

BUILDING A COST, QUALITY AND OUTCOME MODEL FOR A CLINICALLY ALIGNED SUPPLY CHAIN

McLeod Health CASE STUDY



Organization

McLeod Health, a not-for-profit healthcare system with seven hospitals and 938 acute licensed beds across South Carolina. A leader in innovation, McLeod Health continually looks for ways to improve business and clinical performance while delivering exceptional care.

Situation

At McLeod Health, total joint replacement is among the procedures with the greatest patient outcomes — “life changing,” in the words of their patient population. While the total joint service line is critical to the health and well-being of its patients, continued cuts to reimbursements were causing strain. To continue to optimize care and costs, health system leaders needed to find new ways to reduce spend without impacting the quality of care.

“No mission, no margin is real,” said Dr. Michael Rose, anesthesiologist and chief strategy and innovation officer for McLeod Health. “The specific challenge was getting the right care to the right people in the most effective way. That’s what really started to push us to look at all aspects of the program, from the supplies used in a total joint case, to what happens after the patient leaves our door.”

Objectives

To sustain viability of the service line, McLeod’s orthopedic and supply chain teams joined forces to examine how they could reduce costs, maintain patient care quality, and improve financial outcomes for the organization.

They needed visibility into every aspect of total joint procedures that could impact costs, quality and outcomes (CQO) by surgeon and by case, including supply usage/cost, amount billed to/reimbursed by payer, patient outcomes and case revenue/profit.

PHYSICIAN LED, SUPPLY CHAIN SUPPORTED

The McLeod team realized that if they were to enact real change in the health system’s total joint program, the orthopedic team must lead the effort and decide what data was necessary to evaluate supplies and their impact on CQO. Supply chain would support the initiative by obtaining and validating the requested data, as would stakeholders from the finance, value analysis and quality teams.

Challenge

The central challenge was creating visibility to the variables that either positively or negatively impact CQO - in as close to real-time as possible. But the data required for this effort resided in separate systems that lacked integration and spanned different areas of the organization, including:

- Enterprise resource planning (ERP) system for item master and purchase order (PO) data
- Inventory point of use (POU) system for supply consumption data (e.g., supplies used by each surgeon in procedures)
- Cost accounting system for financial data (e.g., what supplies were billed, how much the health system was reimbursed by payers)
- Quality system for patient outcomes data, including infections, readmissions, etc.



Solution

The McLeod team turned to SupplyCopia to develop a user-friendly and intuitive dashboard to support its total joint CQO pilot. SupplyCopia's SaaS solution combines disparate datasets and applies artificial intelligence (AI) and machine learning (ML) to generate actionable insights into CQO.

SupplyCopia leveraged its Virtual Item Master to clean, classify, code and enhance McLeod's data from each of its systems (ERP, POU, cost accounting, quality), making it analyzable.

SupplyCopia then made this data and resulting analytics accessible through a perioperative dashboard, which presents CQO information by surgeon and by procedure as a consolidated report. Users can drill down on specific items included in a procedure, identify costs associated and correlate items to outcomes.

PHYSICIAN LEADER BOARD

Leveraging the integrated data, the orthopedic surgical team created a methodology to score and rank key factors directly impacting CQO. Then, a score was determined and assigned for each surgeon.

SupplyCopia designed a physician leader board through which each surgeon can access his or her own page, see their score and delve deeply into the factors that influence it. The surgeons can also access each other's scoring information and the contributing factors.



Results

Using the insights generated by the SupplyCopia dashboard, the McLeod team has uncovered significant opportunities for product and process standardization, waste reduction and contract optimization. Planned supply optimization initiatives in the total joint service line based on the results of this work will drive significant additional savings for the health system.

Most importantly, they are able to base their decisions on what delivers the greatest value to their patients. Ultimately this helps enable financial viability to continue performing life-changing total joint procedures, critical to the health of the patient population.

"SupplyCopia is generations ahead of other tools available in the market today," said Dale Locklair, Senior Vice President Planning and Facilities Management, McLeod Health. "The capabilities of the technology are the kind of things we dreamed about five or 10 years ago. And they're here today."



Key CQO Insights & Actions

- **Supply and Process Standardization:** SupplyCopia defined about 10,000 combinations of products used among nine or 10 surgeons in total joint procedures. McLeod standardized procedure packs with supplies that cover 85-90% of all cases.
- **Implants and Outcomes:** The McLeod team discovered that the choice of supplier and implant does not have a significant impact on patient outcomes, but it does influence the cost of the procedure.
- **Impact of Ancillary Supplies:** The use of ancillary supplies (beyond the implant) significantly impacts procedure costs when their prices are not pre-negotiated with suppliers. McLeod is using this knowledge to better manage contracts and vendors.
- **Physician Preference Cards:** Realization that inaccurate physician preference cards lead to significant waste from throwing away unused items picked for a case, or staff having to rehandle these items. McLeod is leveraging a bill of materials (BOM) from cases to improve preference card accuracy moving forward.

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