International Journal of Surgery 70 (2019) 60

Contents lists available at ScienceDirect

International Journal of Surgery

journal homepage: www.elsevier.com/locate/ijsu

Invited Commentary

Ensuring safe surgical care across resource settings via surgical outcomes data & quality improvement initiatives

Mortality related to the majority of preventable post-operative complications and lack of surgical care often occur in low-middle income countries (LMICs) compared to high-resource countries [1,2]. Furthermore, a recent study has demonstrated increased postoperative mortality even amongst low-risk patients in LMICs compared to high-resource countries [3]. Continuous efforts are being made in the global health community to initiate and expand health care access, collaboration among health care partners, and capacity building to improve outcomes. Given the differential burden of postoperative morbidity and mortality among low, middle and high resource countries, innovative modifications to the current surgical care systems are the utmost need, especially in LMICs to improve quality and outcomes of surgical care. Recently, a study by Eyob et al. [4], highlighted the need to ensure safe surgical care in LMICs and proposed some useful strategies to create a framework which could improve surgical outcomes which includes (1) cultivation and promotion of a culture of quality surgical care by delivering evidence-guided safe, time-efficient, cost and outcome effective surgical interventions (2) implementation of proven and cost-effective quality improvement interventions tailored to specific settings such as the surgical safety checklist, surgical infection prevention program, goal-oriented training to improve competency in surgical procedures, adherence to time out protocols, and surveillance on several metabolic derangements to improve postoperative morbidity and mortality (3) application of innovative methods of data collection, web-based database management system for tracking progress, and partnering to shared resource settings and information exchange to monitor the effectiveness of quality improvement interventions, and (4) adaptation of technology and mobile health programs for education, screening early signs and symptoms of post-surgical complications, real time data collection, inform decision aids, patient navigation, engagement, follow up rates, and improving overall adherence in the study. The possible mechanism of resource building, collaboration, and understanding the cost-effectiveness of safe surgical care to implement quality improvement programs in low resource settings have been discussed in the proposal. This study also discussed potential barriers such as research fatigue, cultural differences in organizations, and difficulties in collecting reliable scientific data in implementing, adhering, and evaluating quality care system initiatives. They have proposed multiple solutions such as simplifying processes, developing and promoting a culture of patient safety and shared responsibilities, designing and implementing tailored interventions based on previously identified targets in similar populations and settings, utilizing low-cost non-traditional methods of data collection, use of friendly secure web-databases, integrating mobile health in education, data collection, navigation, and follow-up, and use of free social media platforms to promote collaboration and participation in studies to minimize the potential barriers in implementing quality surgical care initiatives. Eyob et al. [4] also provided a case example using the Caribbean healthcare system as a feasible model for improving surgical care and assessing quality improvement initiatives for the global surgery community in low resource settings. In conclusion, implementing proven effective and safe low-cost quality improvement programs and monitoring of outcomes through creative strategies can be useful for improving postoperative morbidity and mortality in resource constrained systems.

Provenance and peer review (for invited commentary papers)

Invited commentary, internally reviewed.

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DOI of original article: https://doi.org/10.1016/j.ijsu.2019.07.036

https://doi.org/10.1016/j.ijsu.2019.08.025

Received 19 August 2019; Accepted 21 August 2019

Available online 22 August 2019

1743-9191/