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Research Article

**QUALITY MEASURES IN SURGICAL PALLIATIVE CARE  
ADAPTING EXISTING PALLIATIVE CARE MEASURES TO  
IMPROVE CARE FOR SERIOUSLY ILL SURGICAL PATIENTS**<sup>1</sup>Dr Maleeha Mujeeb Khan,<sup>2</sup>Dr Hafiz Sami Ullah,<sup>3</sup>Dr Umar Iqbal<sup>1</sup>WMO,Punjab Rangers Teaching Hospital,Lahore, <sup>2</sup>MO,DHQ Hospital,Kasur, <sup>3</sup>MO,DHQ Hospital,Kasur.**Article Received:** February 2019**Accepted:** March 2019**Published:** April 2019**Abstract:**

Surgeons are critical providers for the growing number of seriously ill patients, many who live with burdensome, life-limiting chronic conditions that impose severe functional limitations or carry a high risk of mortality. Over 500,000 older adults, many with frailty and cognitive impairment, undergo high-risk surgery annually and nearly 20% of Medicare decedents undergo an inpatient surgical procedure in the last month of life.<sup>1</sup> Older and seriously ill patients invariably suffer from higher rates of mortality and morbidity after elective and emergency surgery compared to their younger counterparts.<sup>2,3</sup> In addition, many older patients experience distressing physical and psychosocial symptoms, and functional impairments, and reduced quality of life (QOL) after surgery. As such, these patients are also at a high risk of dissatisfaction with care and receiving care discordant with their overall health goals.

**Keywords:** *End of life care, palliative care research, quality measurement, serious illness, surgical patients***Corresponding author:****Dr. Maleeha Mujeeb Khan,**

WMO,Punjab Rangers Teaching Hospital,Lahore.

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**INTRODUCTION:**

Palliative care (PC) is an interdisciplinary approach to care focused on improving QOL for patients and families at all stages of serious illness and improves the quality of care for seriously ill patients. Primary PC delivered by surgical teams is intended to be delivered alongside routine surgical care and includes physical and psychosocial symptom management and establishing treatment goals and preferences. Specialist PC delivered by PC teams includes complex symptom management, conflict resolution regarding goals of treatment, or exploring options for hospice. In this Perspective, the term PC is used broadly to address PC delivery to surgical patients regardless of who is delivering PC. Seriously ill patients have a significant burden of PC needs that can be exacerbated by an acute or elective surgical episode. PC interventions in surgical patients are associated with improvements in outcomes that better reflect the patient experience, such as better QOL, decreased symptom burden, and improved patient-reported quality of communication. These interventions decrease hospital and intensive care unit (ICU) length of stay without increased mortality. Despite these benefits, PC in surgery remains poorly defined. A major barrier to integrating PC into surgical care for seriously ill patients has been a lack of standardized quality measures to consistently measure PC delivery. Surgical quality improvement programs, such as the National Surgical Quality Improvement Program (NSQIP), have averted hundreds of thousands of deaths and complications in the last 2 decades by measuring surgical outcomes and benchmarking hospitals based on performance. The success of NSQIP sets a precedent for quality measurement in surgery, which can be leveraged to improve PC delivery to seriously ill surgical patients.

Recent efforts to test new geriatric-specific variables through the NSQIP Geriatric Surgery Pilot Project, such as preoperative cognitive status and functional

status on discharge, highlight a national interest in evaluating care delivery relevant to seriously ill surgical patients. Nonetheless, these new measures are not inclusive enough to neither encompass the needs of all seriously ill surgical patients nor specifically address PC needs across the entire surgical episode from the preoperative phase to post discharge. Furthermore, NSQIP does not presently assess outcomes such as symptom improvement or improved QOL that are important in PC. Therefore, a significant gap remains between the current standards of quality measurement in surgery and quality measures that patients value. PC quality measures exist in other specialties such as critical care medicine, cardiology, and oncology; however, efforts to integrate PC quality measures into surgery are lacking. We hypothesize that although few quality measures exist to measure PC delivery to surgical patients, existing PC measures in other settings could be adapted or applied to surgery. These findings can provide a framework for surgeons, professional organizations, and policymakers to adapt relevant measures to improve PC delivery to surgical patients. Therefore, we performed an environmental scan of existing quality measures to identify existing quality measures relevant to PC delivery in surgery.

**Exploring Surgical Palliative Care Measures within the Phases of Surgical Care**

Recently, the American College of Surgeons conceptualized the surgical episode over 5 phases of surgical care, including preoperative evaluation, immediate preoperative readiness, intraoperative, postoperative, and post discharge phases. We imagined that the measures identified in this environmental scan could be adapted and employed to measure PC delivery within 4 of the 5 phases as well as a separate phase for patients who die proximate to surgery. Examples of overlapping and potentially adaptable quality measures are summarized in Table 1.

