

HOW MANY PATELLOFEMORAL JOINT REPLACEMENTS SHOULD YOU PERFORM IN ORDER TO OFFER THIS SURGERY TO YOUR PATIENTS?

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IMPERIAL



AIM

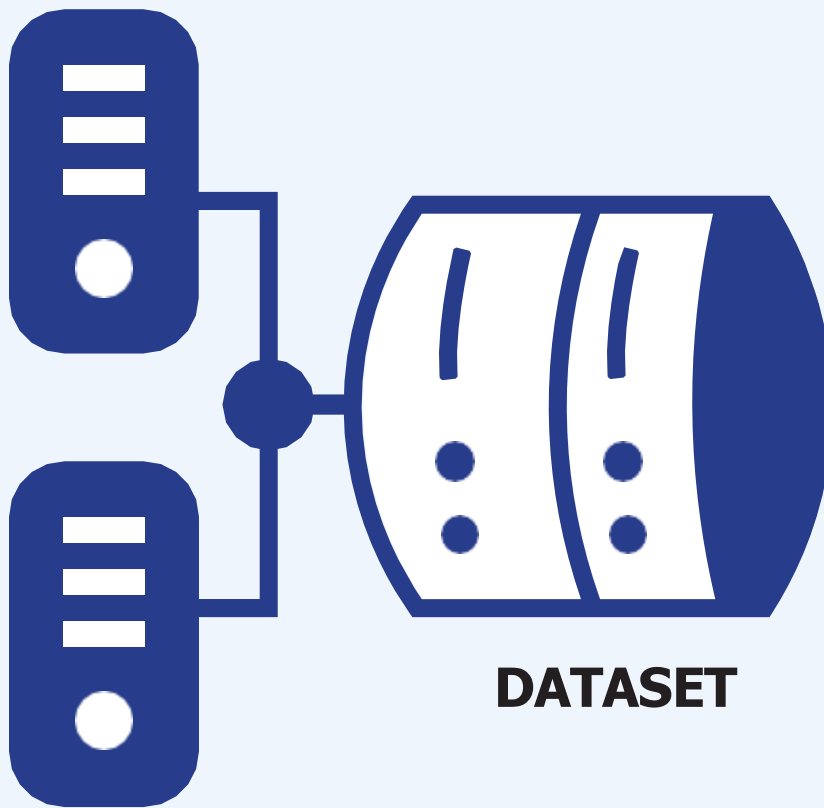
The aim was to identify the learning curve required for patellofemoral joint replacement surgery

BACKGROUND

How common is patellofemoral joint replacement surgery?
Patellofemoral joint osteoarthritis affects 24% of symptomatic patients. Patellofemoral joint arthroplasties (PFA) constitute less than 5% of joint arthroplasty registers worldwide. Lack of experience in this procedure may be one of the reasons for this low uptake.

METHODS

Data between 2003–201X were included
Hospital Episode Statistics (HES)

