

Table 1: Summary and analysis of trends across the AJRR, NJR and NZJR.

Registry	Cemented fixation	Uncemented fixation
AJRR (USA)	Usage: very low (<5%). Key findings: significant lower risk or revision for PPFx in patients ≥ 65 years (HR 0.189, $p < 0.0001$) within the first 1.5 years. Demographics: elderly. Projection: will remain below 5% despite evidence of benefit “cement paradox”.	Usage: dominant (~95%). Key findings: higher early revision risk, but equivalent long-term survival to cemented once osseointegration happens. Projection: will remain default choice for most surgeons in the States.
NJR (UK)	Usage: declining but not significant decline: 14.4% in 2024. Key findings: benchmark for PPFx, lowest risk of revision. PPFx is a risk in uncemented hips predominantly. 10-year benchmark: aggregate CPR 4.2%. Projection: will stabilise at 15%, used for elderly and according to fracture type.	Usage: up to 34.9% in 2024. Key findings: Highest early revision rates for PPFx. 10-year benchmark: aggregate CPR 4.2%. Performs well in young patients. Projection: fracture risk holds it for the above-75s.
NZJR (NZ)	Usage: very low—even cemented acetabulum was only in 3% in 2024. Key findings: strongest in ≥ 65 years old. Revision rate 0.37/100 component-years. Significantly lower than uncemented (0.69) and hybrid (0.45). Projection: (<5%) reserved for elderly ≥ 75 and osteoporotic patients.	Usage: dominant (51.7% in 2024 and growing). Key findings: highest risk in elderly ≥ 75 : 0.69/100 component-years. Performs well in < 65 (0.67%). Overall revision rate: 0.64/100 component-years. Projection: continued growth, may increase early PPFx revision risk.

AJRR = American Joint Replacement Registry; NJR = National Joint Registry; NZJR = New Zealand Joint Registry; USA = United States of America; PPFx = periprosthetic fracture; HR = hazard ratio; UK = United Kingdom; CPR = cumulative percent revision; NZ = New Zealand.

Figure 1: Fixation trends (cemented vs uncemented)—New Zealand.

