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Learning from Excellence; qualitative analysis of team performance in pediatric cardiothoracic surgery

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Safety II is an emerging framework for understanding and targeting safety in the current complex sociotechnical era of medicine. The Safety II paradigm is that learning from what went well ("Learning from Excellence") is as important as learning from what goes badly ("Learning Opportunities"). A qualitative surgeon-led debrief was implemented in order to enact "Learning from Excellence" in the OR. Despite significant health care resource investment in improving patient safety, there continues to be a high rate of complications (40%) in patients undergoing pediatric cardiothoracic surgery. Moving upstream of complications will require analysis and enhancement of intraoperative team performance. Qualitative methods (inductive thematic analysis) were employed using a "Learning from Excellence" lens. Surgeon-led debriefs were conducted at the conclusion of consecutive surgical procedures (Jun 1 2021-May 31 2022). The surgeon (ANI/CHF) scored the overall outcome of the procedure on a Gaussian distribution as a qualitative assessment of how the procedure went and the final outcome. Each team member (anesthesiologist, PA assistants, scrub technicians, RN circulators, perfusionists) was queried for input in the following two categories: "Learning from Excellence" or "Learning Opportunities". Free text handwritten notes were transcribed (VH) into an Excel database and inductive thematic analysis was undertaken by two independent reviewers and then merged (VH/CHF). Rapid cycle PDSA were applied where possible. Comments were obtained from 167/208 procedures (80%). The overall outcome was ranked as better than median in 91/167 (54%) of cases. There were a total of 449 comments identifying "Learning from Excellence" and 297 comments identifying "Learning Opportunities". Comments clustered into 5 thematic areas; Preoperative plan /performance, OR process, OR equipment, Operation performance and Surgical result. The majority (65%) of the "Learning from Excellence" comments were related to two categories, Operation performance and Surgical Result. The majority (75%) of "Learning Opportunities" comments arose from the other three categories (Preop, OR process, OR equipment). The distribution of "Learning from Excellence" themes changed very little between the early series (first 3m) and late series (last 3m). Learning Opportunities showed enhancements in OR equipment (early series 24% vs late series 4%) reflecting the impact of rapid cycle PDSA implementation. Qualitative evaluation of intraoperative events is possible. The highest rated themes in the "Learning from Excellence" category were the lowest in the "Learning Opportunities" category and vice versa. Linking qualitative outcomes to quantitative mortality and complication data may provide new insights into how to move upstream and prevent suboptimal outcomes.