METHODS: A retrospective review of case log numbers performed by residents at our primary training institution was conducted for 13 residents from 2014 to 2018. The cases were grouped into categories based on the Milestone competencies. The association between operative volume and levels of achievement in respective Milestones competencies was performed using Spearman’s rank correlation coefficient (P < 0.05).

RESULTS: The average operative volume and average performance on Milestones both increase across all categories as residents progress through their training years. However, no significant correlation exists between overall operative volume and Patient Care Milestones or Medical Knowledge Milestones across the majority of years of training when residents are compared to their peers at a given training level. Significance was reached with positive correlations between operative volume and Medical Knowledge milestone achievement at PGY3 (r = 0.8182; P = 0.0058) and between operative volume and Patient Care Milestone achievement at PGY5 (r = 0.7858; P = 0.0480).

CONCLUSION: The lack of consistently significant association between operative volume and levels of achievement in Milestones possibly supports the belief that operative exposure does not alone drive competency achievement in surgical education throughout the early years of training. Alternatively, this could suggest that the way the Milestones are being applied is not fully capturing resident competency achievement. Our small sample size is a considerable limitation, and larger scale multi-institutional studies are needed to further investigate the relationship between operative volume and milestone achievement performance.

Determining the Factors Associated With 30- and 90-day Readmissions Following Plastic Surgery Within the National Readmissions Database

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PURPOSE: Previous studies have characterized factors associated with readmission following common plastic surgery procedures within 30 days postoperatively. However, with recent changes to the bundled payment plans, forcing medical systems to cover patient care up to 90 days postoperatively, it is imperative that a comprehensive analysis is performed in order to appreciate comorbidities associated with 30- and 90-day readmission. The National Readmission Database (NRD) is a powerful tool to look beyond the current literature at 90-day readmission rates as it provides readmission from over 50% of the population. This study utilized the NRD to describe the comorbidities associated with 30- and 90-day readmissions to help hospitals, healthcare managers, and plastic surgeons improve patient outcomes and reduce bundled payment penalties.

METHODS: The 2012–2014 NRD was mined for reduction mammoplasty and subcutaneous mammectomy, augmentation mammoplasty, mastopexy, total breast reconstruction, and abdominoplasty/panniculectomy based on ICD-9 CM codes. Only patients ≥18, those who had elective surgery, those who had a length of stay <365 days (to avoid confounding chronic-care complications), those with a diagnosis of cancer of the brain/nervous system, currently receiving maintenance chemotherapy/radiotherapy, or those with missing data/discharged to a court of law were also excluded. A bivariate and multivariate analysis was conducted on these patients to determine the significant comorbidities associated with a 30- and 90-day readmission using Pearson’s chi-square test and Bonferroni correction. Odds ratios were reported to determine the most powerful correlations with readmission.

RESULTS: The overall 30-day readmission rate was 5.7%, and the overall 90-day readmission rate was 9.7%. Medical comorbidities that were found to be statistically significant (P < 0.05) in their association with 90-day readmission include anemia deficiency, congestive heart failure, coagulopathy, depression, diabetes, obesity, and hypertension. On multivariate regression analysis of independent predictors of 90-day readmissions, patients that live in fringe counties of metro areas of ≥1 million population (odds ratio [OR] = 0.82; P < 0.05), counties in metro areas of 250,000–999,999 population (OR = 0.79; P < 0.05), and counties in metro areas of 50,000–249,000 population (OR = 0.61; P < 0.05) were less likely to have complicated readmissions.

CONCLUSION: Although the overall readmissions for common plastic surgeries is relatively low compared with other major surgical operations, the readmission rate for 90-versus 30-day readmission increased by 4 percentage points.
and the comorbidity associations with readmissions shifted. This suggests that current literature defining risk factors for postoperative readmission are not sufficient. Further studies to elucidate causal factors through prospective studies should be encouraged and are in need to continue to determine and reduce 90-day readmissions.

Trends of Breast Reconstruction in Medicare Beneficiaries

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BACKGROUND: In April 2014, the Centers for Medicare and Medicaid Services released millions of billing records for over 880,000 healthcare providers in an effort to improve the transparency, accountability, and affordability of the US healthcare system. This study was performed to analyze the overall Medicare landscape with respect to surgeons, beneficiaries, services, and reimbursements in the setting of breast reconstruction.

METHODS: This is a retrospective analysis of publicly available Medicare utilization and payment data for surgeons who provided services to Medicare beneficiaries between January 2012 and December 2017. Breast reconstruction Current Procedural Terminology (CPT) codes were queried using the Medicare Payment and Utilization Database. Statistical significance was computed using a one-way analysis of variance and Levene’s test was used to confirm the homogeneity of variances.

RESULTS: Data included trends in the number of breast reconstructions over time and average Medicare reimbursements over time. In general, the number of breast reconstructions increased over the study period, with the greatest increase in free flap breast reconstruction (+55.5%) and the greatest decrease in TRAM reconstruction (~36.9%). On average, the Medicare payment amount per service was about 20% of the submitted charge. For example, reconstruction with latissimus flap charge in 2017 was $6,588 and payment amount was $1,358, resulting in a 79.4% reduction. Despite inflation and overall increases in healthcare costs, reimbursements in breast reconstruction have had little or no increase over time. The highest rate of change was Current Procedural Terminology 19366 (breast reconstruction with other technique), which increased from $957 in 2012 to $1,136 in 2017, for an +18% rate of change. Over the study interval, implant-based reconstruction increased around 12%, whereas latissimus and free flap reconstruction decreased around 2% over the same time interval.

CONCLUSION: Our study identifies and quantifies wide variations in reimbursement for breast reconstruction procedures. Over the study period, reimbursement for implant-based reconstruction increased while autologous reconstruction decreased. Variations in reimbursement may preclude some surgeons from offering certain reconstructive options to a subset of patients. Addressing these potential care disparities in a growing patient population has major implications in quality of care for a large subset of women recovering from breast cancer. It is important for surgeons to understand these trends and to communicate with policy makers toward developing sustainable reimbursement models.