

Does Ranking of Surgeons in a Publicly Available Online Platform Correlate With Objective Outcomes?

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Introduction

The accuracy of public reporting in healthcare, especially from private vendors, remains an issue of debate. We investigated the association of the publicly reported physician complication rates in an online platform with real-world adverse outcomes of the same physicians for patients undergoing posterior lumbar fusion.

Methods

We performed a cohort study involving physicians performing posterior lumbar fusions from 2009-2013, who were registered in the Statewide Planning and Research Cooperative System (SPARCS) database. This cohort was merged with publicly available data over the same time period from ProPublica, a private company. Mixed effects multivariable regression models were used to investigate the association of publicly available complication rates with the rate of discharge to a facility, length of stay (LOS), mortality, and hospitalization charges for the same surgeons.

Results

During the selected study period, there were 8,457 patients in New York State who underwent posterior lumbar fusion by the 56 surgeons who were represented in the ProPublica Surgeon Scorecard over the same time. Using a mixed effects multivariable regression model, we demonstrated that publicly reported physician level complication rates were not associated with the rate of discharge to a facility (OR, 0.97; 95% CI, 0.72-1.31), LOS (Adjusted Difference, -0.1; 95% CI, -0.5 to 0.2), mortality (OR, 0.87; 95% CI, 0.49-1.55), and hospitalization charges (Adjusted Difference, \$18,735; 95% CI, -\$59,177 to \$96,647). Similarly, no association was observed when utilizing propensity score adjusted models, and when restricting the cohort to a predefined subgroup of Medicare patients.

Conclusions

After merging a comprehensive all payer posterior lumbar fusion cohort in New York State with data from the ProPublica Surgeon Scorecard over the same time period, we observed no association of publically available physician complication rates with objective outcomes.

References

- 1.American College of Surgeons: American College of Surgeons National Surgical Quality Improvement Program® (ACS NSQIP®), in, 2016, Vol 2016
- 2.Austin JM, Jha AK, Romano PS, Singer SJ, Vogus TJ, Wachter RM, et al: National hospital ratings systems share few common scores and may generate confusion instead of clarity. *Health Aff (Millwood)* 34:423-430, 2015
- 3.Bekelis K, Desai A, Bakhoun SF, Missios S: A predictive model of complications after spine surgery: the National Surgical Quality Improvement Program (NSQIP) 2005-2010. *Spine J* 14:1247-1255, 2014
- 4.Bekelis K, Fisher ES, Labropoulos N, Zhou W, Skinner J: Variations in the intensive use of head CT for elderly patients with hemorrhagic stroke. *Radiology* 275:188-195, 2015
- 5.Bekelis K, Goodney RP, Dzebisashvili N, Goodman DC, Bronner KK: Variation in the Care of Surgical Conditions: Cerebral Aneurysms, in *Practice TDIHPaC (ed): A Dartmouth Atlas of Health Care Series*. Lebanon, NH, 2014
- 6.Bekelis K, Missios S: The association of regional intensity of neurosurgical care with spinal fusion surgery in the USA. *Eur Spine J* 23:909-915, 2014
- 7.Bekelis K, Roberts DW, Zhou W, Skinner JS: Fragmentation of care and the use of head computed tomography in patients with ischemic stroke. *Circ Cardiovasc Qual Outcomes* 7:430-436, 2014
- 8.Birkmeyer NJ, Birkmeyer JD: Strategies for improving surgical quality--should payers reward excellence or effort? *N Engl J Med* 354:864-870, 2006
- 9.Cassel CK, Conway PH, Delbanco SF, Jha AK, Saunders RS, Lee TH: Getting more performance from performance measurement. *N Engl J Med* 371:2145-2147, 2014
- 10.Centers for Medicare and Medicaid Services: Hospital Compare, in, 2015, Vol 2015