The Impact of State-Level Price Transparency Laws on Commercial Charge Prices for 10 Common Orthopaedic Procedures

Andrew Ni, Travis Mark Kotzur, Doha Gamal Hussien, Nasa Xu, Christina Brady

INTRODUCTION:

The Hospital Price Transparency Rule was implemented by the Centers for Medicare and Medicaid Services (CMS) on January 1, 2021, to improve price transparency for patients, promote price competition, and improve hospital care affordability. Since this implementation, many states have introduced additional state-level Hospital Price Transparency Legislation (HPTL) to work alongside federal requirements. However, the impact of these laws on orthopaedic surgery prices remains unclear. The purpose of our study is to better understand the impact of state-level HPTL on orthopaedic surgery costs for commercial payers. We analyzed the charges of ten common orthopaedic procedures between states that have passed HPTL and states that have not. We hypothesized that state-level HPTL would lower commercial charge prices for orthopaedic procedures.

METHODS:

Using Turquoise Health, we reported the commercial insurance charge prices for ten common orthopaedic procedures. State-level legislation was explored to determine which states have passed additional legislation regarding price transparency laws. Fixed and mixed-effect gamma regression models were used to determine the effects of HPTL on charge prices. Outcome measures were hospital charge prices for each given procedure.

RESULTS:

As of May 2023, 9 states have passed price transparency laws. A total of 285,733 commercial charge prices were analyzed. 85,652 (30.0%) charge prices were from states that have passed state-level HPTL and 200,081 (70.0%) were from states that have not. The average cost of the ten procedures examined showed a significant decrease in commercial charge prices in states that have passed HPTLs compared to states without (OR = 0.94, P < 0.01, 95% CI = 0.93 - 0.94).

DISCUSSION AND CONCLUSION:

We found a decrease in commercial charge prices for most orthopaedic procedures examined in states that have passed HPTL. States that passed HPTL had an average 6.2% lower charge price, representing an average decrease of more than $1,000, for the ten most common orthopedic procedures compared to states that did not. HPTL efforts by states to increase healthcare price transparency should be encouraged, as they may lead to lower costs for patients undergoing orthopaedic procedures.

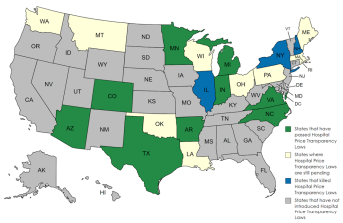

Figure 1: Map of states that have passed HPTL after January 1, 2021

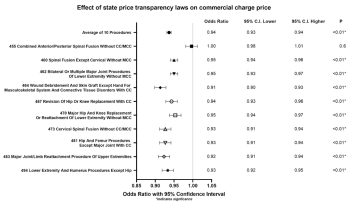

Figure 2: Fixed Effect Forest Plot Of Charge Prices with regard to Price Transparency Laws

Coding Name	
455	COMBINED ANTERIOR/POSTERIOR SPINAL FUSION WITHOUT CC/MCC
460	SPINAL FUSION EXCEPT CERVICAL WITHOUT MCC
463	BILATERAL OR MULTIPLE MAJOR JOINT PROCEDURES OF LOWER EXTREMITY WITHOUT MCC
464	WOUND DEBRIDEMENT AND SKIN GRAFT EXCEPT HAND FOR MUSCULOSKELETAL SYSTEM AND CONNECTIVE TISSUE DISORDERS WITH CC
467	REVISION OF HIP OR KNEE REPLACEMENT WITH CC
470	MAJOR HIP AND KNEE JOINT REPLACEMENT OR REATTACHMENT OF LOWER EXTREMITY WITHOUT MCC
473	CERVICAL SPINAL FUSION WITHOUT CC/MCC
481	HIP AND FEMUR PROCEDURES EXCEPT MAJOR JOINT WITH CC
483	MAJOR JOINT/LIMB REATTACHMENT PROCEDURE OF UPPER EXTREMITIES
494	LOWER EXTREMITY AND HUMERUS PROCEDURES EXCEPT HIP, FOOT AND FEMUR WITHOUT CC/MCC

Table 1: Word editable table of NIS Top 10 Orthopaedic Diagnostic Related Groups