



Shifting the Focus: Value-Based Care in Surgical Oncology

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VALUE-BASED CARE IN ONCOLOGY

Healthcare spending in the USA far exceeds that of other developed nations; however, the relative increase in expenditures has not resulted in reciprocal improvements in overall health.¹ Cancer care in particular results in very high costs of treatment.² These rising costs can also lead to tremendous financial burden for patients that impacts their psychosocial well-being, oncologic outcomes, and quality of life (QOL). It has been projected that, if the costs of cancer care continue to increase unchecked, treatment may become unaffordable to many.³ As the demand to curb costs and improve quality increases, there is a societal consensus that healthcare should be more greatly assessed on the basis of value. Thus, the USA is now in the midst of transitioning to a value-incentivized system.⁴ Policymakers, insurers, and patients are calling on physicians, business leaders, and health economists to deliver value-based care. Reform will require major strategic changes in the way healthcare is measured, delivered, and reimbursed.

Although surgical oncology is only one facet of multidisciplinary cancer care, surgery can result in tremendous physical, emotional, and financial demands for patients. While other oncologic disciplines have begun to prioritize value-based care delivery, consideration of how to best define, deliver, and promote value-based care has not been

fully explored in surgical oncology. In this perspective, we provide a comprehensive overview of value frameworks and their applications in surgical oncology clinical practice, and highlight established and emerging opportunities to enhance the delivery of high-value care.

MEASURING VALUE: EXISTING FRAMEWORKS IN ONCOLOGY

Value in healthcare remains a complex and multifaceted concept. Value is the relationship between outcomes and costs, including direct financial costs and indirect costs such as impact on employment, treatment toxicity, and family/caregiver impact. As there remains no standard to quantify and communicate the many outcomes and cost components of value, various frameworks have been proposed. The American Society of Clinical Oncology (ASCO) has proposed assigning a numeric score, net health benefit (NHB), to cancer treatments on the basis of an assessment of the specific clinical benefit, side effects, QOL, and cost.⁵ The National Comprehensive Cancer Network (NCCN) has also proposed a visual matrix called the NCCN Evidence Blocks to provide consensus-based scoring of efficacy, safety, quality of evidence, and cost.⁶ Additionally, a radar chart that displays quantitative variables on multiple axes has been proposed as a practical tool to improve shared decision-making by providing an understandable snapshot of value.⁷

Although several domains can be measured using existing data sources, other metrics such as patient-reported outcomes (PROs) and estimated costs to patients and health system are not universally available. The Centers for Medicare and Medicaid Services (CMS) developed the Oncology Care First Model, which will mandate hospitals to collect PROs in

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addition to traditional outcome and cost metrics. Meaningful application of these data will be critical to ensure that these regulatory efforts are sustainable and worthwhile.

As our ability to measure value improves, patients and clinicians prioritize value metrics differently, suggesting that consideration of perspective may be necessary to determine value.⁸ Further investigation is necessary to solidify the concept of value-based care. While the basic premise of value-based care is to provide high-quality healthcare services while controlling costs, more research is needed to develop a comprehensive definition. Ultimately, factors that may drive value framework utilization include validation based on real-world data, accuracy of cost estimation, clear definitions of “value,” ease of implementation in clinical practice, and applicability to shared decision-making.

OPPORTUNITIES TO DELIVER VALUE-BASED CARE IN SURGICAL ONCOLOGY

Enhanced Recovery and Prehabilitation

The efficacy of surgical intervention depends heavily on patients’ recovery. Enhanced Recovery After Surgery (ERAS) is an evidence-based approach to perioperative care. Designed to optimize and promote early recovery, ERAS programs have proven effective across many different surgical sites, resulting in major improvements in outcomes and costs, and serves as an example of value-based surgical care.⁹

While ERAS focuses on the immediate perioperative period, prehabilitation is designed to optimize a patient’s functional capacity prior to surgery and can be implemented concurrently in patients undergoing neoadjuvant therapy. Studies to date suggest that prehabilitation may improve outcomes and reduce costs.¹⁰ *Strong for Surgery* is a public campaign led by the American College of Surgeons (ACS) aimed at improving patient health prior to surgery, with the goal of enhancing surgical outcomes. The program provides a comprehensive set of resources for patients to optimize their health, including evidence-based recommendations for exercise, nutrition, and lifestyle changes. The focus of the *Strong for Surgery* program is to address modifiable risk factors such as obesity, smoking, and poor nutrition that can negatively impact surgical outcomes. By empowering patients to take control of their health in the preoperative period, *Strong for Surgery* seeks to improve surgical outcomes and reduce healthcare costs. The program is supported by a coalition of over 100 organizations, including hospitals, medical societies, and health systems, which are dedicated to providing high-value, patient-centered surgical care.¹¹

Operative Standards for Cancer Surgery and Synoptic Reporting

Compliance with evidence-based guidelines has been shown to reduce cancer care costs, improve outcomes, maintain patient satisfaction, and thus provide significant value implications.¹² The American College of Surgeons (ACS) Cancer Research Program (ACS-CRP) has focused efforts toward defining and disseminating evidence-based practice in surgical oncologic technique through publication of “Operative Standards for Cancer Surgery.”¹³ Several studies have illustrated that adherence to standards improves cancer outcomes, including longevity.¹⁴ In 2020, the Commission on Cancer (CoC) introduced new technical standards among the Optimal Resources for Cancer Care (2020 standards) that define critical elements of surgery for cancers of the breast, colon, skin (melanoma), rectum, and lung. Beginning in 2023, CoC-accredited sites will be required to use synoptic reporting to capture these elements in operative documentation. The Cancer Surgery Standards Program was created in 2020 to create the infrastructure for this transition. The goal is to facilitate the capture and reporting of data to drive quality improvement efforts and standardization of surgical oncology care.

