Characterization of Hub and Spoke Facilities for Study of Surgical Care within United States Health Systems
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OBJECTIVES/GOALS: An increasing number of hospitals and provider groups are consolidating into larger health systems, which hold potential to improve access to and quality of surgical cancer care through clinical integration across sites. In order to study clinical integration, we sought to develop: METHODS/STUDY POPULATION: Hospital data from the American Hospital Association were merged with data from the Agency for Healthcare Research and Quality’s Compendium of United States Health Systems. For each health system with more than one acute care hospital, the hospital with the highest surgical volume (inpatient and outpatient) was categorized as the hub hospital while all other hospitals were categorized as spokes. We evaluated the concentration of case volumes at hub versus spoke hospitals and compared characteristics of these hospitals and their surrounding communities using univariate and multivariable logistic regression analyses. RESULTS/ANTICIPATED RESULTS: Within 624 health systems containing 3,554 hospitals, 355 hospitals were characterized as hub hospitals and had 2,645 affiliated spoke hospitals (median 17 spokes per hub, range 2-151). Hub hospitals performed a median of 68% of all surgical cases (25th-75th percentile 44–87%) and were concentrated in metropolitan (88.5%) and urban areas (11.5%) with none in rural areas; spoke hospitals were located in metropolitan (67%), urban (28%) and rural (5%) areas. On multivariable analysis, spoke hospitals were more often located in rural and small urban counties (OR 2.2, CI 1.8–2.7) and took care of a higher percentage of patients with less than high school education (OR 0.98 for each 1% increase, CI 0.97–1.00) but with lower poverty rates (OR 0.90 for each 1% increase in % poverty, CI 0.86–0.95). DISCUSSION/SIGNIFICANCE: For integrated health systems with multiple acute care hospitals, surgical volume is highest at a single hub hospital, supporting use of a hub-spoke taxonomy. Patient populations in counties with hub versus spoke hospitals differ in urban–rural location, poverty rates, and education level, which may impact access to quality care.