

# Patient Retention and Satisfaction with Information Exchange

## Concerning the Risk of Peripheral Nerve Blocks

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## Introduction

Informed consent is the process by which exchange of information occurs, enabling competent patients to make voluntary decisions as to whether to accept or refuse medical treatment.(1) Peripheral nerve block (PNB) techniques have evolved in a manner that may impact the perioperative experiences of patients undergoing orthopedic surgery procedures.(2) However, when patients may select from a variety of anesthetic and analgesic options, such as the addition of a PNB, there is a moral obligation among physicians to respect a patient's right to self-determination for their treatment decisions.(2) This study evaluated patient retention of PNB risk information, their satisfaction with the existing PNB informed consent process, as well as their preferred timing and modes of risk information exchange.

## Materials and Methods

Following institutional review board approval, patients scheduled for orthopedic surgery visiting our Preoperative Evaluation (POE) Clinic were approached and consented for study inclusion, from July 15<sup>th</sup> to Nov 30<sup>th</sup> 2015 and Sept 15<sup>th</sup> to Nov 15<sup>th</sup> 2016. A total of 150 patients were chosen in order to match previous studies examining recall of regional anesthesia risk in obstetric populations(3). During the POE visit, patients were provided an informational booklet describing PNB techniques which included the risks associated with these procedures. On the day of surgery, the anesthesia team discussed the risks and benefits of the particular PNB that would be an option for each patient. Postoperatively (24 to 36 hours), patients who received a PNB were provided a questionnaire asking which of the 3 true, 2 distractor, PNB-related risk(s) they recalled being informed of preoperatively. Also queried were patient satisfaction with the PNB informed consent process, overall satisfaction with PNB pain control, and preferred methods and timing of PNB risk information exchange.

Figure 1A - Satisfaction with Communication of Risks

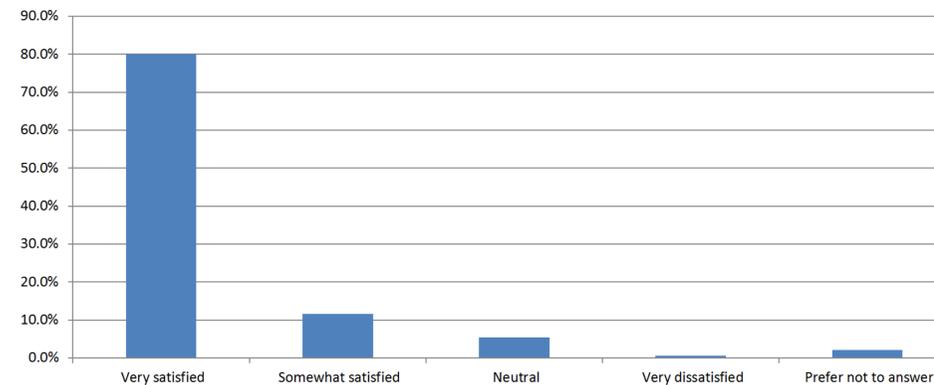
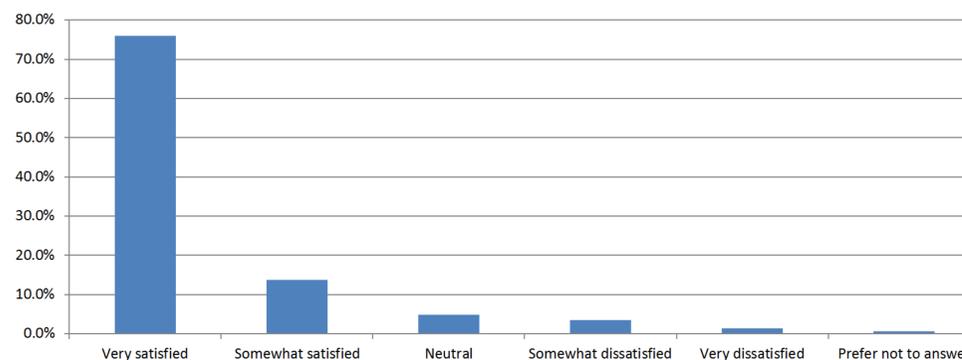


