Abstract: 1405

Demographic and Practice Variations between Medical and Surgical Retina Care Physicians in the United States

Ravi R Pandit, MD, MPH
Philadelphia, PA

Sruti Tekumalla, BA, Keenan Sobol, BS, Anand Gopal, MD, Sean P Considine, MD, Thomas L Jenkins, MD, David Xu, MD, Allen C Ho, MD

Purpose:
The differences between types of retinal care providers in the United States (US) has not been well studied, and prior investigations are limited to small surveys or non-US settings. This study sought to quantify demographic and practice differences between medical (MR) vs. surgical (SR) retina care physicians in the US.

Methods:
Physicians providing retina care were identified using billing codes from a 2017 Medicare dataset. MR were distinguished from SR by vitrectomy and scleral buckle codes. These data were merged with demographic and disease data from the Internal Revenue Service, Centers for Disease Control, and the US Census Bureau. Relationships between binary and categorical/continuous variables were assessed using multivariable logistic regression. Differences between means of continuous variables and distribution of categorical variables were evaluated using Mann-Whitney and Chi-square testing, respectively. The Benjamini-Hochberg method used to adjust for multiple comparisons. A threshold for statistical significance was set at p=0.05.

Results:
2706 MR and 1352 SR (20.4% vs. 8.7% female, p<0.001) were identified. Odds of practicing SR was highest if starting practice in the 2000’s (OR 2.01, p<0.001) and practicing in the East South Central US (OR 1.92, p<0.001). SR outnumbered MR in counties with higher mean income (OR 1.38, p<0.001) and total population (OR 1.42, p=0.002) but not age>65 (0.80, p=0.03) or diabetes prevalence (1.22, p=0.09). Patients of SR were older (75.1 vs. 75.8 years, p<0.001) and sicker (hierarchical condition category 1.53 vs. 1.49). SR billed more office visits (2120 vs. 1379.9, p<0.001) and drug services (3660 vs. 1126, p<0.001). SR performed more anti-VEGF injections (1649 vs. 553, p<0.001) and imaging tests (3462 vs. 1436, p<0.001). Intravitreal injection and optical coherence tomography usage was nearly universal (>95%) amongst both groups. SR physicians were far more likely to perform in-office retinal repair procedures (laser for retinal detachment OR 2.47, p<0.01; laser for retinal tear OR 7.14, p<0.001; and pneumatic retinopexy OR = 26.26, p<0.001).

Conclusions:
Combining large public databases, new insight into the US retinal care workforce is possible. There are significant demographic and practice differences between MR and SR; the causes are likely multifactorial, and public health implications merit further investigation.