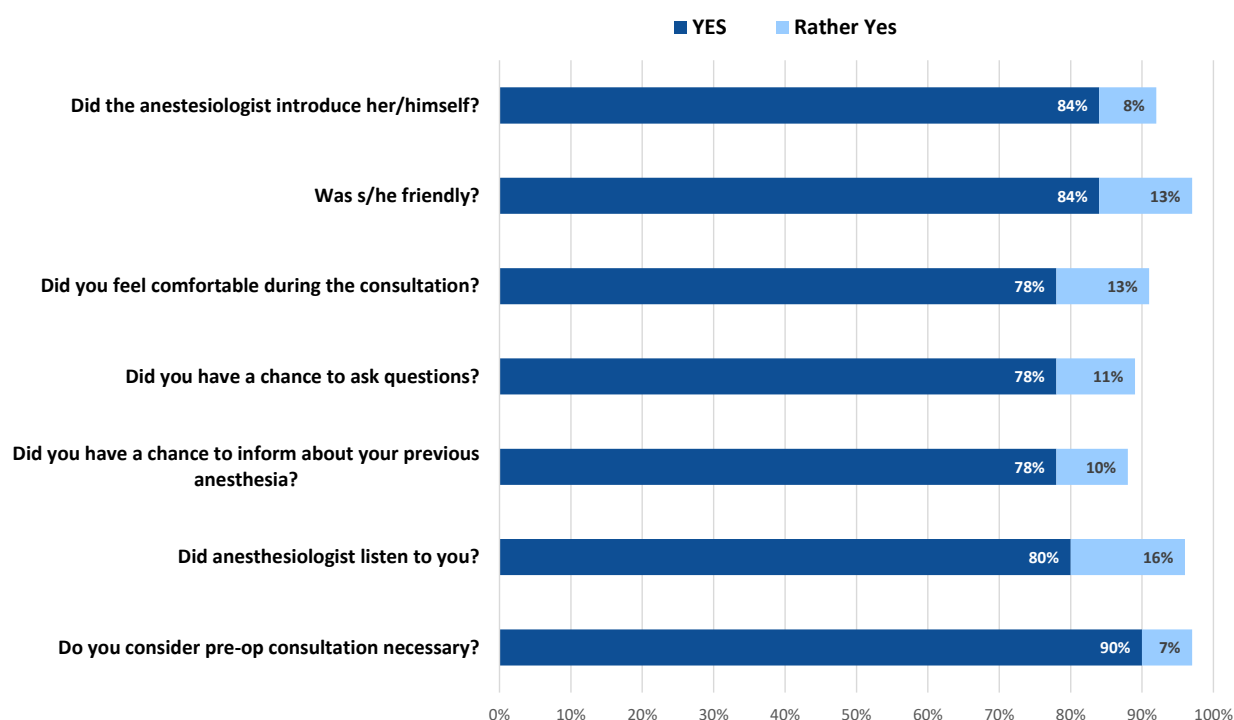


## Results

The majority of our respondents were women (57%), age 18-65 (78%), with high-school education (46%), after general anesthesia (93%) and with 1-2 previous operations under anesthesia (51%). Although >70% gave high ratings in the information sharing dimension, as many as 43% (31% of them were Orthopedic patients) were either unsure or not informed about the possible complications of anesthesia (Figure 1). Similarly, >75% of the patients positively rated the bedside manner (Figure 2); however the majority (69%) were either unsure or sure that an anesthesiologist did not visit them in the post-operative period (Figure 3). Interestingly, this lack of continued care had little overall effect on satisfaction scores (56% of the patients were "satisfied" and 38% "very satisfied"). Almost 1/3 of the responders did not report any pre-operative anxiety and majority of them (38%) were General surgery patients.

Overall, the most commonly reported pre-operative concerns were: fear of post-operative pain (37%) and fear of not waking up after the procedure (25%). Interestingly, our patients were 3 times more likely to worry about a surgeon's error than an anesthesiologist's error (18% and 6% respectively, Figure 3). Majority of patients reported no discomfort due to physical factors such as pre-operative thirst or hunger (62%), positioning on the operating table (72%), post-operative nausea or emesis (58%, Figure 7) and majority received immediate post-operative analgesia (65%, Figure 5). The Oncological Surgery patients reported highest satisfaction with management of their postoperative nausea and pain, while the Orthopedic patients were the least satisfied in this area (Figure 6). Majority of responders were overall satisfied with their care, with those at Plastic surgery clinic slightly in the lead.