Figure 1B - Satisfaction with Pain Relief



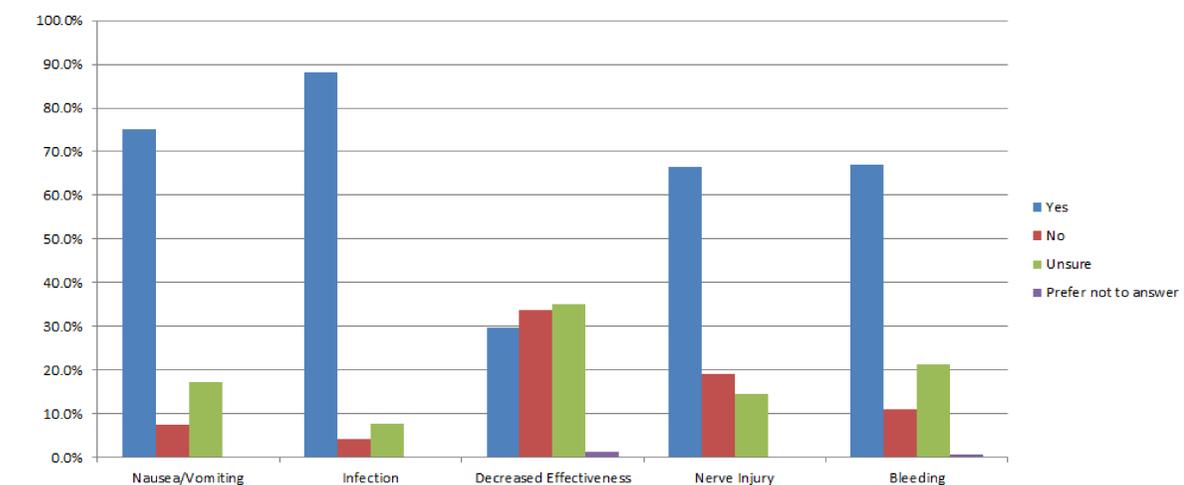
## Results

A total of 153 patients were consented to participate in the study; 7 patients were excluded (cancelled surgery=1, early dismissal=2, declined survey=4), leaving 146 (87 female, 59 male) for analysis. Though only 79 patients (54.1%) could recall receiving the informational booklet in the POE Clinic, most patients (80.1%) felt very satisfied with the communication of risks of PNBs (Figure 1A). After surgery, patients could recall the following risks being discussed at the time of consent: infection 88.2%, nerve damage 66.4%, bleeding 66.9%. Interestingly, 75.2% and 29.7% of patients recalled discussions about nausea/vomiting and decreased drug efficacy (distractors), respectively (Figure 2). Zero patients correctly recalled all discussed risks and none of the distractors. Despite varied recall of risks and distractors, most patients (76.0%) were very satisfied with their postoperative pain relief (Figure 1B).

## Discussion

To our knowledge, this is the largest study reporting on patient retention of PNB risks. Accurate retention of PNB risks was poor with a majority of patients acknowledging one of the risks (nausea/vomiting) more common with general anesthesia, perhaps suggesting patients' inability to differentiate risk by anesthesia type. Given the overall poor retention found, the high level of satisfaction with the informed consent process reported by patients may have been more reflective of the appreciation that an open conversation had occurred with their anesthesiologist preoperatively. It remains unknown whether patients would have continued their comfort with the process had they suffered one of the PNB risks they failed to recall being communicated. Given these findings, future efforts towards a better means of exchange of PNB risk information will occur in our practice setting.

Figure 2 - Recall of Risks and Distractors



## References

- (1) University of Washington Ethics in Medicine Series: Informed Consent. Available at <https://depts.washington.edu/bioethx/topics/consent.html>. (last accessed December 29, 2016)
- (2) Green DS and MacKenzie R. Nuances of Informed Consent: The Paradigm of Regional Anesthesia. *HSSJ*. 2007; 3:115-118.
- (3) Burkle CM, Olsen DA, Sviggum HP and Jacob AK. Parturient recall of neuraxial analgesia risks: Impact of labor pain vs no labor pain. *Journal of Clinical Anesthesia*. 2017; 38:158-163