Differences in Discharge Location for Patients With Multiple ischemic Stroke Admissions: Implications for Postacute Care Costs

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OBJECTIVES: Typically, economic analyses do not account for potential differences in post-acute care (PAC) costs between first and subsequent ischemic strokes (IS). This analysis was performed to identify differences in discharge location and the impact on PAC costs. METHODS: Eight years (01/10/96–30/09/03) of Massachusetts hospital discharge data were analyzed. Patients admitted for IS from 01/10/99–30/09/00 (index year) were identified using ICD-9 principal diagnosis codes (433.X1, 434.XX, 436) and unique patient identifiers. Patients with pre-index IS or hemorrhagic (ICH) stroke (ICD-9 codes: 430, 431, 432.X) admissions were excluded. All post-index hospital stays were examined for stroke readmissions. PAC costs (2005 US$), reflecting first six months post-event, were developed using claims data, fee schedules and published information.

RESULTS: Of the 7801 patients admitted for IS in 2000, 814 (10.4%) were excluded for previous IS or ICH. Of the remaining 6987 patients, 769 (11%) had at least one readmission (range: 1–3) within four years for IS (91.3%), or ICH (7.3%) or both (1.4%). Of those readmitted for IS (n = 713; mean age: 75 years; female: 56%), 4% died during their second IS hospitalization. Compared to index IS admission, significant (p < 0.001) differences in average hospital length of stay (+2 days), home health care service referrals (+12%), and skilled nursing facility transfers (−14%) were noted at second IS discharge. More patients, albeit not statistically significant (p > 0.05), were admitted to chronic hospitals (+1%) and fewer to rehabilitation hospitals (−1%) after second IS. Average time between first and second IS hospitalization was 8.9 months (±11.2). Average PAC costs were $565 lower per patient following second IS. CONCLUSIONS: Differences in discharge location between first and second IS that affect PAC costs were identified. These differences should be considered when modeling lifetime stroke costs, as it reduces PAC costs following a second IS by roughly $500,000 per 1000 patients.