Figure 2. Bedside manner



## Discussion

When reading any literature on patient satisfaction with any type of care or medical procedure, one automatically starts to wonder „what exactly is patient satisfaction?“ According to an often-cited definition, patient's satisfaction consists of his/her cognitive assessment of the received care and the emotional reactions related to it [6]. Other authors indicated that patient satisfaction depends on the consistency between the patient's expectations and actual care s/he received [7]. Fung et al have dissected these concepts down to their elements and accurately described the methodological challenges, if not frustrations, with measuring expectations, ability to accept difference between expectations and reality, mental state during satisfaction etc [1]. Clearly satisfaction is not a one-dimensional concept, thus measuring it is not simple and requires appropriate tools. In the past, researchers relied on psychometric methods to design robust questionnaires [8].

Although there are several validated, previously published anesthesia satisfaction questionnaires, we designed our own instrument. The Iowa Satisfaction with Anesthesia Scale is a validated psychometric questionnaire, however it was not appropriate for our study because it was designed to measure the satisfaction from monitored anesthesia care only [9]. We decided not to

use the Leiden Perioperative care Patient Satisfaction questionnaire because in our opinion it was too lengthy to use during a structured interview [10].

Many of the previously published studies involved staff distributing the questionnaires to the patients at the ward, resulting in response rates between 80 and 100% (10-11). To improve the response rate, we conducted systematic, structured interviews using our questionnaire. We feel that the so-called 'halo effect' and underreporting of dissatisfaction has been minimized because the interviews were conducted by medical students who were not involved in the patient care at their respondents' wards. Although this approach has been viewed with some suspicion, we did not obtain the near-100% response rates that make the validity of prior studies suspect [1].

In terms of methodology, a somewhat similar study was performed by Gaszyński et al, who surveyed 42 patients at a general surgery department [12]. Comparing with our results from a general surgery department, Gaszyński et al had significantly more respondents claiming to be uninformed about the possible adverse effects of anesthesia (52,4% vs. 10%) and fearing not waking up after the procedure (58,8% vs. 30%) [12]. On the contrary, our general surgery patients much more frequently reported post-operative nausea and emesis than those surveyed by Gaszyński et al (40% vs 20,6%) [12].

Figure 3. Pre-operative consultation

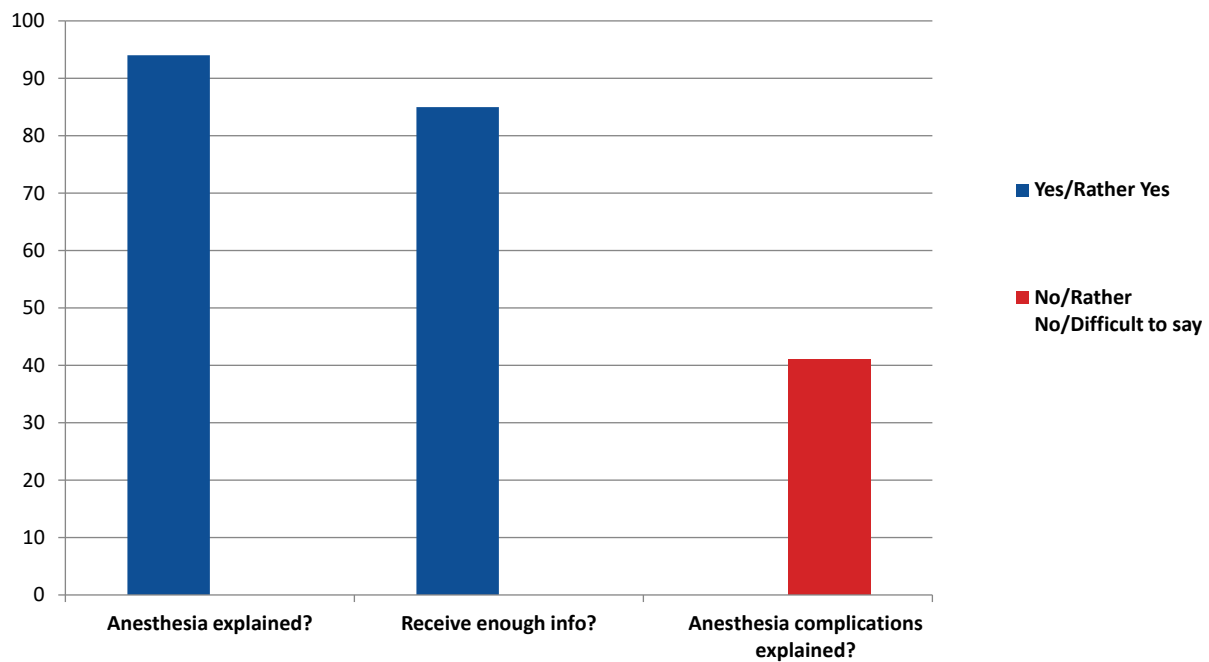


Figure 4. Pre-operative anxiety. The 4 most commonly mentioned causes of anxiety are listed