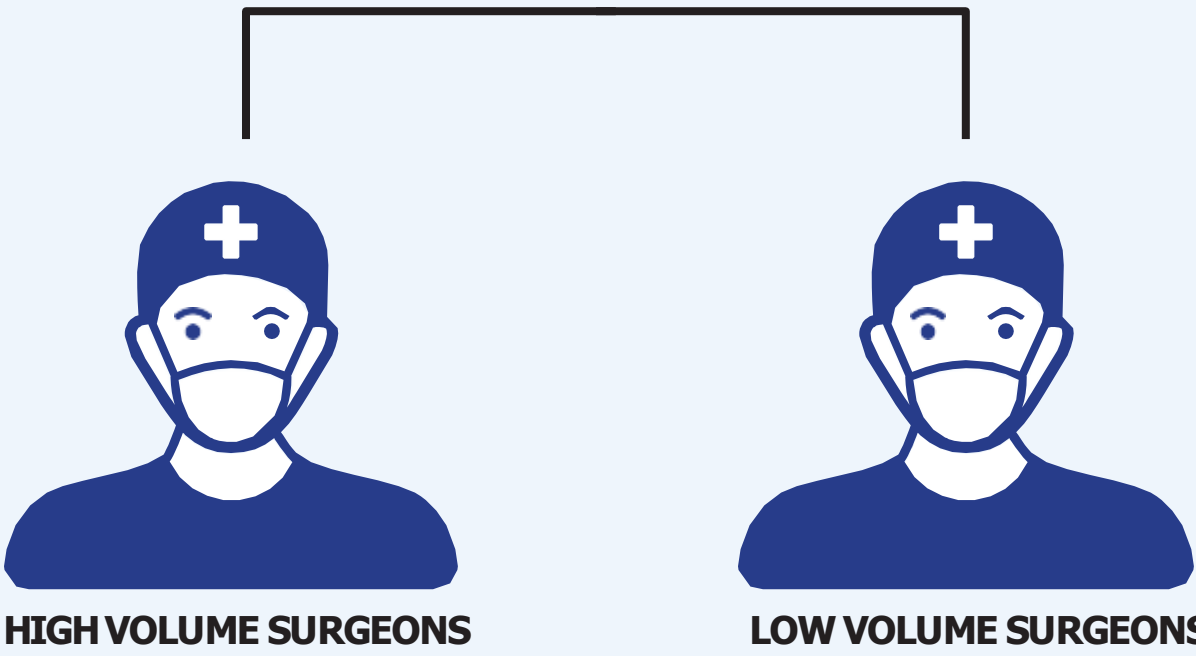


National Joint Registry (NJR) (2003–2021)



For each year the operating surgeon was in practice, the yearly caseload for patellofemoral arthroplasty was calculated.

SURGEONS



Surgeons were grouped into high and low volume groups using splines. Differences in patient selection were analysed. Complications and serious adverse groups for groups were analysed using mixed multilevel logistical modelling. A decision analysis graph was plotted to predict the 10-year risk of revision as a function of surgeon experience.

