

Editorial Commentary: Saving Cost in Orthopaedics While Preserving Patient Experience and Outcomes: We Can Have It All



Ian D. Engler, M.D., Editorial Board

Abstract: Healthcare costs in the United States are the highest in the world and continue to increase unsustainably. As a result, cost-cutting measures are paramount. Bundled payments are a primary method to decrease healthcare use, and they are increasingly prominent in orthopaedic surgical care. Bundled payments require an accurate assessment of the cost of a procedure, which may be determined more reliably and feasibly than previously with time-driven activity-based costing. Time-driven activity-based costing identifies the cost of various stages of care, which allows cost-containment strategies to target the most expensive stages. Amidst the warranted focus on cost reduction, we must maintain a strong focus on the patient experience and patient outcomes. For example, reducing surgeon and staff time with the patient could negatively impact patient care, yet increasing efficiency in the operating room and perioperative setting could decrease the relative cost of staff without harming the patient experience. Other realms, such as implant and administrative costs, are important focuses that are less likely to directly hamper patient care. Controlling cost in the U.S. healthcare system will require a wide-reaching approach with contributions from all parties. As we work toward a more financially sustainable system, we must be sure to preserve excellent patient experience and outcomes.

See related article on page 2371

Healthcare costs in the United States are trending toward unsustainable levels. Healthcare comprises 19.7% of the U.S. gross domestic product and continues to grow at a rate of 6% annually.^{1,2} The Triple Aim has thus been popularized to bring a focus to cost in healthcare alongside the long-held goals of patient care and population health.³ This aim strikes a balance between cutting costs and maintaining patient outcomes—2 goals that at times are at odds. Despite the challenges, the need to reduce cost in U.S. healthcare is clear.

While there is widespread disagreement in the policy and political worlds on how best to address the cost of the U.S. healthcare system, one of the most consistent policy trends is toward decreased fee-for-service and increased bundled payments. The goal of bundled payments is to financially incentivize the healthcare organization and provider to care for the patient in as value-based of a manner as possible. Bundled payments

have their potential downsides, such as underappreciating the high cost of care of some patients and consequently dissuading healthcare organizations from providing care, incentivizing lower-quality but less-expensive care, and targeting utilization rather than larger drivers of U.S. healthcare cost.⁴ However, this payment structure is a logical approach to decreasing healthcare use and thus cost in the nation with the most expensive healthcare in the world.⁵ Most importantly to the orthopaedic surgeon, they are the present and likely the future. As a result, the field must learn to best accommodate them.

The first step to implement bundled payments effectively is to determine the cost of care accurately. The emerging gold standard of cost assessment in orthopaedic surgery is time-driven activity-based costing (TDABC). For an excellent description of TDABC, I refer you to the 2021 *Arthroscopy* Editorial Commentary by Jayakumar et al.⁶ Given the benefits of the method, I

The author reports no conflicts of interest in the authorship and publication of this article. Full ICMJE author disclosure forms are available for this article online, as supplementary material.

© 2022 by the Arthroscopy Association of North America

0749-8063/22288/\$36.00

<https://doi.org/10.1016/j.arthro.2022.03.005>

read with great interest “Time-Driven Activity-Based Costing Accurately Determines Bundle Cost for Rotator Cuff Repair” by Dylan, Koolmees, Ramkumar, Solrud, Yedulla, Elhage, Cross, and Makhni.⁷ The authors used TDABC to determine the operative and 90-day postoperative cost of a rotator cuff repair at a Midwestern tertiary-care medical system. Of note, Centers for Medicare and Medicaid Services include the 90-day postoperative window in bundled payments. Although its generalizability to other hospital systems and geographic regions is unclear, this study is one of the most reliable to date on the cost of rotator cuff repair, given the accuracy of TDABC.⁶ Previous studies on the topic used hospital charges and other techniques that are potentially less accurate, even if a cost-to-charge ratio was used.⁸⁻¹⁰

Once a bundled payment has been set, the goal is to provide high-quality care with as low of a cost as possible. TDABC once again proves valuable by displaying the cost of each stage of patient care within a given procedure. As Makhni et al.⁷ conclude, substantial cost in the 90-day window of a rotator cuff repair stems from the cost of the surgeon/perioperative staff, implant, and physical therapist. Therefore, these aspects of care are potential areas for cost reduction.

Surgeon and perioperative staff cost may be reduced by decreasing time spent on patient care. This is a precarious endeavor, as no patient would advocate for less time with their surgeon or other care team members, especially during the day of surgery. While striving toward efficiency, we as a field must hold as a central tenet the goal of maintaining patient care and the patient experience. Patients do not want to feel as though their care is rushed—in fact, time with the surgeon and the surgeon getting to know patients are two of the most important factors in their selection of a surgeon.¹¹ While all industries benefit financially from efficiency, the medical sector is unique in its commitment to patients and their wellbeing.

