American Spine Registry

Data collection for the American Spine Registry (ASR) includes an option to denote the surgeon's specific diagnostic indication for each procedure. For cases treated between January 2020 and March 2022, the surgeon-delineated diagnosis was compared with the ICD-10 diagnosis generated by standard ASR electronic medical record data extraction. For decompression-only cases, the primary analysis focused on the etiology of neural compression as determined by the surgeon versus that determined on the basis of the related ICD-10 codes extracted from the ASR database. For lumbar fusion cases, the primary analysis compared structural pathology, which may have required fusion, as determined by the surgeon versus that determined on the basis of the extracted ICD-10 codes. This allowed for the identification of agreement between surgeon delineation and extracted ICD-10 codes.

In 5926 decompression-only cases, an agreement between the surgeon and ASR ICD-10 codes was 89% for spinal stenosis and 78% for lumbar disc herniation and/or radiculopathy. Both the surgeon and database indicated no structural pathology (i.e., none) suggesting the need for fusion in 88% of cases. In 5663 lumbar fusion cases, an agreement was 76% for spondylolisthesis but poor for other diagnostic indications.

Agreement between surgeon-specified diagnostic indication and hospital-reported ICD-10 codes was best for patients who underwent decompression only. In the fusion cases, agreement with ICD-10 codes was best in the spondylolisthesis group (76%). In cases other than spondylolisthesis, an agreement was poor due to multiple diagnoses or a lack of an ICD-10 code that reflected the pathology. This study suggested that standard ICD-10 codes may be inadequate to clearly define the indications for decompression or fusion in patients with lumbar degenerative disease [1].

1)
Glassman SD, Carreon LY, Asher AL, De A, Mullen K, Porter KR, Shaffrey CI, Knightly JJ, Foley KT, Albert TJ, Brodke DS, Polly DW, Bydon M. Surgeon input can increase the value of registry data: early experience from the American Spine Registry. J Neurosurg Spine. 2023 May 19:1-7. doi: 10.3171/2023.4.SPINE23135. Epub ahead of print. PMID: 37209078.