

Scores on the doors make a difference: Improvements and learning from a pragmatic Scoring system of post-operative radiographs in orthopaedic trauma.

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Background:

Postoperative radiographic review can be used for clinical governance, quality assurance, teaching and insights into the challenges of a given procedure. They can also highlight operations that frequently present difficulties for trainee surgeons, thereby identifying cases where additional support may be required. These reviews can be enhanced if findings are quantified and recorded with a systematic, pragmatic methodology as presented in this study

Methods:

All orthopaedic trauma cases requiring reduction and/or implant had radiographs which were reviewed at the consultant led handover and a score is assigned as follows:

0. Unacceptable: requires revision
1. Problems identified which require monitoring
2. Acceptable
3. Exceptional (“I would take this to a conference”)

The data comprise 2,134 cases performed between 01 May 2023 and 24 February 2025.

Conclusion

The regular assessment of radiographs can provide interesting trends in intra-operative performance and help to identify areas of weakness and potential areas for improvement for trainees.

Which Areas Score Best

Table 1: Scores ranked by anatomy

Anatomy	Mean
Foot	2.38
Elbow	2.36
Hand	2.33
Knee	2.31
Ankle	2.30
Clavicle	2.29
Forearm	2.25
Distal Radius	2.22
Paeds	2.18
Tibia	2.18
Hip	2.16
Femur	2.11
Shoulder	2.09
Humerus	2.08

Left vs Right DHS, Any Difference?

Table 4: DHS laterality versus mean score

Side	Mean
Left	2.07
Right	2.11

On average, no difference.

Table 2: Highest scoring

Anatomy	Procedure	Mean	n
Foot	ORIF Lis Franc	2.62	12
Hand	ORIF metacarpal	2.57	14
Ankle	ORIF (Weber B)	2.55	10
Hand	ORIF scaphoid	2.48	22
Ankle	ORIF (Medial malleolus)	2.47	18
Elbow	ORIF Olecranon	2.43	22
Hand	K wire metacarpal	2.43	14
Femur	ORIF periprosthetic (TKR)	2.41	11
Ankle	ORIF (Bimalleolus)	2.38	65
Clavicle	ORIF (middle third)	2.38	16

Table 3: Lowest scoring

Anatomy	Procedure	Mean	n
Femur	Antegrade IMN	1.95	46
Humerus	IMN	2.04	12
Shoulder	Reverse shoulder replacement	2.07	14
Femur	ORIF periprosthetic (THR)	2.08	12
Hip	DHS	2.08	219
Distal Radius	MUA + K wire Distal Radius	2.09	56
Humerus	ORIF (humerus proximal)	2.10	31
Humerus	ORIF (middle 1/3)	2.11	14
Hip	Revision total hip replacement	2.12	16
Hip	ORIF periprosthetic (THR)	2.14	11

Which Procedures Score Best/Worst

Are More Common Procedures Scored More Highly?

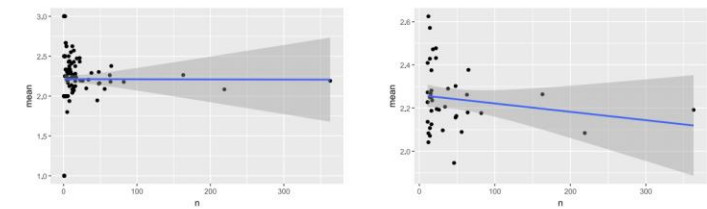


Figure 1: Case frequency versus mean score

Short answer is no. We found no association between mean score and case frequency. DHS (n=219), one of our most performed procedures, was also one of the lowest scoring (2.08).