Improvements in Efficiency and Resident Satisfaction Following the Implementation of a Central Supply Closet

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Introduction: In the 1970's, the idea of burnout began and was defined as emotional exhaustion, depersonalization, and low sense of personal accomplishment (1). Recently, there has been a push by graduate medical education to counter resident burnout, as demonstrated by resident wellness initiatives becoming a requirement for residency programs in the United States (2). At our institution, a source of burnout was the time it took to gather supplies for critical bedside procedures, which was addressed by instituting a central supply closet.

Methods: A checklist was made of the supplies needed for four common bedside procedures: central venous access, arterial line placement, thoracostomy tube placement, and incision and drainage. 9 surgery residents were individually timed to locate the equipment required for each individual procedure with the supply closet and without. A survey was used to evaluate resident satisfaction in the number of locations to search, timeliness, and ability to provide quality patient care before and after the supply closet. This survey was done on a scale of 1 to 5, with 1 being very dissatisfied, and 5 being very satisfied. Paired t-tests were used for data analysis; $p<0.05$ was considered statistically significant.

Results: For central line supplies, the average times were 542 seconds (s) without the closet, and 211s with the closet ($p=0.0041$), arterial line supplies took 570s without and 178s with ($p=0.0114$), thoracostomy tube supplies took 590s without, and 213s with ($p=0.0017$), and incision and drainage supplies took 518s without, and 239s with the closet ($p=0.0066$). Average resident satisfaction for the number of locations to search for supplies went from 1.5 to 4.8 with the closet, length of time to gather supplies went from 1.3 to 4.9 with the closet, and ability to provide quality patient care went from 1.4 to 4.8 (all $p<0.0001$).

Conclusions: The implementation of a supply closet with easy access to supplies allowed for improved speed in completing bedside procedures, leading to expedited patient care, improved resident satisfaction and well-being, and decreasing a source of surgery resident burnout.