

# Extra intracranial bypass cost

United States healthcare reforms are focused on curtailing rising expenditures. In neurosurgical domain, limited or no data exists identifying potential modifiable targets associated with high-hospitalization cost for cerebrovascular procedures such as [extra intracranial bypass surgery](#). Our study objective was to develop a predictive model of initial cost for patients undergoing bypass surgery. METHODS: In an observational cohort study, we analyzed patients registered in the Nationwide Inpatient Sample (2002-2011) that underwent ECIC bypass. Split-sample 1:1 randomization of the study cohort was performed. Hospital cost data was modelled using ordinary least square to identify potential drivers impacting initial hospitalization cost. Subsequently, a validated clinical app for estimated hospitalization cost is proposed (<https://www.neurosurgerycost.com/calc/ec-ic-by-pass>). RESULTS: Overall, 1533 patients [mean age:  $45.18 \pm 19.51$  years; 58% female] underwent ECIC bypass for moyamoya disease [45.1%], cerebro-occlusive disease (COD) [23% without infarction; 12% with infarction], unruptured [12%] and ruptured [4%] aneurysms. Median hospitalization cost was \$37,525 (IQR: \$16,225-\$58,825). Common drivers impacting cost include Asian race, private payer, elective admission, hyponatremia, neurological and respiratory complications, acute renal failure, bypass for moyamoya disease, COD without infarction, medium and high volume centers, hospitals located in Midwest, Northeast, and West region, total number of diagnosis and procedures, days to bypass and post-procedural LOS. Our model was validated in an independent cohort and using 1000-bootstrapped replacement samples.

Identified drivers of hospital cost after ECIC bypass could potentially be used as an adjunct for creation of data driven policies, impact reimbursement criteria, aid in-hospital auditing, and in the cost containment debate <sup>1)</sup>.

<sup>1)</sup>

Sun H, Kalakoti P, Sharma K, Thakur JD, Dossani RH, Patra DP, Phan K, Akbarian-Tefaghi H, Farokhi F, Notarianni C, Guthikonda B, Nanda A. Proposing a validated clinical app predicting hospitalization cost for extracranial-intracranial bypass surgery. PLoS One. 2017 Oct 27;12(10):e0186758. doi: 10.1371/journal.pone.0186758. eCollection 2017. PubMed PMID: 29077743.

From:

<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link:

[https://neurosurgerywiki.com/wiki/doku.php?id=extra\\_intracranial\\_bypass\\_cost](https://neurosurgerywiki.com/wiki/doku.php?id=extra_intracranial_bypass_cost)

Last update: **2024/06/07 02:53**

