

What Are the Differences in Medicare DRG Reimbursement for MIS Deformity Surgery in Academic vs Private Hospitals in Different Geographic Regions?

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Introduction

While physicians are reimbursed based on Current Procedural Terminology (CPT) coding, hospitals are reimbursed based on Diagnosis Related Group (DRG) codes. DRG coding reimburses a fixed amount to the hospital that is intended to cover the cost of a typical patient receiving a treatment/surgery. This coding does not differentiate between number of levels fused but is impacted by approach (ant/post v ant or post only). DRG coding is different between institutions based on multiple factors, including:

- institution type (practice setting),
- institution geographic location
- cost outliers
- disproportionate payments

The aim of this study is to investigate the impact of both geographic location and practice setting on reimbursement.

Methods

DRG based reimbursement for anterior, posterior and circumferential 1 or more level fusions for deformity at 12 institutions was collected. The reimbursement data was then categorized into academic (AC) vs private (PV) and urban (UR) vs suburban (SU) hospitals. The DRG was selected based on coding for a deformity surgery.

Table 1

Surgery Type	DRG	DRG Description
Deformity without MCC/CC	458	Spinal fus exc cerv w spinal curv/malig/infec or ext fus w/o CC/MCC
Deformity with CC	457	Spinal fus exc cerv w spinal curv/malig/infec or ext fus w CC
Deformity with MCC	456	Spinal fus exc cerv w spinal curv/malig/infec or ext fus w MCC

Results

There were 3 PV and 9 AC practices' data available for review. AC reimbursement was \$45,353 while PV was \$29,585 (p=0.019). If significant CC were present AC received \$59,541 and \$39,281 for PV (p=0.022). With a major complication (MCC) reimbursement increased to \$78,188 AC and \$52,014 PV (p=0.024).

Table 2

Surgery Type	Academic	Private	p
Deformity without MCC/CC	\$45,343	\$29,585	0.019
Deformity with CC	\$59,541	\$39,281	0.024
Deformity with MCC	\$78,188	\$52,014	0.022

Comparison of Medicare Reimbursement by Hospital Type

There were 8 UR and 4 RU sites identified. In the UR setting, reimbursement was \$44,270 and \$35,672 (p=0.21) for RU. With CC the UR sites received \$58,182 and RU \$47,063 (p=0.21). With a MCC, UR received \$76,455 and UR \$62,024 (p=0.22). When comparing AC-UR (n=7) to PV-RU (n=2) the cost is 62% higher (\$28,530 vs \$46,066). When comparing a 3 vs 8 day stay no significant changes in reimbursement occurred. A hospital stay of 8 days vs 3 days increased reimbursement by \$355/day for AC and \$61/day for PV.

Table 3

Surgery Type	Urban	Rural	p
Deformity without MCC/CC	\$44,270	\$35,672	0.207
Deformity with CC	\$58,182	\$47,063	0.211
Deformity with MCC	\$76,455	\$62,024	0.215

Comparison of Medicare Reimbursement by Geographic Location

Learning Objectives

Hospital DRG reimbursement is a separate system from physician professional coding, billing and collecting. This study investigated the impact of institution affiliation (academic vs. private) and geographic setting (urban vs suburban) on reimbursement and if hospital length of stay affected the amount paid. Academic institutions received significantly more reimbursement than private hospitals while no difference was found between urban and rural hospital settings. Length of stay did not significantly impact reimbursement.

Conclusions

Medicare DRG based reimbursement was highest for urban academic institutions as expected. The payment structure adopted by Medicare includes 4 adjustment factors

- application of a wage index
- indirect medical education costs
- costs outliers
- disproportionate share payments.

Specifically the application of a wage index impacts urban areas with a higher wage index, therefore those institutions receive higher reimbursement. Indirect medical education costs contribute to the increased reimbursement for academic institutions to offset the expense of additional tests performed. Private suburban hospitals must be more efficient to offset this reimbursement inequity. The number of levels fused and the length of hospital stay has minimal impact on DRG based reimbursement regardless of costs.