

R3/OXINIUM/XLPE delivers significantly higher patient satisfaction and improvements in patient reported outcome measures (PROMs) compared to other total hip replacement (THR) bearing combinations in the UK NJR

+ Plus points

Compared to patients receiving THR with CoP, CoC or MoP bearings, R3/OXINIUM/XLPE delivers:



Overview

- Bespoke implant reports produced by the NJR* comparing performance of the combination of R3 cup and OXINIUM/highly cross-linked polyethylene (XLPE) bearing with:
 - All other THR with ceramic on polyethylene (CoP)¹
 - All other THR with ceramic on ceramic (CoC)²
 - All other THR with metal on polyethylene (MoP)³
- PROMs data were collected by UK National Health Service Digital from April 2009 to March 2020

Results

Satisfaction

At 6 months post THR, patients were asked:

How would you describe the results of your operation?

Patients who received R3/OXINIUM/XLPE were significantly more satisfied with their THR at 6 months than those who had received THR with CoP, CoC or MoP bearings ($p < 0.001$; Figure 1)¹⁻³

Success

At 6 months post THR, patients were asked:

Overall, how are your problems now, compared to before your operation?

Patients who received R3/OXINIUM/XLPE reported a higher level of success than those who had received THR with CoP, CoC or MoP bearings (Figure 2)¹⁻³

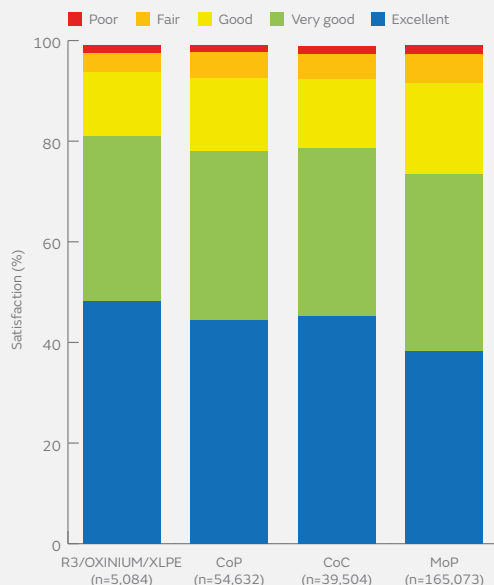


Figure 1. Answer to 6-month satisfaction question. Responses are not case-mix adjusted¹⁻³

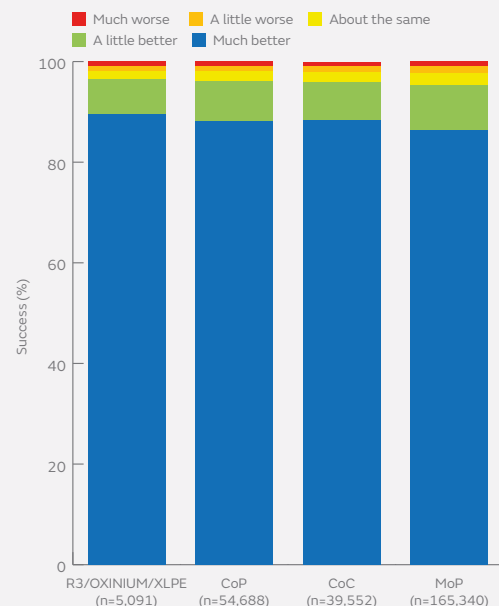


Figure 2. Answer to 6-month general health question. Responses are not case-mix adjusted¹⁻³

PROMs

Patients who received R3[®]/OXINIUM[®]/XLPE reported significantly better PROMs at 6 months (p<0.001) than those who had received THR with CoP, CoC or MoP bearings (Tables 1-3)¹⁻³

Oxford Hip Score (score range: 0–48)

A hip-specific, 12-item PROM tool that assesses function and pain in patients undergoing THR

Table 1. Oxford Hip Score^{†1-3}

Bearing group	Pre-op score	6 months	Adjusted health gain	p-value
R3/OXINIUM/XLPE (n=5,023)	18.6	40.4	22.4	–
CoP (n=53,974)	18.5	39.6	21.6	<0.001
CoC (n=38,816)	19.1	39.5	21.5	<0.001
MoP (n=162,297)	17.7	39.2	21.2	<0.001

Table 2. EQ-5D^{†1-3}

Bearing group	Pre-op score	6 months	Adjusted health gain	p-value
R3/OXINIUM/XLPE (n=4,960)	0.38	0.81	0.46	–
CoP (n=50,268)	0.37	0.80	0.44	<0.001
CoC (n=38,994)	0.39	0.80	0.44	<0.001
MoP (n=148,213)	0.35	0.79	0.43	<0.001

EQ-5D (score range: -0.59–1.00)

A generic, quality of life questionnaire comprising 5 dimensions: mobility, self care, usual activities, pain/discomfort, anxiety/depression

EQ-VAS (score range: 0–100)

A generic, single question visual PROM tool that assesses patient health on a given day

Table 3. EQ-VAS^{†1-3}

Bearing group	Pre-op score	6 months	Adjusted health gain	p-value
R3/OXINIUM/XLPE (n=4,481)	65.2	78.7	13.7	–
CoP (n=48,691)	65.0	77.4	12.4	<0.001
CoC (n=35,213)	65.3	77.1	12.1	<0.001
MoP (n=140,913)	65.4	76.5	11.5	<0.001

Conclusions

R3/OXINIUM/XLPE delivers significantly higher patient satisfaction and greater improvements in PROMs for THR compared with CoP, CoC and MoP bearings in the UK NJR.

References

1. National Joint Registry for England, Wales and Northern Ireland: R3 Verilast vs. all other THR with CoP bearing bespoke report. 4 June 2020. Available at: http://bit.ly/R3OX_CoP_Jun2020
2. National Joint Registry for England, Wales and Northern Ireland: R3 Verilast vs. all other THR with CoC bearing bespoke report. 4 June 2020. Available at: http://bit.ly/R3OX_CoC_Jun2020
3. National Joint Registry for England, Wales and Northern Ireland: R3 Verilast vs. all other THR with MoP bearing bespoke report. 4 June 2020. Available at: http://bit.ly/R3OX_MoPbearing_Jun2020

*The data used for this analysis was obtained from the NJR Supplier Feedback System. The Healthcare Quality Improvement Partnership ("HQIP") and/or the National Joint Registry ("NJR") take no responsibility for the accuracy, currency, reliability and correctness of any data used or referred to in this report, nor for the accuracy, currency, reliability and correctness of links or references to other information sources and disclaims all warranties in relation to such data, links and references to the maximum extent permitted by legislation.

[†]Using case-mix adjusted scores allows for a more accurate comparison between groups by taking into account variations in patient characteristics.