Supplementary article data

Minimal clinically important improvement (MCII) and patient-acceptable symptom state (PASS) in total hip arthroplasty (THA) patients 1 year postoperatively

A prospective cohort study of 1,335 patients

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Table 5. PRO scores for the total population; mean (95% CI)

PRO	Preoperative score	Postoperative score	Change score
HOOS Pain	44 (43–45)	89 (88–90)	44 (43–46)
HOOS-PS	42 (41–43)	85 (84–86)	43 (42–44)
HOOS QoL	31 (30–32)	80 (78–81)	48 (47–50)
EQ-5D Index	0.60 (0.59–0.61)	0.88 (0.87–0.89)	0.27 (0.26–0.28)
EQ-VAS	62 (60–63)	80 (79–81)	18 (17–19)

Table 6. PRO change scores (mean (95% CI)) and distribution of different answer categories for the hip-specific anchor question; "Overall, how are the problems now in the hip on which you had surgery, compared to before your operation?"

Anchor	n (%)	Δ HOOS Pain	Δ HOOS-PS	Δ HOOS QoL	Δ EQ-5D Index [a]	Δ EQ-VAS [a]
Much better	1,074 (88)	48 (47–49)	46 (45–48)	53 (52–55)	0.29 (0.28–0.31)	20 (19–22)
A little better	77	24 (20–28)	23 (19–28)	17 (12–21)	0.14 (0.10–0.18)	7 (1–12)
About the same	35	15 (8–21)	12 (4–19)	12 (6–18)	0.09 (0–0.17)	0 (–7–7)
A little worse	17	7 (–3–16)	7 (–6 to 20)	–4 (–13 to 5)	0.04 (–0.07 to 0.15)	–9 (–19 to 2)
Much worse	15	6 (–6–17)	–5 (–15–6)	0 (–8 to 7)	–0.05 (–0.23 to 0.12)	–7 (–25 to 10)

Higher change scores correspond to greater improvement in PRO scores; negative change scores correspond to deterioration in PRO scores.
[a] Anchor–PRO correlation < 0.30.

Table 7. PRO change scores (mean (95% CI)), and distribution of preoperative answers compared to postoperative answers, for the general-health anchor question: "In general, would you say your health is…"

Anchor	n (%)	Δ EQ-5D Index [a]	Δ EQ-VAS
> 1 step better	129 (11)	0.39 (0.35–0.43)	35 (32–39)
1 step better	411 (34)	0.31 (0.29–0.34)	23 (21–25)
No change	495 (41)	0.24 (0.22–0.25)	14 (12–16)
1 step worse	151 (13)	0.18 (0.14–0.22)	7 (3–11)
> 1 step worse	17	0.18 (0.03–0.32)	−3 (−18 to 12)

Higher change scores correspond to more improvement in PRO scores; negative change scores correspond to deterioration in PRO scores.
[a] Anchor–PRO correlation < 0.30.

Table 8. Spearman's correlation coefficients: PROs and anchor questions

| | MCII | | PASS | |
| | Hip-specific anchor | General-health anchor | Hip-specific anchor | General-health anchor |
PRO				
HOOS Pain	−0.40	0.25 [a]	−0.59	−0.45 [a]
HOOS-PS	−0.40	0.28 [a]	−0.53	−0.46 [a]
HOOS QoL	−0.46	0.28 [a]	−0.61	−0.41 [a]
EQ-5D Index	−0.27	0.27	−0.60	−0.53
EQ-VAS	−0.25	0.35	−0.48	−0.68

[a] Correlation not reported in the article since hip-specific PROs cannot be used to assess general health, and MCII and PASS in relation to the general-health anchor questions were only estimated for the EQ-5D Index and EQ-VAS.
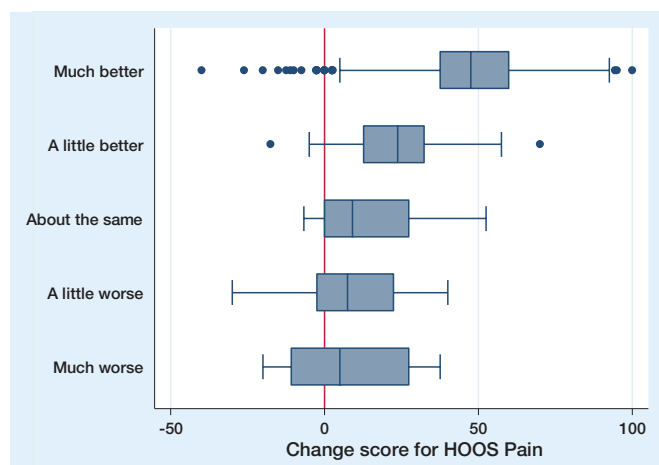

