

Adapting Enhanced Recovery After Surgery (ERAS) Protocols to Promote Equity in Cancer Care and Outcomes

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RACIAL DISPARITIES IN CANCER OUTCOMES AND THE PROMISE OF ERAS

Persistent racial and ethnic disparities across the cancer control continuum have been widely documented for decades, particularly for Black Americans. Relative to White patients, Black patients with cancer are more likely to be diagnosed at later stages, are less likely to receive guideline-concordant treatment, and are more likely to die.¹ Reasons for these disparities are multifactorial and include access to high-quality cancer care, including surgery.¹ Encouragingly, 30-day postoperative mortality after cancer surgery has decreased across racial and ethnic groups since 2007, but mortality remains persistently higher among Black patients.² This mortality gap is not well-understood, but suggested contributors include quality of perioperative care, higher rates of postoperative complications among Black patients, and structural racism.²⁻⁴ Equity-focused evaluations of existing healthcare system-level policies, clinical practices, and interventions are needed to identify factors that may impact the racial disparity in cancer outcomes. We focus here on enhanced recovery after surgery (ERAS) protocols because racially minoritized patients who have been historically disadvantaged by provider- or system-level factors (eg, variability in care decisions related to unconscious or conscious racial biases) may benefit from the standardized pathways of ERAS that improve the quality of perioperative care and reduce postoperative complications for all cancer patients.⁵

ERAS is an established surgical practice that has been in clinical use since the early 2000s.⁶ ERAS (also referred to as fast-track surgery) uses a patient-centered, evidence-based, multidisciplinary approach to care through preadmission, preoperative, intraoperative, and postoperative elements that focus

on improving recovery and decreasing complications after surgery.⁶ ERAS has been shown to improve surgical outcomes (eg, fewer postoperative complications without an increase in readmission or mortality) for multiple cancer types, including colorectal,⁷ gynecologic,⁸ and bladder.⁹ A vast number of medical organizations have endorsed the use of disease-site ERAS protocols,¹⁰ and some studies within noncancer specialties,^{5,7,11,12} though not all,¹³ have demonstrated ERAS to be an effective intervention to address disparities in outcomes. However, it is unclear whether ERAS could reduce the complex and long-standing racial and ethnic disparities in cancer outcomes specifically.¹

EVALUATION OF ERAS IN PROMOTING EQUITY

To assess if the implementation of ERAS reduces racial and ethnic disparities in surgical outcomes for cancer patients, we conducted a systematic review. To be included, studies were required to compare ERAS to other standard of care among individuals receiving any type of cancer surgery in the United States and assess outcomes by race and ethnicity. Any clinical or institutional-level outcomes were of interest (eg, length of hospital stay, pain scores, opioid use, postoperative complications, hospital readmission, mortality, and hospital costs). After 2 comprehensive searches of peer-reviewed articles indexed in PubMed, Embase, Scopus, or ClinicalTrials.gov in January 2022 and May 2023 (Prospero protocol ID: CRD42022302851), only a single study met the inclusion criteria.¹⁴ That study examined ERAS implementation and outcomes among White and non-White gynecologic oncology patients enrolled in an ERAS pathway at one institution in 2017–2021; though fewer non-White women received preadmission ERAS education (language barriers a possible contributor) and oral bowel preparation, no differences by race were observed in other aspects of ERAS implementation (eg, preoperative nutritional assessment and carbohydrate loading) or intraoperative and postoperative outcomes (eg, blood loss, length of hospital stay, complications, reoperations, intensive care unit transfers, or readmissions).¹⁴

Discouragingly, among 48 other studies that met all inclusion criteria except for assessing the effectiveness of ERAS by race and ethnicity, a mere 15 studies (31%) reported the racial and ethnic distribution of included patients. Based on preliminary searches, we anticipated minimal published evidence of ERAS effectiveness by race and ethnicity within cancer, but we did not expect that only roughly 1 in 3 studies would meet the bare minimum standard of reporting the racial and ethnic distribution of patients. Such lack of reporting is an exemplar of Krieger 2-edged sword of data for racial health justice: nonuse of data preventing documentation of health inequities.¹⁵ Black, Indigenous, and Hispanic/Latino populations in the United States have a long history of worse cancer outcomes compared to their White counterparts,¹ including increased rates of complications and mortality after cancer surgery.² Without an

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intentional focus on diversifying study populations and assessing the effectiveness of policies, clinical practices, and interventions by race and ethnicity in relation to social determinants of health (SDOH), we risk perpetuating the health inequities generated by structural racism.¹⁵

EQUITY-FOCUSED ADAPTATIONS OF ERAS

To ensure equity in ERAS implementation and outcomes, protocols may require adaptation to address barriers to care and disparate cancer outcomes among diverse population subgroups. However, no such guidelines from the ERAS Society currently exist.¹⁰ To fill that gap, we propose equity-focused adaptations to the ERAS protocol, which may improve protocol adherence and outcomes for patient populations who have been historically disadvantaged, within cancer and more broadly among all surgical specialties (Fig. 1). These proposed adaptations were guided by the NIMHD Minority Health and Health Disparities Research Framework¹⁶ and the CMS Framework for Health Equity,¹⁷ and span from preadmission to postdischarge based on existing ERAS elements. Though challenges will exist around the implementation of these elements, they are a first step toward ensuring that the ERAS protocol actively works to mitigate, rather than widen, disparities in surgical care and outcomes. What remains key for optimal care delivery is a focus on high-quality reporting of adherence and promoting adherence across all protocol elements.

