Maximizing Value in Total Knee Arthroplasty: Ambulatory Surgical Center or Hospital Outpatient Department?

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Maximizing Value in Total Knee Arthroplasty: Ambulatory Surgical Center or Hospital Outpatient Department?

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Introduction:
In the United States, healthcare costs have consistently ranked the highest among developed countries, leading to an urgent push towards decreasing spending. This study compared the cost of robot-assisted total knee arthroplasty (TKA) performed in a hospital outpatient department (HOPD) to an Ambulatory Surgical Center (ASC).

Methods and Materials:
Costs were determined using Time-Driven Activity-Based Costing (TDABC) methodology. All steps of a patient care pathway for robotic TKA performed in ASC and HOPD were organized into one process map. All personnel involved in patient care were included and the average time each allocated to patients was multiplied by their per-minute salary cost to determine direct variable costs.

Results:
Personnel costs of 11 HOPD TKAs were compared to 4 ASC TKAs. Average total costs for TKA in the ASC were $961.58 compared to $1,140.09 in the HOPD ($<0.001). Average PA costs in the HOPD were significantly greater at $106.61 compared to $86.58 in the ASC ($0.029). RN costs at the HOPD were $231.89 vs $188.02 at the ASC ($0.059). Anesthesia Attending costs were $42.48 in the HOPD vs $26.15 at the ASC ($0.253).

Discussion:
The significant difference in cost demonstrates that the ASC is less expensive regarding labor costs. With healthcare costs rising, value-based care plays a pivotal role in healthcare decisions and treatment options. As TKA volumes continue to increase, determining less expensive modalities can ameliorate the expected rise in healthcare costs. Future studies should include a cost-effectiveness analysis for TKA procedures, directly comparing cost and patient-reported outcomes, to better aid clinicians in decision-making.