

NJR reporting completeness in a trauma centre

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Background

Established to record implant usage and promote patient safety, the National Joint Registry (NJR) relies on complete data to ensure the validity of its analysis and to minimize bias. The latest Minimum Dataset version 8, launched in June 2023, included additional trauma procedures related to orthopaedic prostheses. However, the completeness of these new procedures is still not being reinforced within the Data Quality Audit (DQA). Since within our Trust, trauma and elective procedures are undertaken at different sites, the processes needed for NJR compliance had not yet been replicated at the trauma site.

Results

The initial 15-month scoping review revealed that, of 848 procedures that should have been accompanied by an NJR form, only 59 were submitted by the Trust, equating to a baseline reporting rate of 7%.

Procedures	Count	NJR data capture	
1st Stage revision (Hip)	3		0%
1st Stage revision (Knee)	5	1	20%
Cemented THR	44	30	68%
Closed Hip Hemi Reduction	2		0%
Closed THR Reduction	49		0%
DAIR (Hip)	7	2	29%
DAIR (Knee)	24	9	38%
Excision arthroplasty (Hip)	10		0%
Hip Hemiarthroplasty	581	1	0%
Hybrid THR	21	15	71%
Open THR Reduction	1		0%
Periprosthetic fracture fixation (around a Hip prosthesis)	11		0%
Periprosthetic fracture fixation (around a Knee prosthesis)	52		0%
Periprosthetic fracture fixation (around both a Hip and Knee prosthesis)	24		0%
Single stage revision (Hip)	1	1	100%
Single Stage revision (Knee)	1		0%
Washout (Hip)	6		0%
Washout (Knee)	6		0%
Grand Total	848	59	7%

Aims

This project aims to identify NJR data reporting being undertaken in our trauma centre and employ changes to improve procedure completeness to a level that satisfies the stipulated minimum compliance rate.

Methods

A retrospective review of 15 months of orthopaedic procedures was conducted in our trauma site to identify all procedures requiring an NJR form and compared to the NJR data submitted for the same period. Following the implementation of a more robust data collection pathway, a six-week data collection period was undertaken and compared against a comparable six-week period from the previous year to measure the project's impact.

Following the QI intervention, a six-week audit period was compared to the same period from the previous year revealing a significant increase in NJR reporting from a representative baseline of 8% up to 72%.

Procedures	2024			Change implementation	2025		
	Count	NJR data capture			Count	NJR data capture	
First Stage revision (Hip)	1	0	0%	-	-	-	
Cemented THR	5	4	80%	1	1	100%	
Closed THR Reduction	2	0	0%	5	1	20%	
DAIR (Knee)	1	1	100%	1	1	100%	
Excision arthroplasty (Hip)	2	0	0%	2	2	100%	
Hip Hemiarthroplasty	54	0	0%	54	44	81%	
Hybrid THR	1	1	100%	6	6	100%	
Periprosthetic fracture fixation (around both a Hip and Knee prosthesis)	2	0	0%	-	-	-	
Periprosthetic fracture fixation (around a Hip prosthesis)	5	0	0%	4	2	50%	
Periprosthetic fracture fixation (around a Knee prosthesis)	2	0	0%	4	1	25%	
Staged revision (Hip)	-	-	-	3	1	33%	
Washout (Hip)	2	0	0%	1	0	0%	
Washout (Knee)	-	-	-	1	0	0%	
Grand Total	77	6	8%	82	59	72%	

The concept of 'procedure completeness' for this project was informed by a systematic literature review (PRISMA), which yielded three critical findings:



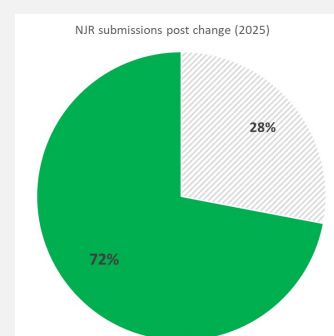
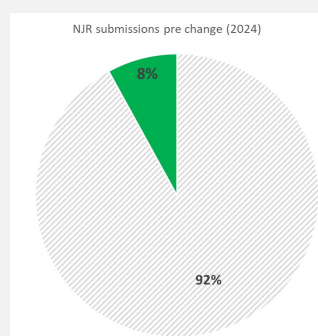
Defining Completeness: Systematic review agreed with ISAR definition of **Procedure Completeness** as: the proportion of procedures successfully captured by a registry relative to the true number performed in a population.



Establishing the Gold Standard: Operating room schedules (rather than HESS) should be considered the gold standard for assessing procedure completeness as they represent the true count of operative interventions.



Identifying the Critical Gap: Data capture is challenging in the **emergency setting**, despite this environment accounting for a substantial proportion of **revision surgery** which is the key endpoint monitored by most arthroplasty registries.



✓ Procedure without NJR entry
■ Procedure with NJR entry

Conclusion

The change intervention improved the trauma site's NJR procedure completeness by 64% during the first six weeks of implementation. While this still fell short of the >95% compliance stipulated by the NJR and CQC (Health Quality Improvement Partnership and National Joint Registry, 2022), it represents a significant step forward. Further changes are now planned, including the training of an on-site NJR administrator to monitor and input data, to continue improving the data collection pathway.



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