patient population, IM centers are an underutilized adjunct in the care of our patients. Further study into specific IM services that may benefit our patients would be helpful in increasing IM utilization in our field.

Referral Citations:
1. Patel N, Pierson J, Lee T, et al. Utilization and Perception of Integrative Medicine Among Plastic Surgery Patients. Ann Plast Surg. Oct 17 2016.

Failure to Graduate from Plastic & Reconstructive Surgery Residency: A 10- Year Analysis

Presenter: Charalampos Siotos, MD
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INTRODUCTION: During the 2015–2016 academic year, plastic surgery residents accounted for nearly 4.2% of surgical residents and 0.8% of residents overall. While the number of residency programs and allotted residency positions in plastic surgery have been steadily increasing in recent years, little information exists regarding residents who are accepted for plastic surgery residency but never make it to graduation. This knowledge is important for informing expectations of plastic surgery residency program directors and managing the residency programs in general. We sought to evaluate the rates of failure to graduate and associated factors.

METHODS: We evaluated information on residents in surgery and surgical subspecialties during the 2007–2016 academic years that was provided by the Accreditation Council for Graduate Medical Education (ACGME). Total number of graduating residents each year and total number of residents who failed to graduate were extracted in addition to factors causing discontinuation of residency. Ratios and proportions were calculated to estimate potential differences among rates of failure across time and among different surgical subspecialties.

RESULTS: Our analysis indicates that overall, on average, for every 14.3 residents graduating there is one resident who will not graduate. For the surgical specialties, the ratio is smaller at 8.96:1, indicating that surgical residents are more likely to not complete their residency. In particular, for integrated plastic surgery programs the overall ratio is 6.9:1 (range: 4:1 to 17:1) and for the independent programs this ratio is 3.8:1 (range: 1:1 to 43:1). Of those cases where reasoning was known, more than 50% of the plastic surgery residents withdrew, 35% transferred to a different program, and 10% were dismissed.

CONCLUSION: Our findings indicate that plastic surgery residents are more likely to discontinue their initial training program prior to completion compared to residents in other surgical and medical specialties. The most common reason is voluntary withdrawal. Because of this, it is essential to investigate possible barriers to pursuing plastic surgery residency including motivations for voluntary withdrawal and to provide adequate education to medical students to adjust their expectations prior to selecting this residency.

Evolution of the Plastic Surgery Workforce

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INTRODUCTION: The field of plastic surgery consists of a dynamic workforce. Assessing workforce diversity over time is essential to understanding how the field has evolved and anticipating its future. For these reasons, we conducted the current study to evaluate gender, racial/ethnic, and duty trends in the field of plastic surgery over the past decade.

METHODS: We evaluated data acquired by the American Medical Association and the Accreditation Council for Graduate Medical Education. We extracted data from 2000 to 2015 including the overall number of plastic surgeons, surgeon race/
ethnicity, gender, and primary professional activity. We calculated ratios and relative changes to assess potential differences across time and with other surgical specialties.

RESULTS: The total number of plastic surgeons increased 11% from 2000 to 2013, reaching 7,970 active physicians and residents, the majority of whom were white (68.5%). Whites increased by 12%, reaching an overall relative increase of 1.4% among all plastic surgeons. Asians were the second largest group with a relative increase around 80% among plastic surgeons. Hispanic and African-Americans both almost doubled their proportion. Native Indians were the least represented group, however their number has been increased by 6-fold. The relative increase of white plastic surgeons was smaller than that of all other ethnic groups, and plastic surgery demonstrated a higher increase in minority physicians over time than surgery overall. The relative increase in female surgeons was 62% in both plastic surgery and surgery in general. Male physicians demonstrated a relative decrease of 7% in plastic surgery and 11.5% in surgery. Most plastic surgeons (98%) participate in patient care while a small portion are devoted to other activities (e.g., administrative, research, teaching). The relative change in these groups was (+)0.4% and (-)20%, respectively, rates similar to those in other surgical specialties.

CONCLUSION: Our results suggest that the face of plastic surgery is changing and may be achieving racial and ethnic diversity more rapidly than other surgical specialties. The majority of plastic surgeons are involved with direct patient care with a decreasing number being completely devoted to non-patient care activities. It is important to monitor the composition of the surgical workforce to anticipate future deficiencies and excesses and to continue to serve a diverse patient population.

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Trends in Surgical Management of Hidradenitis Suppurativa using the American College of Surgeons National Surgical Quality Improvement Program and National Inpatient Sample Databases

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INTRODUCTION: Hidradenitis suppurativa (HS) is a chronic inflammatory disorder that can be severely debilitating. Multiple specialties participate in management, but there is a lack of clear specialty ownership. We aimed to delineate the types of operations performed and the surgical services (general vs plastic surgery) involved in HS patients on a national level.

METHODS: Data was collected through the American College of Surgeons National Surgical Quality Improvement Program (NSQIP) and National Inpatient Sample (NIS) databases from 2008 to 2014. Current Procedure Terminology (CPT) and International Classification of Disease 9th Revision (ICD-9) codes were used for data extraction, and associated complications were assessed.

RESULTS: In the NSQIP database, there were 414 patients diagnosed with HS while the NIS database revealed 12,938 diagnoses over the same duration with 3,903 patients having surgery. In NSQIP, debridement was the most frequently performed procedure (n=106) and the most common complication was surgical site infections, most apparent in the incision and drainage (I&D) group (6.3%). Between plastic surgery and general surgery, complication rates were similar although plastic surgeons had longer operating room times. In the NIS, I&D (n=2,312) was the most commonly performed operation, with 595 skin grafts and 217 local flaps. When controlled for surgical procedures, NIS patients exhibited longer lengths of stay.

CONCLUSION: Hidradenitis suppurativa is a condition that remains poorly represented nationally. General surgery and plastic surgery services manage the bulk of operative interventions with comparable outcomes. Further multidisciplinary approaches may be warranted to better define successful treatment approaches for this pathology.

Reference Citations:
1. Zouboulis CC, Desai N, Emtestam L, et al. European S1 guideline for the treatment of hidradenitis suppurativa/acne inversa. J Eur Acad Dermatol Venereol. Apr 2015;29(4):619–644