

Serial Preoperative Process Flow Utilizing Multidisciplinary Bedside Handoffs Improves Preoperative Task Completion

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Description

Incident reports suggested that patients were reaching the operating room (OR) without completion of necessary preparatory tasks. Incidents included “Near Misses” with potential for harm. Parallel processing and inadequate communication among preoperative nurses, anesthesia providers, and OR nurses were determined to be root causes of many of these failures.

Aim

Significantly increase the number of days-between preoperative task-completion (PTC) failures.

Actions Taken

1. Root causes were identified.
2. Preoperative process flow was mapped and compared to ideal systems.
3. Bedside handoffs and task-completion checklists were tested, adapted, and adopted.
4. Standard operating procedure was written.
5. Staff training was performed.
6. Process was implemented.
7. Qualitative data were collected about process issues.
8. Ongoing feedback to system participants

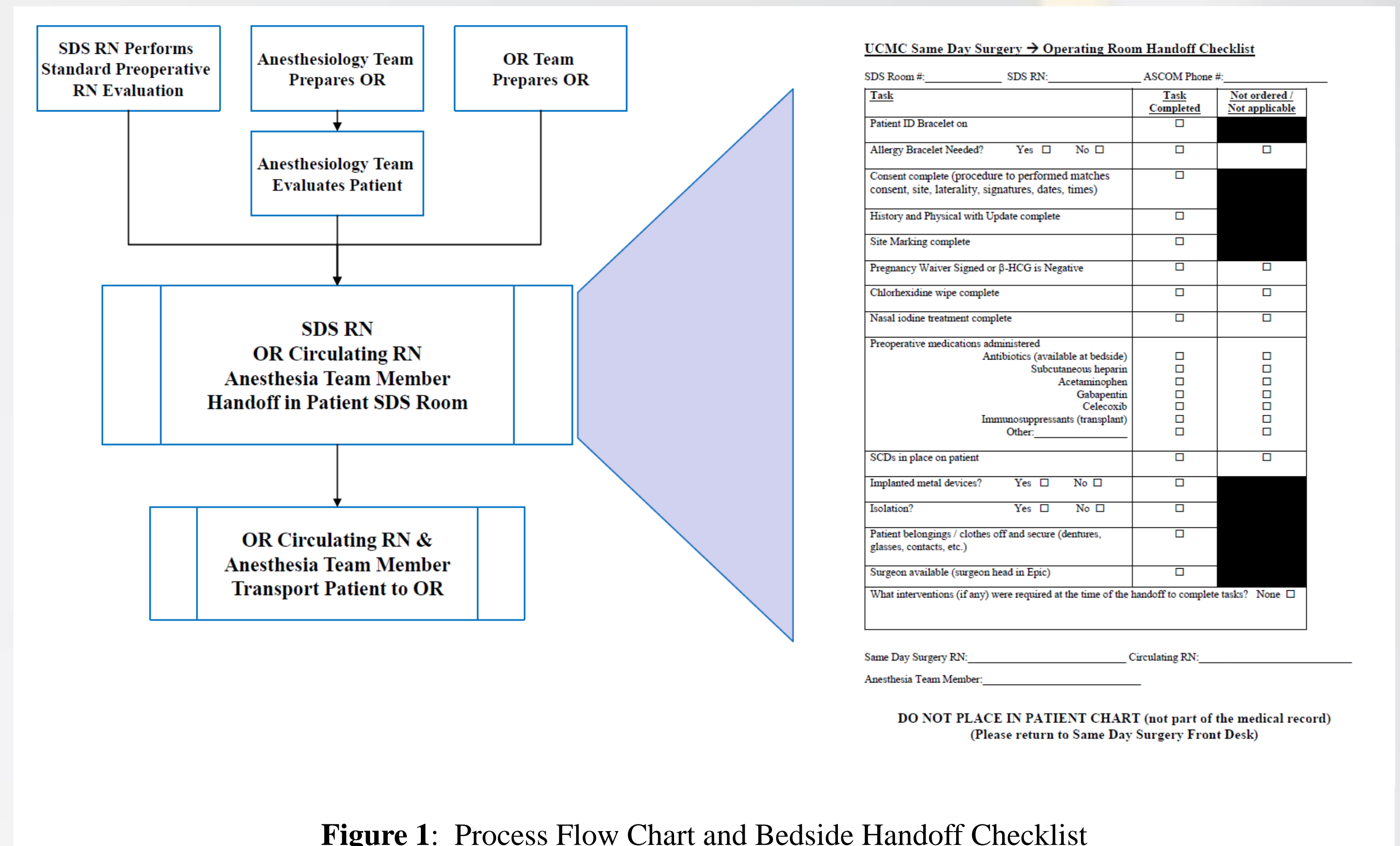


Figure 1: Process Flow Chart and Bedside Handoff Checklist

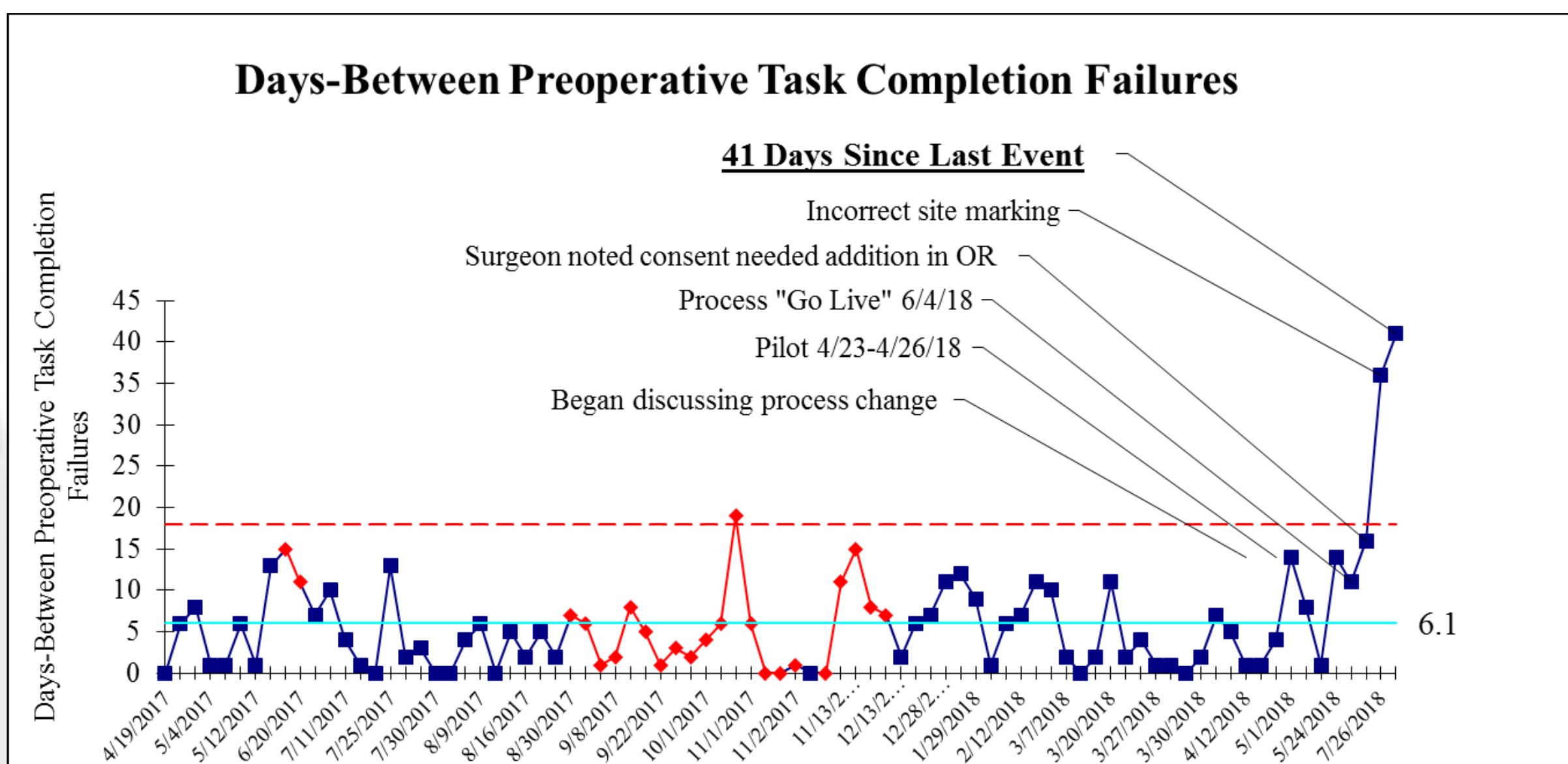


Figure 2: Days-Between Preoperative Task Completion Failures

Individuals (XMR) chart depicting the days between preoperative task-completion failures that resulted in incident reports. The chart is annotated for important time points in the study. Special cause is illustrated by points / connectors in red and by points above the upper control limit. Dashed red line = upper control limit; Light blue line = Centerline depicting the mean for each value.

