The Financial and strategic impact of accurate coding in elective orthopaedic surgery: A retrospective study

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Abstract

Accurate Healthcare Resource Group (HRG) coding is crucial for NHS hospital funding, governance, and planning. This project assessed the financial and operational impact of the Hospital. Analysis of clinical documentation improving coding accuracy in elective orthopaedic cases at North Middlesex University Hospital revealed frequent omissions, mainly unrecorded comorbidities and BMI data, that affected tariff allocation. By revising HRG codes based on complete information, the Trust recovered £76,000 across 144 cases, highlighting the importance of close collaboration between clinicians and coding teams to optimise income accuracy and organisational efficiency.

Introduction

Clinical documentation

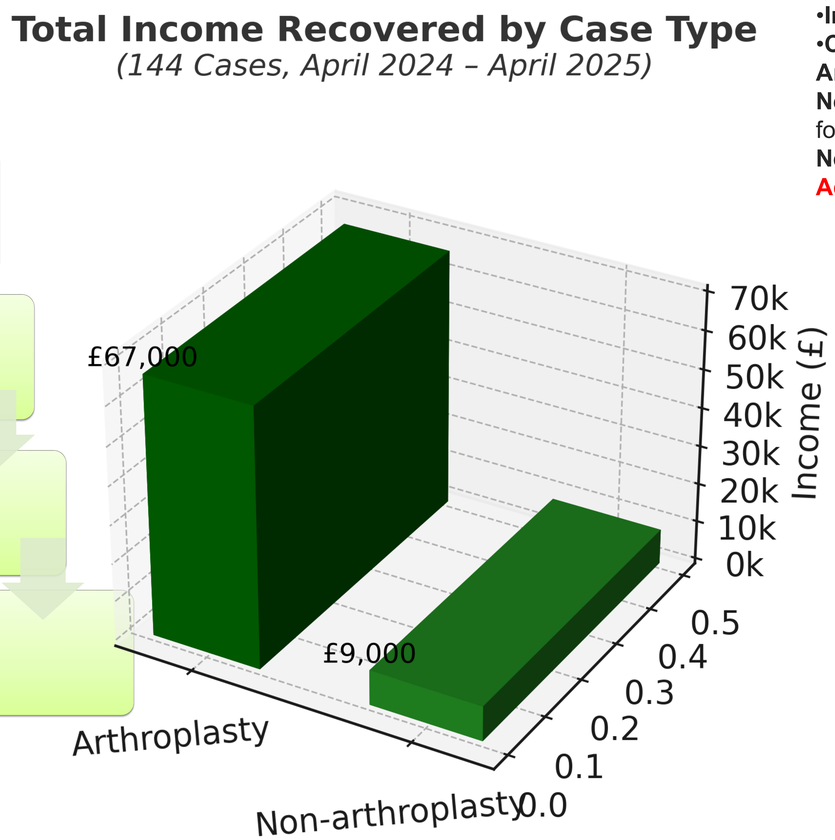
Coding team

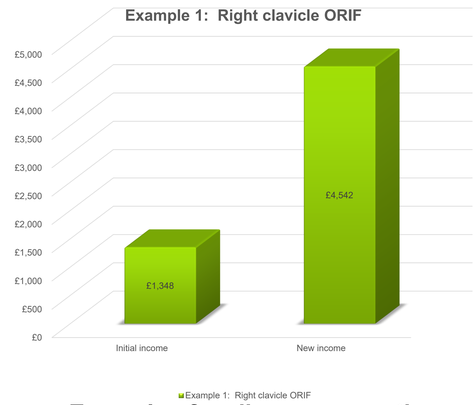
HRG code

Funding/ Governance/strategic planning.

Methodology

We conducted a retrospective review of elective orthopaedic cases, including minor to major procedures, at North Middlesex University Hospital NHS Trust. Clinical documentation (notes, discharge summaries, referral and operation notes, and anaesthetic pre-assessment records) was analysed for information on procedures, comorbidities, Body Mass Index, inpatient journey, mobility, and social history. This data was provided to the hospital's coding team to generate revised HRG codes, which were compared with the originals to calculate changes in tariff income.





Example of coding renumeration:

Case: Non-union of right clavicle
Procedure Right clavicle ORIF.
•**Initial HRG**: **HN55Z**(Minor shoulder procedures for non trauma)
•**Initial income: £1348**
•**Coding changes:** Added the following comorbidities:
Anxiety, hypertension, Chronic sinusitis, lower backpain.
New HRG: HN53C (Major shoulder procedures for non trauma with comorbidities)
New income: £4542
Additional income gained: £3194

Summary of CCs with Value = 2
Infective gastroenteritis
Sepsis
Iron deficiency anaemia
Diabetes with complications (neurological, peripheral circulatory)
Hypoglycaemia
Hypercalcaemia
Hypocalcaemia
Hyponatraemia
Hyperkalaemia
Hypokalaemia
Delirium
Pneumonia
IECOPD
pressure sores Gr lll and Gr lV
Leg ulcer
UTI
septic shock

Results

A total of 144 elective orthopaedic cases from April 2024 to April 2025 were reviewed. Of these, 51% (74) had missing information affecting the HRG tariff, leading to a recovered income of £76,000, an average uplift of £1,027 per corrected case. 88% (65/74) were arthroplasty cases, with the remaining nine non-arthroplasty cases contributing £9,000. Most discrepancies were due to under-reported comorbidities and BMI, which influence the complication/comorbidity score used in HRG calculation.

Conclusion

This study underscores the value of robust communication between clinical and coding teams. Accurate documentation of Body Mass Index and comorbidities significantly affects HRG coding in elective orthopaedics. Conducted before the financial year-end, this exercise led to a substantial remuneration uplift for the Trust, enabling reinvestment, improved governance, and strategic planning to enhance patient care.