

Prioritizing Quality Improvement in Surgical Care

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Abstract

Surgical care is an essential component of the primary health-care system. Like all healthcare delivery processes, unsafe or poor quality in surgical care practices can result in adverse outcomes. The potential for adverse surgical outcomes exists not only at the point of the surgery itself but in the preoperative and postoperative processes. Preoperative, intraoperative, and postoperative processes are carried out by several members of the surgical care team and require clinical adherence to best practices as well as proper communication and handover throughout the care delivery process. Integrating quality improvement into surgical care provides a means by which surgical care delivery processes can be reviewed and improved, utilizing an interdisciplinary team with surgeon engagement. However, literature regarding the use of quality improvement in surgical care is limited. This article calls for prioritization of quality improvement in surgical care to increase the quality of all surgical care delivery processes and to reduce variation in adherence to best practices, with the goal of reducing adverse care outcomes related to surgical care.

Keywords: Health Systems; Quality Improvement; Surgical Care; Surgery

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therefore essential in reducing variation in the quality of surgical care from all points in the care delivery process. This paper suggests the need to integrate and prioritize quality improvement in surgical care, with importance placed on involving surgeons on an interdisciplinary surgical care team.

The Need for Quality in Surgical Care

Surgical procedures are critical to saving lives and require quality of care at each stage of the surgical care process including preoperative, postoperative, and intraoperative care delivery. This means that attention must be paid to quality surgical care must go beyond the surgical procedure itself and involve the processes that occur before and after the surgical procedure is conducted. Maintaining quality in all processes of surgical care delivery is particularly important because at least half of all surgical complications are avoidable [6,7]. Providing quality surgical care involves proper delivery of best practices in preoperative, intraoperative, and postoperative care in addition to quality intraoperative care.

Quality improvement methods have been utilized in various clinical processes in healthcare, the use of quality improvement in surgical care has been limited. Quality in surgical care is essential in reducing readmissions and mortality related to preventable adverse events. In addition to providing clinical knowledge and building the surgical capacity of practitioners, quality improvement must be integrated into surgical care process design to ensure that clinical knowledge is realized in care delivery by all members involved in the surgical care delivery process.

The importance of quality in surgical care is not unknown to anesthesiologists or surgeons. Surgical audits reveal whether quality care has

Introduction

Surgery is considered by WHO the “neglected component of primary care” [1]. An essential part of the health system, surgical care is responsible for delivering procedures that reduce mortality and disability worldwide by addressing surgically treatable conditions [1,2]. While access to surgical care in many low and middle income countries is limited, a greater issue exists in surgical care delivery in global health [3]. Unsafe surgical care in developed countries and low and middle income countries alike can be life threatening and result in adverse outcomes including death and disability [3-5]. The same statement can be made for developed countries quality surgical care goes beyond having the necessary inputs such as the infrastructure, workforce, and equipment needed to carry surgical services. Surgical care must include quality in the processes of care delivery to produce outputs that are free of avoidable adverse outcomes related to surgical procedures.

Even with the existence of evidence-based guidelines and available resources to deliver surgical care, wider variation exists in adherence to and clinical delivery of care consistent with best practices [4]. Variation in the quality of surgical care, including preoperative, intraoperative and postoperative care, undermines the quality of surgery in healthcare, particularly if this variation in care results in adverse outcomes. Emphasizing and prioritizing quality in surgical care is

been delivered and can be measured by rates of mortality resulting from surgery [8,9].

What mortality rates do not necessarily reflect is where quality was compromised in the surgical care delivery process. Although responsibilities may be held by nurses and other facility staff in pre and post operative care processes, care outcomes from surgery involve the team in its entirety.

Creating a Multidisciplinary Surgical Care Team

Although some complications in surgical care involve errors related to preoperative or postoperative care processes, other complications include intraoperative issues such as surgical site errors, infections and anesthesia related complications. Involving and engaging surgeons and anesthesiologists on a multidisciplinary improvement team with members responsible for preoperative, intraoperative, and post-operative care is essential in developing a comprehensive analysis of the surgical care delivery process for each patient.