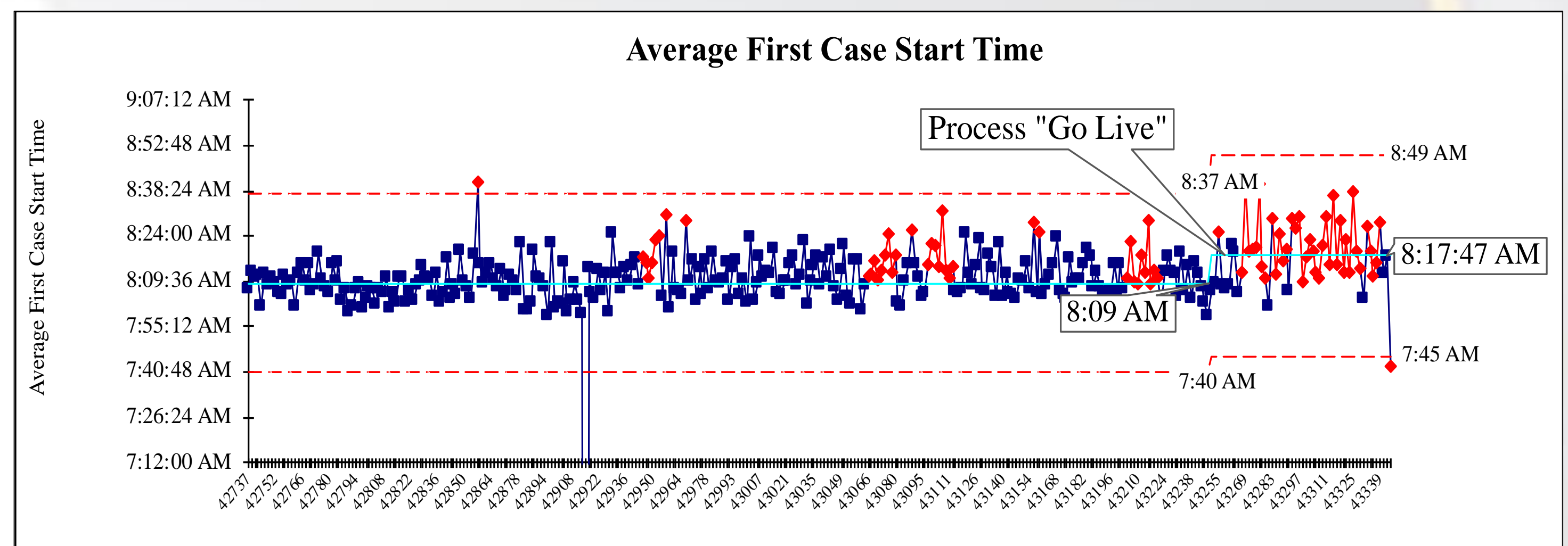


Figure 3: First-case start times

Individuals (XMR) chart depicting the average start time for first cases in the operating room. The chart is annotated for important time points in the study. Special cause is illustrated by points / connectors in red and by points above the upper control limit. The shift upward of the centerline after special cause was met in the upper chart illustrates the average start time becoming significantly later after “Go-Live” of the new handoff process. The widening control limits illustrate increased variation in the start times after introducing the new process. Dashed red line = upper control limits (UCL) and lower control limits (LCL); Light blue line = centerline depicting the mean for each value.

