Table 1. Selected studies* by type of perioperative care transition.

Reference	Findings	Metrics/Methodology
Intraoperative shift-to-shift handoffs: clinicians with similar clinical roles offer permanent relief		
Studies evaluating long-term patient outcomes		
Saager et al.[7] (2014)	Intraoperative handoffs associated with increase in morbidity/mortality in dose-dependent fashion	Single-center retrospective database analysis. Composite outcome of major morbidity and mortality
Hudson et al.[9] (2015)	Intraoperative handoffs associated with increase in morbidity/mortality in dose-dependent fashion	Single-center retrospective database analysis. Mortality alone and composite outcome of major morbidity and mortality
Hyder et al.[8] (2016)	Intraoperative handoffs associated with increase in morbidity/mortality in dose-dependent fashion	Single-center retrospective analysis of colorectal surgery patients. Composite outcome of major morbidity and mortality
Terekhov et al.[10] (2016)	No association between intraoperative end-of-shift handoffs and morbidity/mortality. Short breaks associated with improved outcomes	Single-center retrospective database analysis. Composite outcome of major morbidity and mortality
Pre-post Interventional Studies		
Boat & Spaeth[12] (2013)	Improvement in intraoperative attending-to-attending handoff reliability from 20% to 100% with use of checklist.	Interprofessional development and implementation of checklists using quality improvement methodology
Agarwala et al.[11] (2015)	Improvement in critical information transfer and retention, discussion of concerns, and perception of overall quality of handoff communication	Development and implementation of AIMS-based electronic handoff checklist
Jullia et al.[13] (2017)	43% improvement in quality of observed handoffs	Development, training, and display of laminated checklist for intraoperative handoff
Intraoperative duty relief/break: clinicians with similar clinical roles offer short-term relief (< 1 hour) with the expectation that the first clinician will return		
Cooper[5] (1989)	Short breaks associated with identification of potential areas of concern or near-misses	Analysis of >1000 critical incidents during anesthesia care
Terekhov et al.[10] (2016)	Short breaks associated with small (6.7%) improvement in patient outcomes	Single-center retrospective database analysis. Composite outcome of major morbidity and mortality
Postoperative transition of care from operating room to post-anesthesia care unit		
Boat & Spaeth[12] (2013)	Improvement in PACU handoff reliability from 59% to greater than 90%	Interprofessional development and implementation of checklists using quality improvement methodology
Weinger et al.[14] (2015)	Improvement in acceptable handoffs from 3% to 87% at three years post-initiation of improvement program	Large-scale, multimodal intervention including standardized electronic handoff form, didactic and simulation-based training, performance feedback.
Postoperative transition of care from operating room to intensive care unit		
Catchpole et al.[16] (2007)	42% reduction in technical errors, 49% reduction in information omissions	Pre-handoff information transfer, explicit separation of equipment and information transfer, use of cognitive aid
Joy et al.[15] (2011)	75% reduction in technical errors, 62% reduction in critical information omissions	Standardized template for oral handoff presentation, implementation including iterative testing of tool, education and training
Craig et al.[17] (2012)	Significant improvement in pre-patient readiness, pre-handoff readiness, information transfer, and staff perception	Implementation of structured handoff process with preadmission reports and OR information