

# Surgical scorecards may cut cost of surgical procedures without impacting outcomes

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Surgical scorecards, a tool that gives direct feedback to surgeons about their procedure costs in the operating room, may significantly reduce costs without impacting clinical outcomes, according to a study

published in the *Journal of the American College of Surgeons (JACS)*.

The surgical scorecard is a novel approach to addressing operating room costs. It is commonly delivered to the surgeon in the form of an email receipt, [report card](#), or informational session summarizing the cost of their own surgical items, staffing, and the time used for any procedure in the operating room, as well as how those costs compare to colleagues' costs and similar operations performed.

"The reality is that health care in the United States is exorbitantly expensive, and despite this increased spending, Americans don't have better health outcomes than our high income country neighbors," said lead study author Wesley Dixon, MD, an internal medicine resident physician at Brigham and Women's Hospital in Boston, Massachusetts.

"Our results show that scorecard implementation is one of many different methods that can be used to lower health-care costs, particularly operating room costs, which comprise a significant proportion of health-care spending. Using different cost saving interventions together can reduce overall U.S. [health care](#) spending without compromising patient care."

The researchers carried out a scoping review, which synthesizes all available study results based on keyword searches, by scanning research databases such as PubMed, Embase, and Web of Science to gather more information about surgical scorecards and their impact on cost reduction.

Twenty-one studies published between 2011 and 2022 were included, spanning eight subspecialties and 30 procedures. Through a literature search, key elements of cost such as "surgical supplies," "implants," "wasted supplies," and "operative time" were identified.

The data was then analyzed according to the impact of scorecards on the

percentage change in cost per operation—from before the intervention to after the intervention, and the impact on patient outcomes, which included operative time, postoperative length of stay, complication rates, readmission rates, and mortality.

## Key findings

- Of 30 total scorecard interventions measured across 21 studies, 16 out of 30 (53%) interventions showed surgical procedure cost reductions between 5% and 20%.
- For 11 studies, cost reduction was attributed to reduced use of specific high cost items. Cost savings can come from using less expensive alternatives or wasting fewer supplies (opened but unused during the operation).
- The most common surgical subspecialties included in the review were orthopedic and general surgery. A wide variety of procedures were included, but the most common were adult and pediatric laparoscopic appendectomy.

## Making hospitals more energy efficient

"The biggest knowledge gap we identified in this study is that there is essentially no research connecting surgical scorecards to surgeons with environmental or emissions data related to the [operating room](#)," Dr. Dixon said.

"Operating rooms contribute around 50% of hospital waste and are much more energy-intensive than the rest of the hospital, adding to the overall carbon footprint. Therefore, some of these data-driven feedback mechanisms that include carbon-related data would be a major step towards making the hospital a more energy-efficient place."

A limitation of the study is that a large part of scorecard use nationwide is implemented as part of quality improvement initiatives and those results are not always published. Therefore, the results of this scoping review might under-represent the true impact of surgical scorecards.

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**More information:** Wesley Dixon et al, Cost-Saving in the Operating Room: A Scoping Review of Surgical Scorecards., *Journal of the American College of Surgeons* (2023). [DOI: 10.1097/XCS.0000000000000846](https://doi.org/10.1097/XCS.0000000000000846)

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