Value in the Perioperative Period

Lee A. Fleisher, MD*, Joshua H. Atkins, MD, PhD

KEYWORDS

• Perioperative period • Value • Health care • Costs

KEY POINTS

- Value incorporates both quality and costs.
- The value components incorporated in the determination of quality and costs depend on the perspective taken (eg, payer and patient).
- Although major morbidity and mortality are important determinants of quality, the patient perspective must include return to baseline function and quality of life.

The costs of health care continue to increase in the United States and most of the industrialized world. Despite the increasing costs of care, the outcomes achieved have remained unchanged for decades. Michael Porter and colleagues[1] proposed that the overarching strategy for health care should be to improve value for patients, with value being defined as patient outcomes achieved in relation to the amount of money spent. Further, they think that "only through achieving better outcomes that matter to patients, reducing the costs required to deliver those outcomes, or both can medicine unite the interests of all key stakeholders."

Surgery represents a significant portion of the health care budget of the United States. Although performing surgery on an outpatient basis is one means of reducing the cost of care, patients continue to be readmitted after discharge and there are opportunities to reduce the most common complications of pain and nausea and vomiting. With respect to inpatient surgery, complications continue to occur, which substantially adds to the health care costs. Although there is evidence to suggest that mortality has decreased in recent years, complications are common. For example, colorectal surgery is associated with a 25% to 30% incidence of complications in the elderly. Therefore, there is substantial opportunity to improve the outcome for this and other major surgeries. In addition, reducing complications

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Department of Anesthesiology and Critical Care, Perelman School of Medicine, University of Pennsylvania, 3400 Spruce Street, Dulles 680, Philadelphia, PA 19104, USA
* Corresponding author.
E-mail address: Lee.Fleisher@uphs.upenn.edu

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dramatically reduces the cost of care. The net result is improved outcome and reduced costs.

In addition to reducing complication rates perioperatively, there are also opportunities to reduce costs without effecting outcome. For example, there are opportunities to reduce preoperative testing and consultations, which is a hallmark of the Choosing Wisely campaign. Length of stay can be shortened independently of reducing complication rates. The enhanced recovery after surgery (ERAS) program has been shown to substantially reduce length of stay and has been associated with a reduction in health care expenditures. This article defines some of the opportunities that can increase value in the perioperative period.

VALUE IN THE POLICY CONTEXT

The United States Federal Government has developed the value-based payment plan that began as bonuses on physician reporting of specific metrics to more recently imposing penalties for not reporting. The Centers for Medicare and Medicaid Services (CMS) also incorporated these measures into hospital-based payments, and most hospitals incorporated these metrics as part of their contracts with physicians. The initial focus by CMS was process measures; evidence-based processes of care that are linked to outcomes. These initial metrics included some of the Surgical Care Improvement Project measures, such as antibiotic timing within 1 hour of incision and choice of antibiotic for surgery. These measures were also incorporated into private plans like Blue Cross/Blue Shield with physicians and hospitals.

The other major change in the payment area has been the move to bundled care. Although slow to be adopted, Sylvia Burwell, Secretary of Health and Human Services, recently wrote that the federal government plans to accelerate the movement to alternative payment models, including bundled payments, over the next 3 years.[2] Bundled care involves paying a single amount to hospitals that includes the payments for both hospital and physician care. It frequently also incorporates payment for care for a time frame after hospital discharge that can vary from 30 days to 90 days. The premise of such a payment approach is that the hospitals will take responsibility for delivering the highest quality care for the lowest total cost (ie, value). Although the Accountable Care Organization model linking provider payments to quality and outcomes recently showed national cost-savings,[3] the barriers to implementation of bundled payments may be substantial.[4]

Value from the Payer's Perspective

At present, the method to judge the outcome side of the value equation is complex and varies according the group using the data. Death is an easily assessed outcome and risk-adjusted mortality can be measured and used in the value equation. Risk-adjusted complication rates can also be used by the payers to assess value; however, complications increase costs and must be incorporated into the cost side of the equation as a function of resource use. Furthermore, each surgical procedure or medical treatment requires a defined set of outcomes, which requires risk adjustment. For example, risk-adjusted outcomes have been well defined by the Society of Thoracic Surgeons (STS), but this has required decades of research and a great deal of resources to collect in their database.[5] Defining similar risk-adjusted outcomes across the broad spectrum of surgery and interventional procedures would be a substantial undertaking. Other surgical specialty groups, including anesthesiologists, have or are developing databases to show value. These include the National Anesthesia Core Outcome Registry (NACOR) established by the American Society of