Influence of provider volume on length of stay, operating room time, and discharge status for rotator cuff repair

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Length of hospital stay, operating room time, and disposition of patient on discharge are important determinants of health care resource utilization. We examined the relationship between these determinants and hospital/surgeon volume for rotator cuff repair. A total of 9,973 patients undergoing rotator cuff repair were extracted from the New York State Ambulatory Surgery Databases for the years 1997 through 2000. Surgeon volume and hospital volume were divided into low-, intermediate-, and high-volume categories. Multivariate regression models were used to estimate the risk-adjusted association between provider volume and outcomes. Patients operated on by low-volume surgeons had significantly higher likelihood for an extended length of stay when compared with those operated on by high-volume surgeons (adjusted odds ratio for extended length of stay, 2.3; 95% confidence interval, 1.2-4.4). There was a linear trend for a higher proportion of routine patient discharge with increasing surgeon volume. The mean operating room times for low- and intermediate-volume surgeons were significantly higher than that for high-volume surgeons (P < .001). We conclude that high-volume providers use health care resources more efficiently.