

Using Data-Driven, Principled Negotiation With a Clinician-Integrated Approach to Optimize Value on Orthopaedic Trauma Implants

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Purpose: Orthopaedic trauma implants comprise a significant part of orthopaedic health system costs, and surgeon knowledge about implant cost is limited. This study sought to determine if market-based pricing and volume data could be coupled with surgeon integration into negotiation strategies to achieve better value for patients and lower pricing levels for orthopaedic trauma implants. Secondary aims included evaluating whether new pricing would result in consolidation of vendors and identifying specific types of implants that may offer larger opportunities for cost savings. Given value-based health care represents the net health outcome per dollar spent, cost reduction provides an opportunity for value creation.

Methods: Market pricing levels were reviewed from an industry implant price database. This information was used by surgeons and supply chain management (SCM) at our institution to select appropriate target pricing levels (25th percentile market pricing) for commonly used orthopaedic trauma implants. Target price values were provided to the existing 12 vendors utilized by our institution with a clear expectation that vendors meet these thresholds. If the vendor did not meet these targets, they would be subjected to a 1-year lockout from the health system. In return, our institution rewarded vendors meeting price targets with improved market share and access.

Results: Benchmark modeling projected a potential savings of 20.0% over our prior total annual spending on trauma implants. Following 2 rounds of negotiation, savings amounted to 23.0% of prior annual spending. Total savings exceeded \$1,000,000 US with 11 of 12 vendors (91.7%) offering net savings. Total percent savings were highest for external fixators, drill bits, and Kirschner wires. Plates and screws comprised the greatest proportion of our prior annual spending and achieved similar savings. After final negotiation, no vendors were subjected to a 1-year lockout or dismissed from our supply chain system (100% vendor retention rate).

Conclusion: A surgeon and supply chain coordinated effort led to major cost savings, which likely improves value for orthopaedic trauma patients without a need for consolidation of vendors. This achievement was supported by several negotiating principles, including benchmarking implant pricing data, longitudinal integration of surgeons into decision-making, and data-driven negotiation strategies.