

Background Patient reported outcome measures (PROMs) are of utmost importance to clinical practice as they permit a patient-focused evaluation of surgical outcomes. However, recall bias can limit an adequate interpretation of PROMs. Objectives To assess the impact of recall bias of preoperative status on postoperative PROMs of patients submitted to surgery due to degenerative spine disease. Trial design and setting Randomized, single-blind, controlled trial in a tertiary care neurosurgical unit in Portugal Participants and randomization All patients submitted to surgery at our institution with valid questionnaires from January 2019 to April 2020 due to degenerative lumbar or cervical spine disease were enrolled, and two computer generated randomized groups were created. Interventions and main outcome measure The intervention group was sent postoperative questionnaires including preoperative answers, while patients in the control group were sent the same PROMs without the preoperative scores. The study's primary endpoint was the median postoperative COMI score. Results 236 patients were randomized (118 for each group) and valid results were obtained for 147 patients (81 lumbar, 44 from the intervention group; and 66 cervical, 29 from the intervention group), from which 88 (60%) were females, with a median age of 58 years. Both groups shared similar baseline clinical characteristics and preoperative scores. Median postoperative COMI scores and interquartile ranges (IQR) were 4.20 (IQR: 2.30-6.00) and 5.45 (IQR: 3.75-7.40) for the intervention and control groups, respectively (Wilcoxon, $p=0.02$). This difference was reached mainly due to cervical spine patients as median postoperative COMI score was 3.95 (IQR: 2.20-5.32) in the intervention group and 5.1 (IQR: 4.0-8.4) in the control group (Wilcoxon, $p=0.01$). No significant difference was reached for lumbar patients. Conclusions Better PROM scores were obtained for degenerative cervical spine patients with knowledge of preoperative results. Therefore, providing preoperative scores to patients upon postoperative PROM fulfilment might influence postoperative results. Further research is necessary to increase the reliability of PROMs in clinical practice.

Figure 1 - Comparison of postoperative PROM values between groups for overall patients.

