ABSTRACT

Importance
Surgical care improvement efforts based on checklists have been inconsistent and not reproducible at scale. It remains unclear how checklists can be ideally used, along with the time horizon for achieving meaningful and measurable benefits.

Objective(s)
To develop a sustainable surgery debriefing checklist with systematized review and iterative analysis to improve care quality, workforce engagement, and patient safety while lowering costs.

Design
Surgical teams reported defects in care associated with clinical quality and safety, negative team behaviors and relationships, faulty processes, delays, ineffective flow, and supply chain issues. The previous day’s cases and long-term trends were categorized by severity and were reviewed daily. Supply chain, finance, and clinical managers analyzed events, identified causes, and engaged teams to action. Results were continuously shared with senior executives and the health system board.

Setting
A large surgical program at a tertiary community-based hospital, McLeod Regional Medical Center, Florence, South Carolina.

Participants
Surgical staff, physicians, managers, executive leadership, governing board.

Exposure(s)
Surgical checklist debriefings of 54,033 consecutive surgical cases and analysis of 4,523 events.

Main Outcome(s) and Measure(s)
Three healthcare value categories compared to an industry benchmark, or 50% improvements: quality/safety, productivity/labor hours per case, and workforce engagement. Primary quality/safety metric was the 30-day post-surgical mortality. Labor hours/case compared to 50th percentile for similar facilities. Performance metrics included the proportion of surgical cases with events, critical events, event severity per service, and events per physician. An adaptation of the Safety Attitude Questionnaire was used to measured safety climate and workforce engagement.

Results
Adjusted 30-day surgical mortality dropped approximately 40% (p<0.001). Debrief-driven improvements significantly reduced the percentage of defective cases from 15-20% to 2-2.5% (p=0.0009). Labor hours per case fell to 10.8 from 19 (industry average =13.5). As a result of fewer defects in care, surgical flow improved significantly, care cost was lowered, case volume grew, and patient access to surgery increased by 13.3%.

Conclusions/Relevance
This multi-level, multi-pronged approach significantly improved healthcare value at our facility, and represents a novel process for utilizing debriefing checklists to improve value in surgical care. Our experience shows that meaningful, sustained improvements require consistent broad-based teamwork over multiple years.