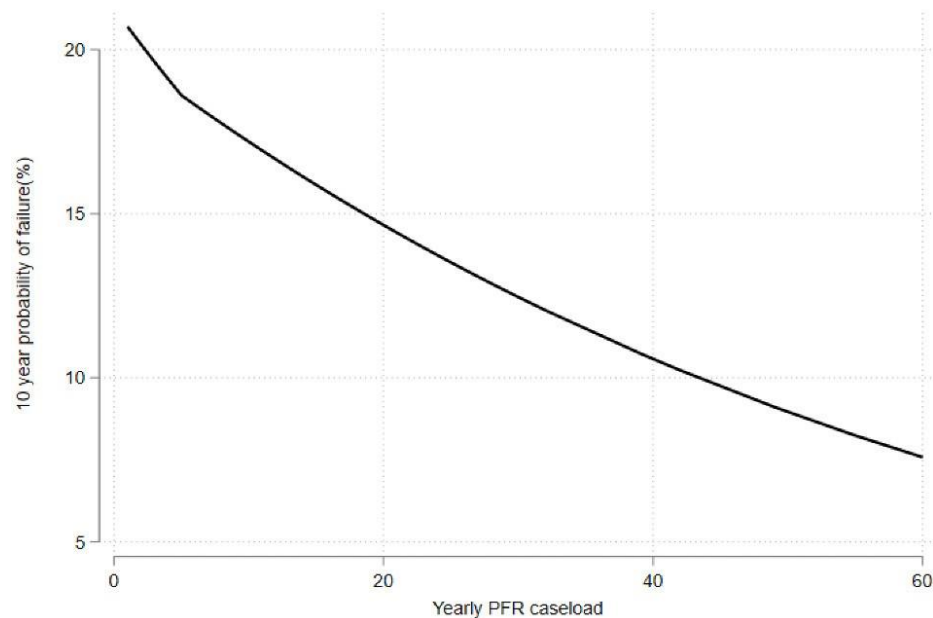
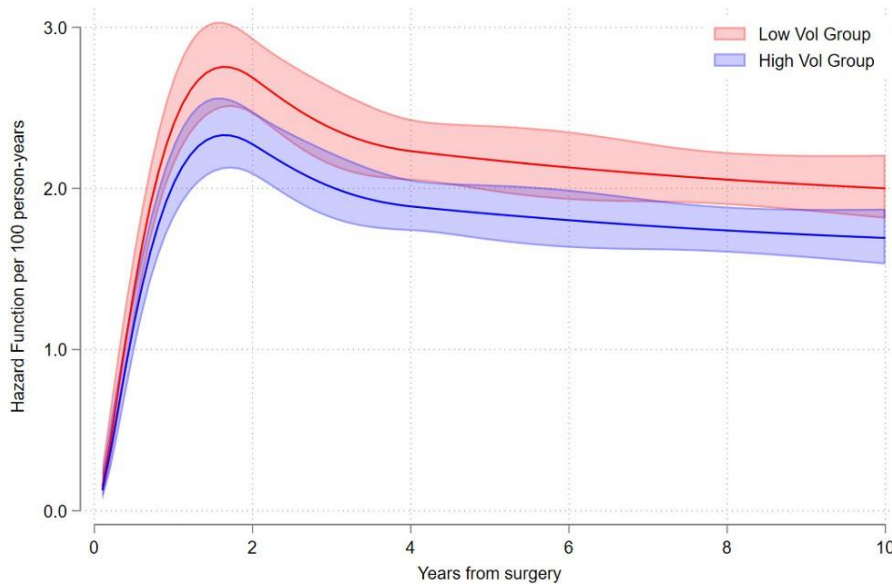
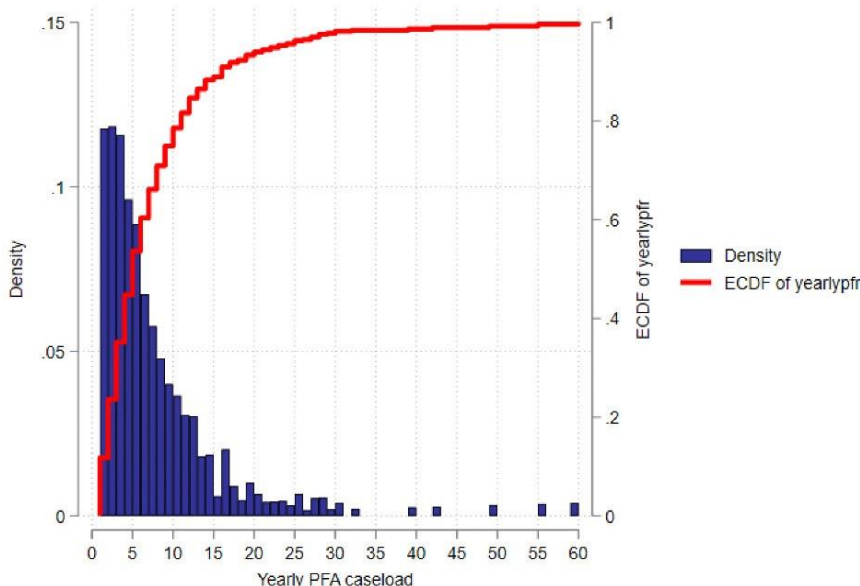
ANNUAL CASE LOAD EXPERIENCE



The risk of revision was determined as a function of annual caseload experience.

RESULTS

- 858 surgeons (26%) performed a PFA during the study period. 14,615 patellofemoral arthroplasty records were available for analysis. The modal yearly caseload was 2 per year.
- Higher volume surgeons were defined as surgeons performing more than 5 per year. The hazard ratio for a high volume surgeon was 0.98 and had a lower risk of revision irrespective of the patient's age.
- Higher volume surgeons were 25% (0.23–0.25[AB6] , p [0.05) more likely to operate on healthier patients (ASA–1) and are more likely to operate on patients with patella disorders (OR 1.34, CI: 1.09 – 1.77, p[0.05) when compared with low volume surgeons.



PATELLA DISORDERS	1.34 (1.09–1.77)	0.01
PATELLA DISLOCATION	1.82 (1.06–3.10)	0.03

Patients operated on by higher volume surgeons were less likely to have a serious adverse effect (OR 0.97, CI: 0.95–0.99, P [0.05,). A surgeon with a yearly caseload of 60 has an 8% pr

CONCLUSION

An association was found between surgeons performing >5 PFAs per year with a lower revision rate. This study should inform surgical planning services to improve the outcomes of PFA.