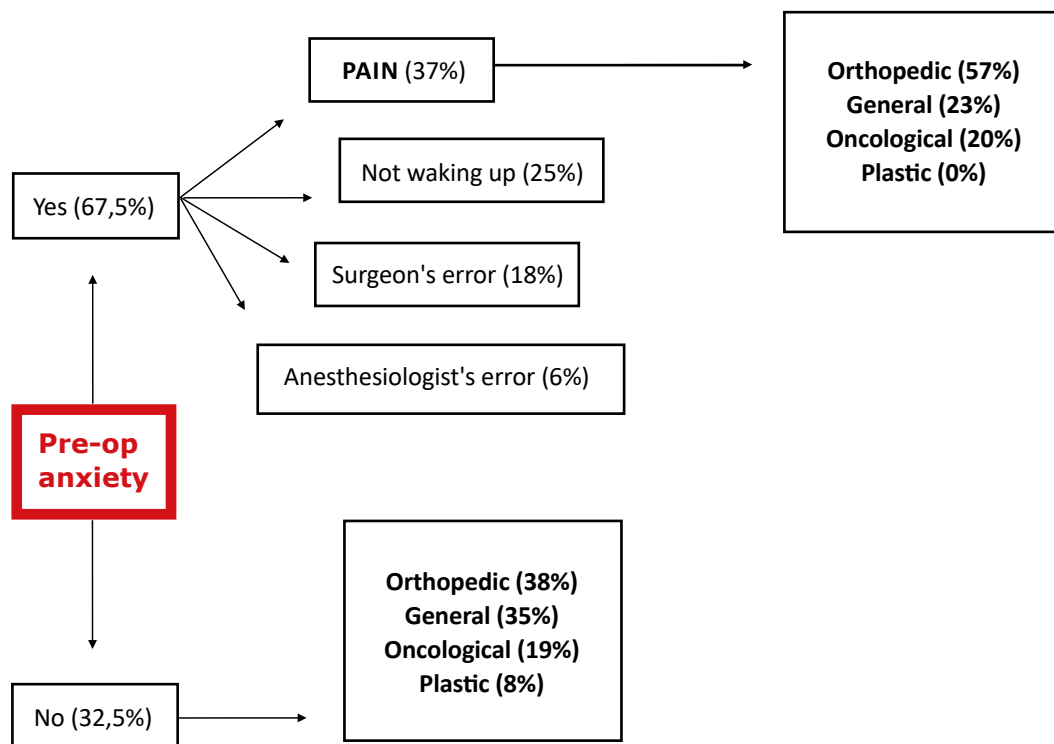


Figure 5. Pre-operative anxiety

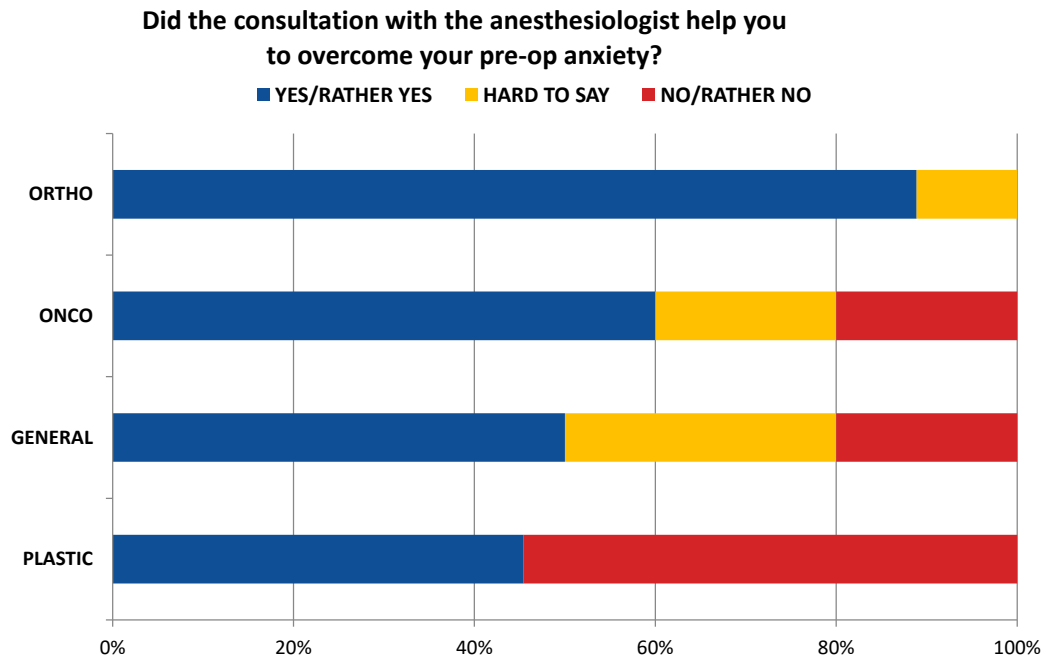
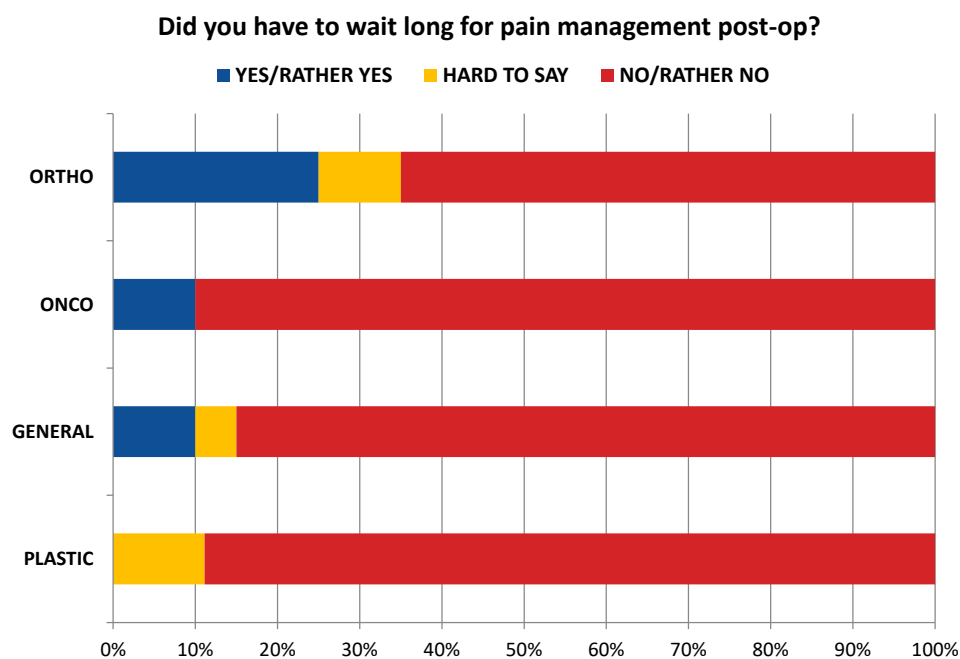
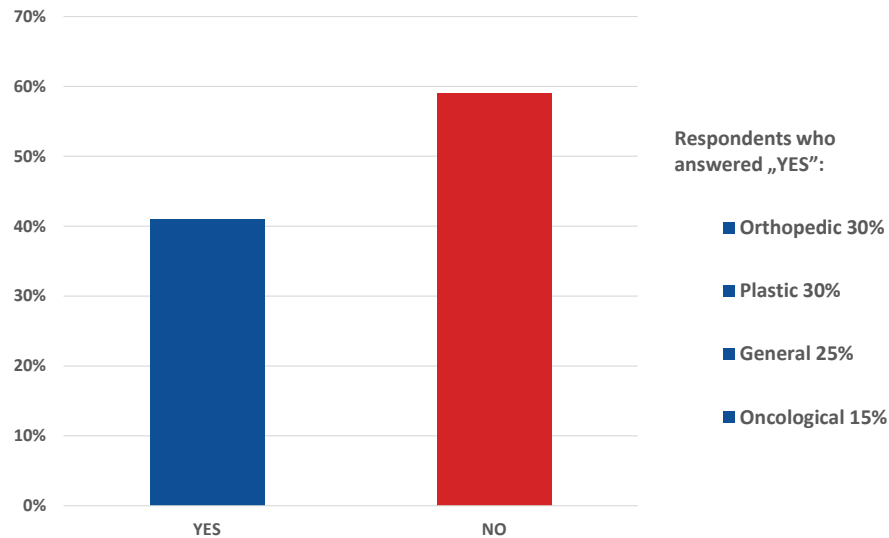


Figure 6. Post-operative pain management



**Figure 7.**  
Post-operative  
discomfort  
due to nausea  
& emesis



## Conclusion

Our preliminary data suggest a high level of patient satisfaction with nearly all aspects of perioperative anesthesiology care at our institution. However, anesthesiologists need to more thoroughly inform patients about possible complications of anesthesia. It is critical to respect the patient's right to information about the procedure and its complications. Surveys are a simple and useful tool to measure quality of care indicators at an anesthesiology department and can help

in training residents. A larger survey at more surgical departments is needed to fully assess the patient care and satisfaction trends discussed above.

## Acknowledgements

The authors would like to thank Anna Smeja MD and Joanna Woźniak MD for collecting and processing the survey data for this study. Last but not least, we would also like to thank Małgorzata Omilian-Mucharska MSc for valuable help with figure design.

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