Results

Days-between PTC failures reaching the OR increased from every 6 days to >40 days (Figure 2.) The average procedure start time was delayed by 8 minutes (Figure 3.) A majority of PTC failures that were stopped from reaching the OR were surgeon-specific (Figure 4.) Unavailability of nurses was a reported barrier to process success. (Figure 5.)

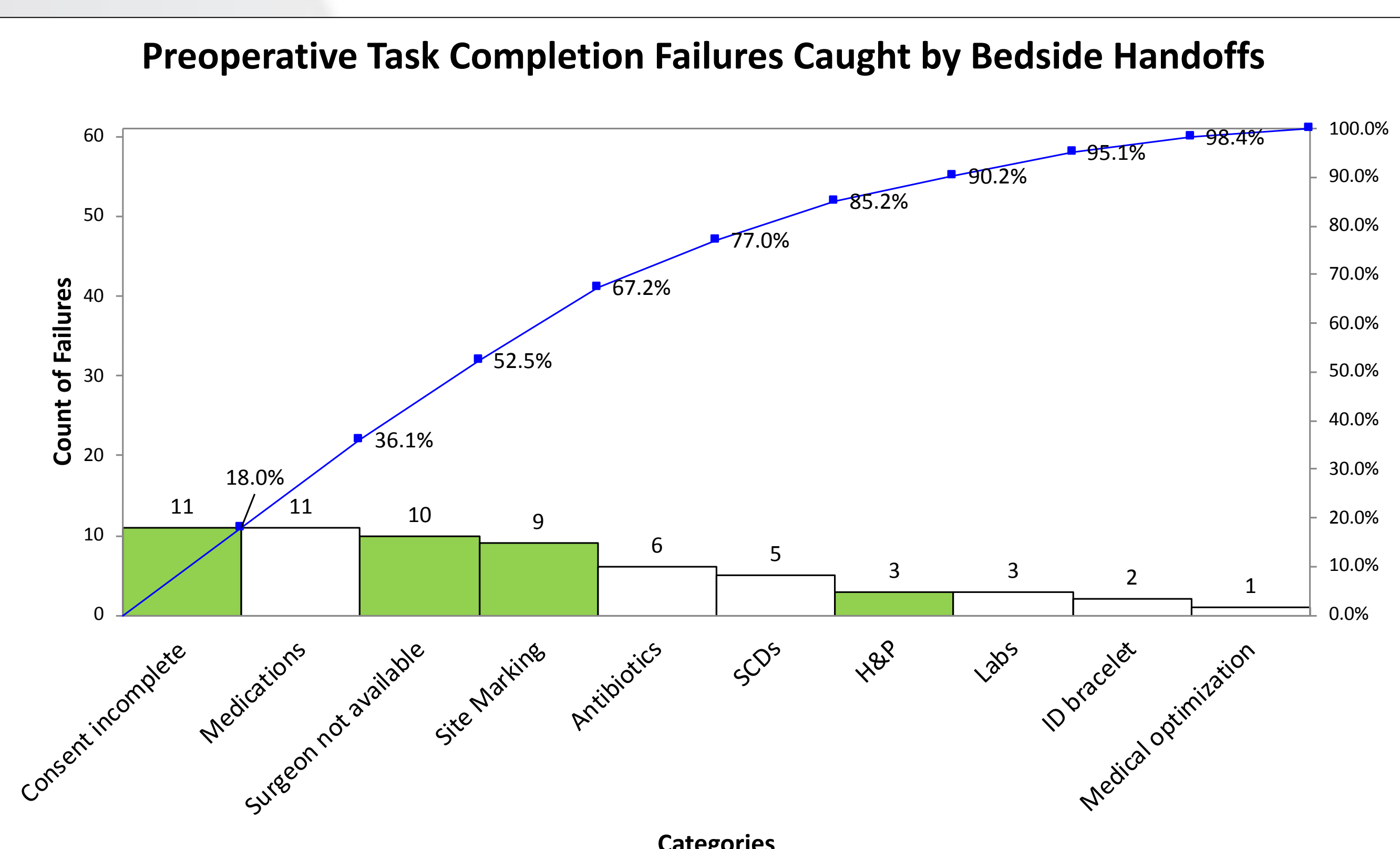


Figure 4: Pareto Charts of Issues Identified by Qualitative Bedside Handoff Data

Tasks requiring completion that were caught by bedside handoffs prior to transferring patient to the operating room. Green bars represent categories requiring surgeon presence to complete.