Due to the high degree of specialization of surgical care, there tends to be limited communication of surgical care outcomes to surgeons [1,5]. Multidisciplinary debriefs in surgical care to review care delivery are not common communication regarding surgical care outcomes to surgeons is particularly limited to when adverse events occur outside of the intraoperative care of surgeons and anesthesiologists [10]. Due to the lack of communication between members of surgical care teams, surgeons and anesthesiologists tend not to be engaged or involved in quality improvement initiatives, despite their key role in ensuring quality in surgical care delivery [1,10]. The separation of surgeons and anesthesiologists from other medical processes⁶, results in a breakdown in communication and handover, which results in injury, mortality, and other adverse outcomes to surgical patients. In fact, problems in communication and handovers between the surgical care team have been found to result in most adverse outcomes related to surgical care delivery [9,11]. Promoting collaboration and engagement is therefore essential for overall quality care. Involving surgeons and anesthesiologists requires a change in organizational structure as it changes the way in which senior and specialized practitioners are actively involved in patient care and improvement.

Understanding both health system and individual care processes is essential in bolstering engagement, collaboration and empowerment to improve healthcare outcomes as related to surgery [12,13]. Although complications may not emerge during surgical procedures themselves, it is important that surgeons be aware of the overall care outcomes of their patients to promote an organizational culture of communication to improve the quality of care delivery. Similarly, members involved in aspects of preoperative and postoperative surgical care must effectively communicate with surgeons, anesthesiologists, and other members of the intraoperative care team to ensure proper handover and maintain quality care delivery and avoid adverse outcomes.

Why quality improvement?

Quality improvement analyses the processes of healthcare delivery. Processes are the means by which inputs are used to produce outputs and outcomes of care. By analyzing processes, quality improvement identifies areas in which processes of care need to be changed

to produce improved healthcare outcomes of care. Changes made to processes seek to ensure that evidence based medicine is delivered to patients while adhering to best practices, every time care is delivered.

In the case of surgical care delivery, quality improvement encourages communication and engagement of all members of the surgical care team, from preoperative to postoperative care, to decrease adverse outcomes of surgical care. As is evident by rates of mortality and adverse events in healthcare, surgical care included, knowledge of evidence based medicine and best practices does not ensure delivery of quality care. For instance, the use of a surgical safety checklist can be useful in reducing mortality and postoperative complications but only if the checklist is implemented properly by surgical care staff [14,15].

Quality improvement methods play a role in ensuring proper implementation of a surgical safety checklist by integrating the use of the checklist into the processes of surgical care delivery. Quality improvement takes the use of a surgical safety checklist in surgical care a step beyond the introduction of the checklist by and integrating its use into the care delivery process. Using a multidisciplinary team, quality improvement in the case of a surgical safety checklist involves analyzing and reorganizing processes of care delivery to ensure the surgical safety checklist is not only integrated but effectively used as part of the care delivery process.

Conclusion

As with all healthcare delivery, the key to maintaining quality in surgical care is to effectively deliver evidence based best practices to patients, every time it is needed. Practitioners at all levels of the surgical care delivery process must be knowledgeable of these evidence-based best practices and have the resources and capacity required for surgical care. However, even with these components, surgical care will not effectively reduce mortality and disability without attention to the processes of care delivery. Prioritizing quality improvement as an integral part of surgical care is needed to ensure that practitioners consistently utilize their knowledge, resources, and capacity to deliver care to patients that are consistent with best-practices.

As key members of the surgical care system, surgeons and anesthesiologists must be engaged and actively involved, alongside members of preoperative and postoperative surgical care. Together, practitioners can work to ensure that adverse outcomes are avoided and that quality is maintained at every step in the surgical care delivery process. By promoting continuous improvement in surgical care, quality improvement provides a means of promoting teamwork and making quality care a part of the care delivery process.

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