Transforming Healthcare Resources to Increase Value and Efficiency (THRIVE)

In 2019, the Harvard Business School’s Institute for Strategy and Competitiveness partnered with the American College of Surgeons (ACS) and announced the creation of THRIVE, Transforming Healthcare Resources to Increase Value and Efficiency. The program’s mission is to assist clinicians in delivering value-based surgical care by improving patient outcomes while lowering healthcare costs.

THRIVE focuses on the entire continuum of care for patients undergoing cancer surgery, and employs a cutting-edge methodology called time-driven activity-based costing (TDABC) to accurately calculate the total cost of care at select institutions.¹⁵ TDABC measures all resources used, including staff time, supplies, and equipment, to determine the total cost of care for each patient. This information is used to identify areas where improvements can be made, leading to better patient outcomes and lower costs.

The ultimate goal of THRIVE is to develop a generalizable approach that can be used by hospitals across the country to measure and improve value in surgical care. By working with leading institutions and utilizing innovative tools such as TDABC, the program aims to create a roadmap for delivering high-quality, cost-effective surgical care to patients.

Choosing Wisely

Although not exclusive to the practice of surgery, the Choosing Wisely campaign was launched by the American Board of Internal Medicine (ABIM) Foundation to reduce waste by educating physicians and patients about opportunities to decrease, or “deimplement,” the use of low utility tests and interventions.¹⁶ The Society of Surgical Oncology has joined this collaborative initiative to identify and discourage low-utility testing and treatment for patients with cancer, such as the routine use of breast MRI for breast cancer screening in women of average risk. This campaign is an important component of improving quality of care by decreasing unnecessary interventions that result in low-yield expenditures.

Centralization/Volume

Receiving care at high-volume hospitals has been associated with better outcomes for patients undergoing certain high-risk cancer operations.¹⁷ Accordingly, stakeholders have advocated for hospitals to meet minimum-volume standards, and value-based alternative payment models incentivize the shift of specialized care to centralized, tertiary centers while low-risk care will be delegated to community settings. Even though regionalization of high-risk cancer surgery is occurring,¹⁸ there is concern that geographic and financial barriers prevent patients’ access to specialized care, thus exacerbating existing health disparities. Thus, as efforts to improve value through centralization of specialty care may exacerbate barriers to care among patients in rural communities or those with limited financial reserves, it is critical to address potential unintended effects of a shift toward value-based care.

Additionally, it is important to consider that while centralizing complex care toward tertiary care centers has potential to improve value, there may also be value in decentralizing less complex care away from these centers. This highlights the importance of evaluating each case individually and of considering a balanced approach that takes into account the specific needs and circumstances of the patient and health-care system.

Green Surgery

Green surgery aims to improve value-based care by incorporating environmentally sustainable practices into surgical procedures. This not only reduces waste and conserves resources, but it also minimizes the environmental impact of healthcare.¹⁹ By reducing single-use plastics, utilizing energy-efficient equipment, and promoting environmentally friendly products, green surgery can help lower costs while ensuring the sustainability of healthcare systems.

Additionally, incorporating these practices into surgical procedures can improve the reputation of healthcare organizations, demonstrating their commitment to sustainability and social responsibility.

However, it is important to note that further research is needed to fully understand the impact of green surgery on value-based care. Additionally, there is a need for better measurement and reporting of the environmental impact of healthcare, as well as the development of guidelines and best practices for implementing green surgical practices in a way that is both effective and safe for patients. Nevertheless, the principles of green surgery offer a promising solution for improving value-based care in the future.

Surgeon-Led, Hospital Administrative Leadership

There is growing evidence that physician leaders improve hospital performance. Physician-led hospitals have higher quality scores, lower complication rates, improved efficiencies, higher physician-satisfaction scores, and better financial performance than non-physician-led counterparts.²⁰ Accordingly, surgeon-led efforts have been shown to reduce costs of surgical supplies, standardize care pathways, and improve efficiencies that translate into significant cost reductions,²¹ creating a compelling argument for engaging surgical leaders to improve value. Opportunities for business and administrative leadership education should be included in the surgical training paradigm and made available to junior faculty to foster development of future leaders in value-based surgical care.

CONCLUSIONS

The US healthcare system is embarking on an era of value-based care transformation that will change how we educate, innovate, and care for patients. By pioneering care redesign and cultural change, surgical oncologists should play a leading role in improving the value of cancer care. We should work thoughtfully and intentionally toward the collective goal of reducing cost, improving outcomes, and prioritizing patient well-being to ensure that our patients and their families receive high-value, worthwhile care.

ACKNOWLEDGEMENT It is essential to acknowledge that some of the programs discussed herein lack strong evidence of their impact on value. For instance, while the Choosing Wisely campaign aims to identify low-value practices, there is limited evidence to suggest it has effectively improved value without accompanying deimplementation strategies. Additionally, it is important to note that the cost of implementation should also be taken into consideration. In light of these limitations, it is crucial to emphasize that any focus on value must be grounded in evidence-based practices, including rigorous prospective evaluations, to ensure that quality improvement programs do not simply increase costs without improving overall value. We also acknowledge that the concept of value-based care is complex and cannot be

fully explained in a brief article. This article is not a formal systematic review, and the selection of discussed strategies was based on their potential impact. It's worth noting that there are numerous other relevant strategies that could be considered, including increased utilization of palliative and supportive care, less surgery/treatment in the last 30 days of life, more judicious use of costly technologies, and leveraging policies such as Medicaid expansion, among others. However, we feel this offers a useful overview of the key principles of value, its implementation, and its importance in our field. This article serves as a resource for further exploration and professional growth for surgeons looking to provide value-based care.

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