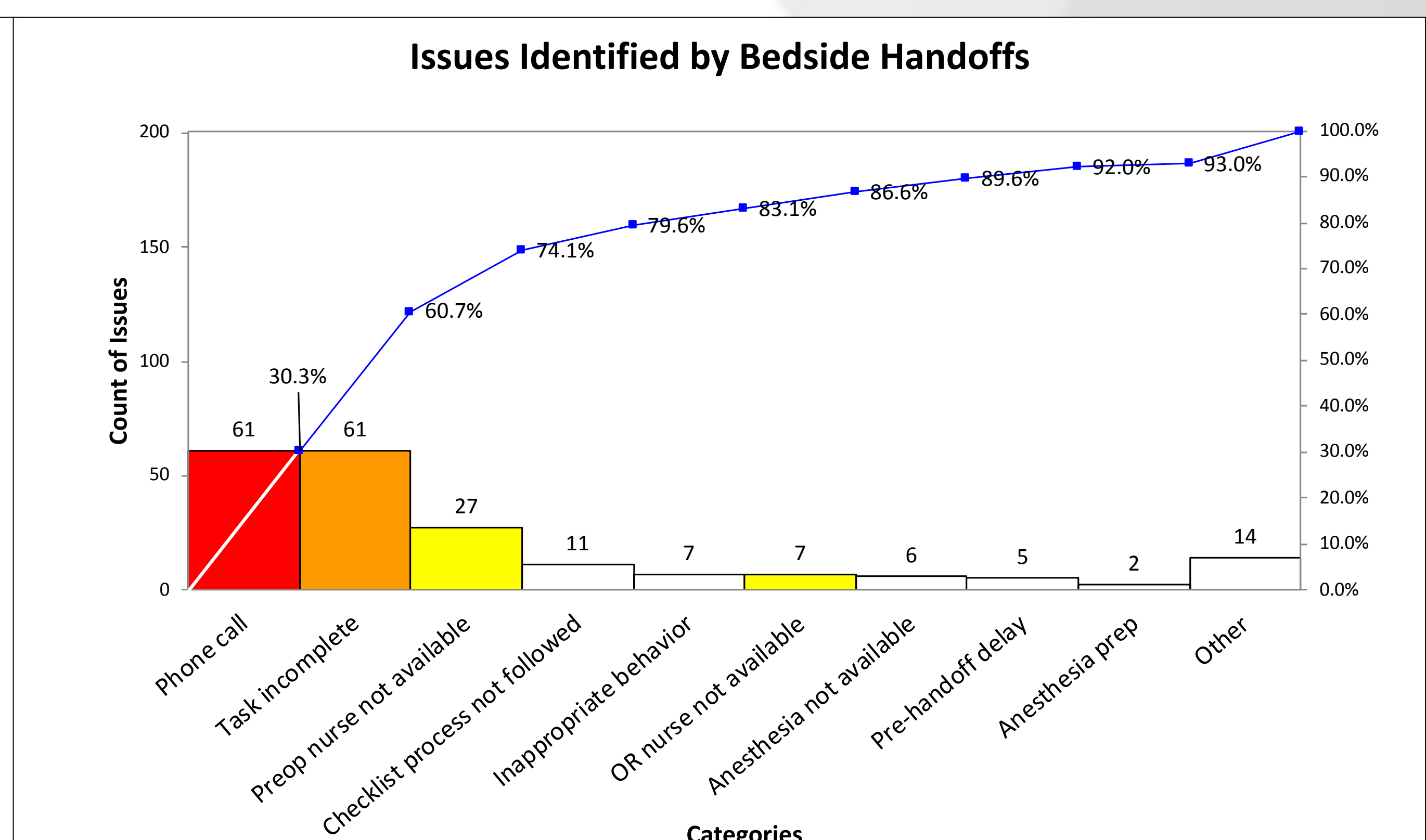


Figure 5: Pareto Charts of Issues Identified by Qualitative Bedside Handoff Data

Issues that interfered with or needed completion at the time of bedside handoffs. Red bar and orange bars identify the issues with the highest count. Yellow bars represent categories related to nurse availability.