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Quantitative Evaluation of Handoff Checklists

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Background: Handoff checklists have become a paradigm for implementing quality improvement (QI) in novel handoff models. Despite the checklist's wide acceptance as a QI technique, few tools exist to reliably determine the extent of true utilization or effectiveness of the checklist in achieving the desired goal of the handoff.

Purpose: Our objective is to create a quantitative tool to measure the effectiveness of a novel handoff checklist and correct any underutilization. Rather than rely on informal, impromptu means to adjust the handoff checklist, an iterative method that incorporates resident behavior patterns into the adjustment process provides more accurate evaluations and better elucidates opportunities for improvement.

Description: A model that quantifies the checklist items will provide data that can identify trends in effective utilization over time through regression analysis. A QI team with domain expertise in the specific perioperative context will quantify the handoff checklist as a function of determinable parameters such as compliance, actionability, time to completion, or importance. Each QI team member assigns a scale-weighted value to each checklist item. Overall scores are then averaged and arranged by parameter to create an iteration matrix. Finally, in piloting the handoff, residents will complete only the part of the handoff deemed useful in enhancing the handoff.

Results: The aggregate data compiled from the checklists will create a time series regression that evaluates trends in usage by recording and scoring items completed. Trend analyses will gauge resident behavior by determining which aspects of the handoff checklist are utilized more often. The QI team then recognizes which checklist items need to be adjusted to improve the effective utilization.

Conclusion: Iterative quantitative methods allow for a more effective evaluation of the handoff checklist. Our model measures the checklist's utility as a function of key scaled parameters, as valued by a given department, through time series regression analysis.