## **Relative value units**

Relative value units (RVUs) were designed to provide relative economic values for medical care based on the cost of providing services categorized as a physician work, practice expense, and professional liability. ... RVUs were designed to provide a rational approach to assessing the relative value of medical services.

The debate surrounding the integration of value in healthcare delivery and reimbursement reform has centered around integrating quality metrics into the current fee-for-service relative value units (RVU) payment model. Although a great amount of literature has been published on the creation and utilization of the RVU, there remains a dearth of information on how clinicians from various specialties view RVU and the quality-of-care metric in the compensation formula. The aim of a review was to analyze and consolidate existing theories on the RVU payment model in neurosurgery. Google and PubMed were searched for English-language literature describing opinions on the RVU in neurosurgery. The commentary was noted to be primary opinions if it was mentioned at least twice in the eight articles included in this review. Overall, seven primary opinions on the RVU were identified across the analyzed articles. Integration of quality into the RVU is viewed favorably by neurosurgeons with a few caveats and opportunities for further improvement <sup>1)</sup>.

The work relative value unit (wRVU) is a commonly cited surrogate for surgical complexity; however, it is highly susceptible to subjective interpretation and external forces.

The objective of Kim et al. was to evaluate whether wRVU is associated with perioperative outcomes, including complications, after brain tumor surgery. The 2006-2014 American College of Surgeons National Surgical Quality Improvement Program database was queried to identify patients  $\geq$  18 years who underwent brain tumor resection. Patients were categorized into approximate guintiles based on total wRVU. The relationship between wRVU and several perioperative outcomes was assessed with univariate and multivariate analyses. Subgroup analyses were performed using a Current Procedural Terminology code common to all wRVU groups. The 16,884 patients were categorized into wRVU ranges 0-30.83 (4664 patients), 30.84-34.58 (2548 patients), 34.59-38.04 (3147 patients), 38.05-45.38 (3173 patients), and  $\geq$  45.39 (3352 patients). In multivariate logistic regression analysis, increasing wRVU did not predict more 30-day postoperative complications, except respiratory complications and need for blood transfusion. Linear regression analysis showed that wRVU was poorly correlated with operative duration and length of stay. On multivariate analysis of the craniectomy subgroup, wRVU was not associated with overall or respiratory complications. The highest wRVU group was still associated with greater risk of requiring blood transfusion (OR 3.01, p < 0.001). Increasing wRVU generally did not correlate with 30 days postoperative complications in patients undergoing any surgery for brain tumor resection; however, the highest wRVU groups may be associated with greater risk of respiratory complications and need for transfusion. These finding suggests that wRVU may be a poor surrogate for case complexity  $^{2}$ .

In a cross-sectional review of registry data using the ACS NSQIP 2016 Participant User File and the Centers for Medicare & Medicaid Services physician procedure time file for 2018. Uppal et al. analyzed total RVUs for surgeries by operative time to calculate RVU per hour and stratified by specialty. Multivariate regression analysis adjusted for patient comorbidities, age, length of stay, and ACS NSQIP mortality and morbidity probabilities. The surgeon self-reported operative times from the Centers for Medicare & Medicaid Services physician were compared with operative times recorded in the ACS NSQIP, with excess time from RUC estimates termed "overreported time."

Analysis of 901,917 surgeries revealed a wide variation in median RVU per hour between specialties. Orthopedics (14.3), neurosurgery (12.9), and general surgery (12.1) had the highest RVU per hour, whereas gynecology (10.2), plastic surgery (9.5), and otolaryngology (9) had the lowest (P<.001 for all comparisons). These results remained unchanged on multivariate regression analysis. General surgery had the highest median overreported operative time (+26 minutes) followed by neurosurgery (+23.5 minutes) and urology (+20 minutes). Overreporting of the operative time strongly correlated to higher RVU per hour (r=0.87, P=.002).

Despite reliable electronic records, the AMA-RUC continues to use inaccurate self-reported RUC surveys for operative times. This results in discrepancies in RVU per hour (and subsequent reimbursement) across specialties and a persistent disparity for women-specific procedures in gynecology. Relative value units levels should be based on the available objective data to eliminate these disparities <sup>3)</sup>.

1)

Satarasinghe P, Shah D, Koltz MT. The Perception and Impact of Relative Value Units (RVUs) and Quality-of-Care Compensation in Neurosurgery: A Literature Review. Healthcare (Basel). 2020 Dec 1;8(4):526. doi: 10.3390/healthcare8040526. PMID: 33271871; PMCID: PMC7711854.

Kim RB, Scoville JP, Karsy M, Lim S, Jensen RL, Menacho ST. Work relative value units and perioperative outcomes in patients undergoing brain tumor surgery. Neurosurg Rev. 2021 Jul 8. doi: 10.1007/s10143-021-01601-6. Epub ahead of print. PMID: 34236568.

Uppal S, Rice LW, Spencer RJ. Discrepancies Created by Surgeon Self-Reported Operative Time and the Effects on Procedural Relative Value Units and Reimbursement. Obstet Gynecol. 2021 Jul 8. doi: 10.1097/AOG.000000000004467. Epub ahead of print. PMID: 34237766.

From: https://neurosurgerywiki.com/wiki/ - Neurosurgery Wiki

Permanent link: https://neurosurgerywiki.com/wiki/doku.php?id=relative\_value\_units



Last update: 2024/06/07 02:58