Figure 3. Box plot of HOOS Pain change scores of different answer categories for the hip-specific anchor question: "Overall, how are the problems now in the hip on which you had surgery, compared to before your operation?" The box plot shows outliers, sample minimum, lower quartile, median, upper quartile and sample maximum.
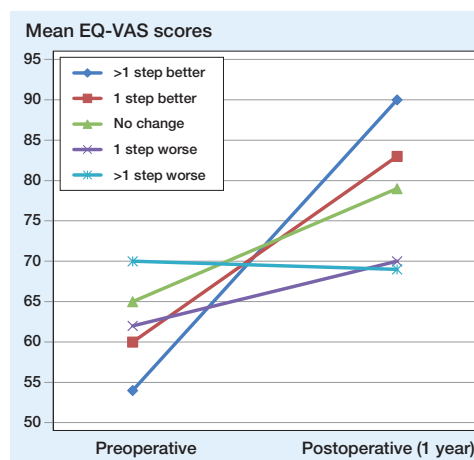

Figure 4. Mean preoperative and postoperative EQ-VAS scores of pre-operative answers compared to postoperative answers, for the general-health anchor question: "In general, would you say your health is…"
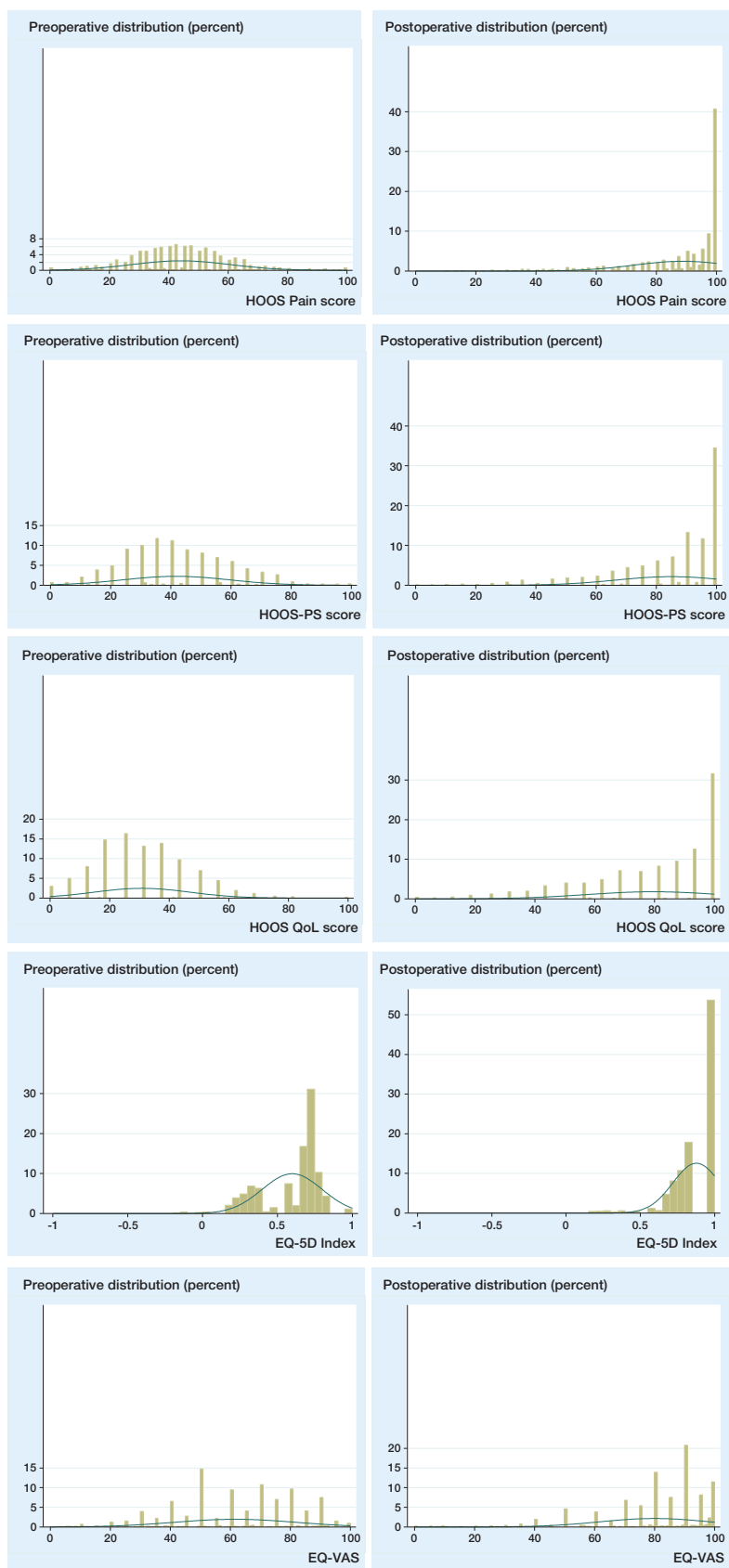
Figure 2. Distribution of preoperative and postoperative PRO scores.