An effective way to reduce the cost of staffing without adversely impacting patient care is to increase the efficiency of the operating room and perioperative setting.¹² The goal is to have patients flow through the system into and out of the operating room as efficiently as possible, minimizing “dead time” where no work is being done to progress the patient through their day. Medical centers should thus strive for efficiency in their perioperative care, for example by incentivizing employee productivity via bonuses or leaving work when cases are finished, rather than at a predetermined time.

While there is a degree of cost-control that can be directed toward perioperative staff expenses, cost reductions in other realms are less likely to harm the patient experience. Implant prices are variable and have the potential to be negotiated down between hospitals and manufacturers. As Makhni et al. and others report,

implants are one of the greatest drivers of the cost of orthopaedic procedures.^{7,13,14} Administrative costs are another massive contributor to cost in U.S. healthcare, given that the country spends nearly 8 times as much on administrative healthcare costs than the median for most developed nations.⁴ TDABC is known to undervalue administrative costs due to the difficulty in defining the cost of the operation of the healthcare organization that is attributable to an individual patient encounter, so administrative costs are likely a larger part of the cost of rotator cuff repair than Makhni et al. found.⁶ Possible solutions to the rising administrative expenses of healthcare include streamlining administrative processes on the organizational level and decreasing regulatory burden on the national level.

The United States must cut healthcare costs, and it must do so in a way that preserves patient care. There is urgency on both fronts. Without maintaining the patient experience, we are left with a culture in which patient–provider and patient–healthcare system interactions are focused more on money than on health. Avoiding this fate is one of the few things on which we can all agree.

References

1. Keehan SP, Stone DA, Poisal JA, et al. National health expenditure projections, 2016–25: Price increases, aging push sector to 20 percent of economy. *Health Affairs* 2017;36:553-563.
2. Centers for Medicare & Medicaid Services. National Health Expenditure Data: Historical. February 26, 2022. <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical#:~:text=The%20data%20are%20presented%20by,spending%20accounted%20for%2019.7%20percent>
3. Berwick DM, Nolan TW, Whittington J. The triple aim: Care, health, and cost. *Health Affairs* 2008;27:759-769.
4. Anderson GF, Hussey P, Petrosyan V. It's still the prices, stupid: Why the US spends so much on health care, and a tribute to Uwe Reinhardt. *Health Affairs* 2019;38:87-95.
5. Papanicolaos I, Woskie LR, Jha AK. Health care spending in the United States and other high-income countries. *JAMA* 2018;319:1024-1039.
6. Jayakumar P, Triana B, Bozic KJ. Editorial commentary: The value of time-driven, activity-based costing in health care delivery. *Arthroscopy* 2021;37:1628-1631.
7. Makhni Dylan S, Koolmees DS, Ramkumar PN, et al. Time-driven activity-based costing accurately determines bundle cost for rotator cuff repair. *Arthroscopy* 2022;38:2371-2377.
8. Li L, Bokshan SL, Ready LV, Owens BD. The primary cost drivers of arthroscopic rotator cuff repair surgery: A cost-minimization analysis of 40,618 cases. *J Shoulder Elbow Surg* 2019;28:1977-1982.
9. Vitale MA, Vitale MG, Zivin JG, Braman JP, Bigliani LU, Flatow EL. Rotator cuff repair: An analysis of utility scores and cost-effectiveness. *J Shoulder Elbow Surg* 2007;16:181-187.

10. Iyengar JJ, Samagh SP, Schairer W, Singh G, Valone FH III, Feeley BT. Current trends in rotator cuff repair: Surgical technique, setting, and cost. *Arthroscopy* 2014;30:284-288.
11. Engler ID, Ahrendt GM, Curley AJ, Musahl V. Surgeon personality, time spent with the patient, and quality of facilities are the most important factors to patients in selecting an orthopaedic sports medicine surgeon. *Arthrosc Sports Med Rehab* 2022;4:e1023-e1029.
12. Farber A. Embracing patient-centric endeavors to improve operating room efficiency. *JAMA Surg* 2021;156:322-322.
13. Menendez ME, Lawler SM, Shaker J, Bassoff NW, Warner JJ, Jawa A. Time-driven activity-based costing to identify patients incurring high inpatient cost for total shoulder arthroplasty. *J Bone Joint Surg* 2018;100:2050-2056.
14. Carducci MP, Gasbarro G, Menendez ME, et al. Variation in the cost of care for different types of joint arthroplasty. *J Bone Joint Surg* 2020;102:404-409.