

STRONG CHILDREN'S RESEARCH CENTER

Summer 2024 Research Scholar

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ABSTRACT

Title: *Efficacy of the Department of Surgery Resident Quality and Safety Curriculum*

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Background: Quality improvement (QI) in healthcare consists of ongoing efforts to obtain measurable improvements in healthcare delivery and outcomes. In August 2018, the University of Rochester Medical Center Department of Surgery implemented a two-year quality and safety curriculum for its surgical residents. Year 1 of the curriculum aimed to provide residents with a working understanding of QI methodology.

Objective: We sought to evaluate the efficacy of the Quality and Safety curriculum in teaching QI methodology to the surgical residents by analyzing resident scholarly output. We hypothesized that since the implementation of the curriculum, the number of meaningful QI projects, as measured by peer-reviewed manuscripts related to QI authored by surgical residents, has increased.

Methods: We performed a retrospective study of peer-reviewed manuscripts with at least one surgical resident author in the Department of Surgery from July 2013 to June 2023. Manuscripts were sorted by the academic year of publication and characterized based on their content to determine whether they described the implementation or proposal of a QI project (QI), outcome or system measurements to direct future areas of improvement (quality measurement or QM), outcome or system measurements that do not aim to direct future improvement (quality review or QR), or unrelated research. The number of unique resident authors with and without Year 1 education on QI manuscripts since the inception of the curriculum were compared using a chi-square test.

Results: 411 manuscripts were reviewed, with the number of QI, QM, and QR manuscripts displayed in Table 1. Beginning in 2020, the number of QI manuscripts increased, whereas the number of QM and QR manuscripts remained relatively constant throughout the study period. Residents with Year 1 education contributed more to QI manuscripts than residents without Year 1 since the inception of the curriculum; 78% of Department of Surgery resident authorship on QI manuscripts was from residents with Year 1 education. These contributions were statistically significant compared to the expected contributions of surgical residents with Year 1 education based on annual participation in the curriculum (p-value: 0.015).

Conclusion: The implementation of the Quality and Safety surgical resident curriculum has given surgical residents the knowledge and tools to participate in meaningful QI projects. These data support the efficacy of formal quality improvement education for residents. Future efforts will assess knowledge acquisition.

Table 1. Department of Surgery resident authored publications related to quality improvement (QI), quality measurement (QM), and quality review (QR) from July 2013 to June 2023. The number of manuscripts published in each category during an academic year is shown, with the start of the curriculum in 2018 denoted by the double line. Academic years begin July 1 and finish June 30 of the following year (e.g., AY22: July 1, 2022, to June 30, 2023).

	AY13	AY14	AY15	AY16	AY17	AY18	AY19	AY20	AY21	AY22
QI	0	1	0	0	0	0	1	4	3	5
QM	4	8	12	5	6	8	8	6	12	17
QR	5	6	6	1	5	4	9	5	2	6