**TABLE 1.** Existing Quality Measures Relevant for Palliative Care Delivery to Surgical Patients

Phase of Surgical Episode	Example Quality Measures That Overlap Between Surgery and Palliative Care (N = 18)	Examples of Palliative Care Quality Measures Potentially Applicable to Surgical Patients (N = 71)
Preoperative Evaluation and Preparation*	Percentage of elderly patients with preoperative discussions of goals and treatment preferences (ACOVE/QIESP)	Percentage of seriously ill patients who received a physical symptom assessment during an inpatient palliative care encounter (NQF/MWM) Percentage of patients with a documented surrogate decision-maker (ACOVE/ASSIST/CCB)
Immediate Preoperative Readiness*	None	Proportion of vulnerable elders with continuity of advance directive or care preference documentation between health care settings (ACOVE)
Intraoperative* Postoperative*	None Patient experience with postoperative communication or communication after cancer surgery (CAHPS) Percentage of elderly patients whose documented treatment preferences were followed postoperatively (QIESP)	None Percentage of ICU patients with documentation of an interdisciplinary meeting with patient/family (CCB) Percentage of seriously ill patients with documentation of life-sustaining treatment preferences (NQF/ACOVE/MWM)
Postdischarge*	Percentage of adult patients with improved ability to self-manage (measured by the Patient Activation Measures questionnaire) in the year after orthopedic surgery (NQF)	Percentage of cancer patients with screening for pain during a cancer-related outpatient visit (ASSIST)
End-of-Life	None	Proportion of older patients with documentation of end of life discussion if diagnosed with incurable cancer (ACOVE)  Proportion of patients who died from cancer not admitted to hospice (NQF)

ACOVE indicates Assessing Care of Vulnerable Elders; CAHPS, Consumer Assessment of Healthcare Providers and Systems; Cancer-Quality ASSIST, Addressing Symptoms, Side Effects, and Indicators of Supportive Treatment; CCB, Care and Communication Bundle; ICU, intensive care unit; MWM, Measuring What Matters; NQF, National Quality Forum; QIESP, Quality Indicators for Elderly Surgical Patients.

\*Identified from *Optimal Resources for Surgical Quality and Safety*. Chicago: American College of Surgeons, 2017.

In the preoperative evaluation phase, surgeons engage with patients to deliberate surgery. Overlapping quality measures include patient-reported experience with surgeon communication (CAHPS), percentage of vulnerable elders with documented preoperative discussions regarding clinical and functional risks (ACOVE), and documented discussions of advance directives (ACOVE/QIESP).

### DISCUSSIONS:

Existing PC measures potentially adaptable to this phase include the percentage of patients receiving physical symptom assessments (NQF/ACOVE) or have a documented surrogate decision-maker (ACOVE). This scan revealed no overlapping quality measures for the immediate preoperative readiness phase. However, existing measures such as ensuring continuity of advance directives from outpatient to inpatient settings (ACOVE) could be adapted for this phase. In the postoperative period, overlapping measures include patient experience with postoperative communication (CAHPS), following treatment preferences after surgery among older adults (QIESP), and postoperative pain assessment and management (QIESP). Potentially adaptable quality measures include the proportion of patients with documentation of life-sustaining treatment preferences (ACOVE/NQF/MWM/CCB), family meetings in patients with prolonged postoperative

ICU stay (CCB), and physical symptom assessments (ACOVE/MWM).

After discharge, seriously ill surgical patients continue to have PC needs. Current overlapping measures are limited to self-management ability in the year after orthopaedic surgery (NQF) and mortality rates after hip fracture admissions among older adults (NQF). However, potentially adaptable PC measures include symptom assessment and management (NQF/ACOVE) in the post discharge period. Surgeons also provide EOL care to surgical patients. No surgical measures presently exist for quality EOL care. However, potentially adaptable PC quality measures include those for terminal care, such as management of dyspnea and pain (ACOVE/MWM), ICU stays near EOL for expected deaths (NQF), and bereavement services for survivors (NQF/ACOVE).

PC delivery is critical to improve value for seriously ill surgical patients. This environmental scan highlights opportunities to translate existing quality measures in related specialties to develop PC measures for surgical patients. Importantly, measures unique to surgery, such as documenting preoperative life-sustaining treatment preferences or preoperative palliative symptom assessment for palliative operations, are not captured among current measures. Even where overlapping measures exist, they do not

necessarily address outcomes seriously ill patients' value. These findings challenge surgical leaders to use previously described approaches to adapt and create PC quality measures relevant to seriously ill surgical patients. These measures should be tested to establish baseline performance and set goals for improvement, and then ultimately integrated into quality improvement programs to improve the value of surgical care for complex seriously ill patients.

Quality measures from these sources were organized into the following categories: PC measures, surgical measures, measures that overlap between PC and surgery (PC measures about surgical patients or surgical measures concerning PC), and PC measures in other specialties that could potentially apply to surgical patients. Measures were defined as PC if they addressed one of the established PC domains structure and processes of care, physical and psychosocial symptom management, social, spiritual, and cultural aspects of care, care near end of life (EOL), and ethical and legal aspects of care. Measures were defined as surgical depending on the endorser's classification or if the measure specifically addressed surgery.

#### CONCLUSION:

Measures were identified as overlapping if the endorser classified the measure in both surgery and PC or if the measure addressed PC domains among surgical patients. Two authors (KCL, general surgery resident; SS, trained research coordinator) reviewed and categorized each measure and a third author (ZC, surgeon, board certified in hospice and palliative medicine) reviewed and resolved any disagreement. Among the measures reviewed, 643 surgical measures and PC measures were identified. Only quality measures overlap between PC and surgery. However, PC measures exist in other fields that can be adapted to measure quality PC in surgery. For example, the NQF-Endorsed Measure, percentage of vulnerable elders admitted to the ICU with documentation of care preferences within 48 hours, could also be applied to seriously ill patients undergoing surgery.

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