a 5-point scale (1=“observed case” and 5=“can take junior resident through case”). We extracted all complete OEAs (those containing self-assessments and attending evaluations) from three institutions. We used linear regression adjusting for post-graduate year (PGY) to compare male and female attendings’ assessments of male and female residents.

RESULTS: We included 8,149 OEAs completed by 64 unique residents (25% female) and 51 unique attendings (29% female). Adjusted analysis showed that male attendings rated female residents significantly lower than male residents (p<0.001, 95%CI= -0.311 to -0.197). Scores by female attendings demonstrated no significant difference between male and female residents (p=0.067, 95%CI= -0.198 to 0.007).

CONCLUSION: Our dataset including 4.5 years of data from three training programs showed that female plastic surgery residents are scored lower than their male counterparts by male attendings. As plastic surgery begins its pilot of competency-based training, further studies are needed to determine reasons for these differences to ensure appropriate advancement of all trainees.

The Creation of a Comprehensive Measure of Academic Achievement: Part I

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BACKGROUND: While the advent of the h-index has allowed for a quantitative measure of one’s publications and citations, there is no comprehensive measure of academic productivity that takes into account the other notable achievements of an academic physician. Such variables include academic rank, journal editorship, society involvement, among others. Thus, as the first step in creating a novel and comprehensive measure of academic achievement, we sought to investigate the perceived importance of different accomplishments of an academic physician by surveying physicians nationwide and at our own institution.

METHODS: The link to an online cross-sectional survey (http://mssurgerydept.com/academicsurvey/) was distributed to plastic surgeons of different academic levels nationwide and faculty members at our institution from 2016 through 2018. After select demographic questions, respondents were presented with random, unique, binary comparisons of 42 different achievements of an academic physician, and were asked to choose the more important achievement. Respondents were able to complete as many comparisons as they desired until reaching the maximum 1,722. Descriptive statistics of demographics and win rates of each achievement (number of times a variable won / number of times the variable appeared) were reported.

RESULTS: Respondents consisted of 127 unique users comprised of 10 department chairs, 97 senior attendings, and 20 junior attendings. 48% of respondents were plastic surgeons, 57% were fellowship trained, and 75% practiced exclusively in an academic setting. Respondents completed an average of 116 (SD=97.6) comparisons each, generating a total of 14,736 ranked comparisons. Win rates for the 42 variables ranged from 0.9 to 0.1, with the highest win rates attained by dean of a medical school (0.90) and editor of a medical journal (0.88), and the lowest win rates attained by industry spokesperson (0.1) and member of a local medical society (0.1).

CONCLUSION: The survey responses of 127 physicians were used to order 42 different academic achievements by perceived importance using a unique survey methodology that did not require respondents to rank all 42 items. This ranked comparison data will be used to create a novel and comprehensive measure of academic achievement with a variety of potential applications.

Evaluating the Variability of Surgical Education in US Plastic Surgery Training Programs: Is the Current Model Sufficient or Redundant?

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BACKGROUND: The Accreditation Council for Graduate Medical Education (ACGME) provides minimum case requirements to ensure that graduates acquire the skills to safely care for patients. We analyzed trends and variability in plastic surgery case volumes as programs transitioned from an independent/combined model (ICM) to an integrated model (IM). We used this information to comment on the utility of current ACGME minimum case requirements and the feasibility of transitioning to a competency based training model.
METHODS: The ACGME Plastic Surgery Operative Log database was used to obtain data on graduating resident case volumes between 2008–2018. Data on total reconstructive and subcategory cases were analyzed. Trends in average case volumes and standard deviations were compared between ICM (2008–2011) and with the introduction of the IM (2011–2018). Variability was defined as the fold difference between the maximum and minimum number of cases per year.

RESULTS: Average case volumes have remained largely consistent over the study period between ICM (1341.6 cases/year) and IM (1508.1 cases/year). The variability between graduating residents has remained large with an average of 2.9 fold difference between programs with the highest and lowest case volumes. This variability has decreased over time (ICM=3.4 fold vs IM=2.8 fold). Trends for subcategory case logs reflect this great variability: microsurgery (23.9 for ICM vs 15.2 for IM), cleft lip (44.0 for ICM vs 8.24 for IM), cleft palate (19.3 for ICM vs 11.6 for IM), hand and upper extremity (7.3 for ICM vs 5.9 for IM), and head and neck trauma (8.9 for ICM vs 7.6 for IM). Minimum requirements have remained relatively consistent despite the transition to the IM.

CONCLUSION: Graduating plastic surgery resident case volumes reflect great variability between programs—a trend that has remained relatively consistent despite transitioning from the ICM to the IM. These data reveal a need to reevaluate whether the required case minimums truly reflect the volume threshold to achieve competency for the average trainee, or whether the current model allows for redundancy. Plastic surgery training could be improved by identifying educational needs based on trainee competency and customizing operative experience within program specific opportunities.

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Leadership in Plastic Surgery

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BACKGROUND: The pathway to leadership in plastic surgery remains uncertain. While certain residency programs are more represented among academic plastic surgeons, the relationship of training on leadership has never been established. The aim of this study was to determine the impact of plastic surgery training on leadership.

METHODS: First, a cross-sectional study examined the demographics and training of plastic surgery faculty within ACGME-accredited programs. Second, a retrospective review examined similar parameters among past presidents of plastic surgery societies (American Association of Plastic Surgeons, American Society of Plastic Surgeons, Plastic Surgery Foundation, and Plastic Surgery Research Council). Data was gathered from institutional websites and society websites. Frequencies of leaders who trained at each institution during plastic surgery residency or fellowships were calculated.

RESULTS: Among the 287 institutional leaders (112 chairs or chiefs, 109 residency directors, and 66 fellowship directors) 90 training programs were identified that contributed to their training. However, the top ten training programs accounted for 41% of the residencies and fellowships individuals received. The top five programs included University of Pittsburgh, Johns Hopkins University, New York University, University of Pennsylvania, and Harvard Medical School, respectively. Similarly, the 230 past presidents across societies trained in 51 programs, but the top ten accounted for 51% of their training. The top five institutions were Johns Hopkins University, Duke University, Harvard Medical School, Washington University-St. Louis, and University of Pennsylvania, respectively. Across datasets, the top eight leadership producing institutions remained constant.

CONCLUSION: This study suggests that an elite cohort of institutions has consistently produced a large portion of the leaders in plastic surgery, suggesting that they have consistently fostered an aptitude for leadership among their trainees.

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Is a Hands-On Simulation Model a Better Way to Teach Distal Radius Fracture Reduction and Splint Placement?

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BACKGROUND: Surgical residency programs are increasing the use of simulation based training to provide skill acquisition through tactile feedback while removing the stress associated with an actual patient situation. We aim to compare subject confidence and satisfaction with two learning modalities for teaching distal radius fracture (DRF) reduction.

METHODS: A prospective cohort study of plastic surgery residents was conducted at our institution. Group 1