

Inaccuracies In Coding In Neonatal Stroke

Valeria I Naranjo, MD¹ • Michael N Karras, MD¹ • Larry B Goldstein, MD¹ • Ricki F Goldstein, MD² • Marc A Wolfe³ • Murali M Palla, MD² • Robert J Baumann, MD¹ • Michael R Dobbs, MD¹

¹Neurology, University of Kentucky • ²Neonatology, University of Kentucky • ³Database administrator Health Sciences, University of Kentucky

OBJECTIVE

Administrative data is useful for studying the process and quality of care and patient outcomes. We evaluated the accuracy of discharge diagnosis coding for patients with neonatal stroke at the Kentucky Children's Hospital Neonatal Intensive Care Unit (NICU).

METHODS

We reviewed the medical records of all patients discharged from the NICU between 01/2016-03/2016 to identify those with stroke-related diagnoses (i.e., acute ischemic stroke, hypoxic ischemic encephalopathy (HIE), periventricular leukomalacia, intraventricular hemorrhage (IVH), subdural and other intracranial hemorrhages) and assigned appropriate ICD-10 codes without reference to administrative data. We then compared the reviewer-assigned and administrative ICD-10 codes.

RESULTS

We reviewed 252 records. Forty-four patients (17.5%) had one or more stroke-related diagnoses based on record review, administrative data, or both. Record review and administrative codes were concordant for 26 (59.1%). Of these 18 (69.2%) were assigned identical ICD-10 codes administratively and by the reviewers. Twelve patients (27.3%) were identified by record review, but were not reflected in administrative codes (2 patients with HIE, 2 grade 4 IVH, 1 ischemic stroke, 1 subdural, and 1 subarachnoid hemorrhage). Although indicated in the patients' records, these diagnoses were not reflected in the discharge summaries. Six patients (13.6%) were identified administratively, but did not have strokes based on record review.

CONCLUSIONS

We found that coding of neonatal ischemic and hemorrhagic stroke is frequently inaccurate. This is in part due to inadequate listing of these conditions in the discharge summary. Improvements in coding accuracy is necessary before administrative data can be used for outcomes research.