Preadmission

Preadmission intake should collect detailed data on race, ethnicity, and SDOH (eg, ability to pay medical expenses, health literacy, language barriers, and reliable transportation). This intake can be incorporated into the existing workflow and used in a risk-stratified model of care to assign patients to tiers based on clinical and social needs, which will more effectively guide the provision of resources to patients most in need, including assignment to a patient navigator who can help address patient-level barriers related to communication and health literacy.¹⁸ Standard ERAS patient optimization during preadmission (eg, smoking cessation and alcohol abstinence) should also include prehabilitation for nonemergent cases in order to address underlying comorbidities, such as diabetes, which are

more prevalent in racially and ethnically minoritized populations,¹ and if better managed, can improve surgical outcomes.¹⁹ Additionally, patient and caregiver education should include clear instructions for medication management, particularly targeted to patients with low health literacy, non-English speakers, or with multiple comorbidities.

Preoperative

During the preoperative phase, fasting guidelines should be tailored to meet the patient’s needs. For instance, patients with diabetes should receive clear instructions regarding safe fasting guidelines that are personalized based on their health status. To ensure equitable access and adherence to carbohydrate loading before surgery, patients with identified social needs should be provided with an appropriate beverage free of charge. If not already complete at this stage, the importance of advance directives (ie, living will and healthcare power of attorney) should be discussed with patients and their families in a manner that accounts for varying health literacy levels and language barriers.

Intraoperative

Intraoperative components of ERAS should prioritize real-time communication with the patient’s family (eg, with the use of electronic updates through a mobile app or text message at critical stages of the surgical procedure^{20,21}), with consideration of literacy and language needs. The surgical team should account for the patient’s baseline health status and comorbidities from the preadmission intake that may impact operative needs, and any deviations from quality protocols should be discussed and clearly articulated.

Postoperative

During the postoperative phase, discharge instructions should be reviewed carefully with the patient and caregiver, reiterating clear instructions for medication management, particularly for patients with comorbidities, low health literacy, or non-English speaking, as was done in the preadmission phase. Management and care requirements should be discussed with patients and caregivers (eg, caring for wounds or management of new appliances such as a colostomy bag), including resources on reordering medical supplies and ensuring proper fit, and ensuring accessibility to needed medical equipment and services, such as physical and occupational therapy.

Postdischarge

A priority during postdischarge is to ensure appropriate access to follow-up care. High-risk patients, previously identified from the preadmission intake, should be provided proactive case management after discharge; these include patients with multiple clinical or social needs (eg, food insecurity, housing, and transportation). Regular follow-up with high-risk patients should be incorporated into the workflow and will provide a more efficient strategy to intervene quickly to address postoperative issues that may arise. Additionally, objective pre/post pain assessments should be used to personalize opioid prescription, and patients and caregivers should receive clear instructions on their use and disposal.

CONCLUSIONS

In developing, implementing, and evaluating healthcare standards, clinicians and researchers should ensure that such care promotes health equity for groups who experience worse health outcomes.²² Broader implementation of an equity-focused ERAS protocol in cancer and noncancer surgery could ensure

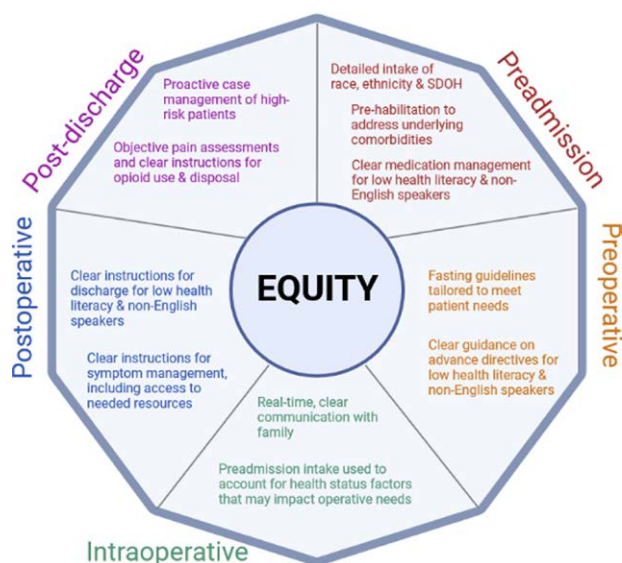


FIGURE 1. Proposed adaptations to the ERAS protocol to promote equity in surgical care and outcomes.

that patients of all races and ethnicities receive standardized yet personalized care to meet their clinical and social needs. Though healthcare access factors may result in inequities in which patients have access to ERAS-based surgery, our proposed equity-focused adaptations are a step toward mitigating barriers to protocol adherence (eg, health literacy, language, comorbidities, and postoperative follow-up) and target social risks that could perpetuate disparities in outcomes after surgery.^{11,23,24} Moving forward, it is key that: (1) clinics focus on reporting and promoting adherence to protocol elements, particularly among historically disadvantaged patients; and (2) studies evaluating the effect of ERAS (with or without equity-focused adaptations) report the race and ethnicity of patients, as well as SDOH measures, and when feasible, evaluate ERAS effectiveness by race, ethnicity, and SDOH; these data are needed to inform the relevance of the study's results to diverse populations and can be used to better promote equity in surgical care. Through these adaptations, we can move from ERAS to enhanced quality of life and more equitable outcomes after surgery.

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