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Best of the Best Oral Abstracts

1 Association of Videolaryngoscopy Utilization and Junior Trainee Intubation Attempts: A National Emergency Airway Registry Study

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Learning Objective: We seek to determine whether there is any association between the frequency with which videolaryngoscopy (VL) is utilized at particular institutions and the proportion of first intubation attempts given to junior trainees.

Methods: We performed a secondary analysis of prospectively collected observational data in the National Emergency Airway Registry from January 1, 2016 to December 31, 2018. The primary outcome measure was the percentage of first and second attempt intubations performed by intubators at the PGY1 training level, stratifying institutions by quintile according to the proportion of VL intubations they performed. We performed logistic regressions to see if increased hospital-level VL use is associated with a higher likelihood of first or second attempt intubation being performed by PGY1. We calculated and graphed the estimated proportions of PGY1 intubations and corresponding 95% CI for each quintile using marginal estimation methods. We reported general descriptive statistics as well odds ratios with cluster-adjusted 95% confidence intervals.

Results: 19,071 completed intubations were recorded at 25 institutions, 156 (0.8%) did not record a device, of which 18,897 were first attempt intubations, 2,315 were second attempt and the remaining 645 were third or attempt or higher. We found the proportion of first attempt PGY-1 intubations was 6.89% in the first quintile, 13.44% in the second, 13.39% in the third, 18.32% in the fourth and 8.67% in the fifth. We fit logistic regressions to estimate associations between institutional ranking of percent first attempt VL and percentage of PGY1 first and second attempt intubations at that institution. We found that relative to first quintile, institutions ranked in the fourth quintile of VL intubations are significantly more likely to have first attempt and second intubation performed by a PGY1 level intubator with ORs of 3.03, (95% CI 1.62 - 5.65) and OR 1.94, (95% CI 1.09 - 3.44).

Conclusion: This analysis shows an association between higher institution-specific utilization of VL and a higher rate of either PGY-1 first attempts or PGY-1 second attempt intubations.

2 Emergency Medicine Career Outcomes and Scholarly Pursuits: The Impact of Transitioning From a Three-year to a Four-year Niche-based Residency Curriculum

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Background: Emergency Medicine residency programs exist in both three- and four-year training formats, the majority of which are three-year programs. It is unclear what impact training program length may have on residents' scholarly activity and longer-term career goals. In 2008, our residency transitioned from a three-year to a four-year training format.

Objectives: We hypothesized that a three-year to four-year curriculum format change would lead residents to be more scholarly productive and more frequently attain academic jobs and leadership positions in their first post-residency positions. To determine the effect changing our EM residency program from a three- to four-year format had on residents' likelihood of being scholarly productive and attaining an academic job and leadership role in their first post-residency position

Methods: This was a retrospective analysis of residents (N=95) who graduated from a single residency program that underwent a curriculum change from a three-year to a four-year training format. Three cohorts prior to (N=36) and five cohorts after (N=59) this transition were included. The primary outcome of interest was the setting (academic or not) of graduates' first post-residency position. Secondary outcomes included completion of scholarly activity during training and attaining a leadership role in the first post-residency position.

Results: Of the four-year program graduates, 44% obtained an academic position vs 28% of three-year program graduates. After controlling for confounders (gender, test scores, additional advanced degree(s)), this difference was not statistically discernible (OR 2.14 [95% CI, 0.72-6.32]). Residents in the four-year format had a higher likelihood of producing scholarly work by graduation (OR 8.51 [95% CI, 2.28-31.78]) and of obtaining a leadership position immediately after graduation (OR 12.65 [95% CI, 2.02-79.36]).

Conclusions: Compared to three-year residency graduates, graduates of our four-year curriculum were more likely to produce scholarly work and to secure a leadership position immediately after graduation.