

What is the cost of pipeline embolization for intracranial aneurysms? The total cost of the hospital encounter: Review of the first 21 cases

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Purpose: The Pipeline Embolization Device (PED) is a new technology for endovascular treatment of complex intracranial aneurysms. However, costs are significant and require efficacy analysis.

Methods: Data was collected from interventional case logs, medical and accounting records relevant to the first 21 cases embolized at the RBWH. Costs assessed included: radiology, intensive care bed (ICU), ward stay, allied health, pathology, theatre, pharmacy and outpatient visits. Radiology costs comprised of: PED/s, equipment, imaging, repair and maintenance, depreciation, utilities, clinical supplies, administration and staff. Costs were expressed in Australian dollars (AU\$) and analyzed.

Results: The total encounter cost for the 21 cases was \$1,365,495 (mean \$71,868; SD \$75,736; median \$36,901). Radiology costs accounted for 44-70% of the total hospital encounter (mean \$31,268; SD \$10,704; median \$25,858) followed by the cost of ICU (15-36%; mean \$25,617; SD \$45,182; median \$5,570), ward bed (6-12%; mean \$8701; SD \$12,691; median \$2,163), allied health (3%), theatre (3%), pathology (2%), pharmaceuticals (<1%) and outpatients (<1%). Equipment accounted for 62-64% of the total radiology cost (mean \$20,018; SD \$7,156; median \$15,941), followed by imaging (15-24%; mean \$7,515; SD \$7,714; median \$3,992), anaesthetist (6-7%; mean \$1734; SD \$381; median \$1716), nursing (2%), radiologist (1%) and radiographer (1%). PEDs contributed 25-30% (mean \$16,071; SD \$7,008; median AU\$12,500) of the total hospital encounter cost.

Conclusion: This is the first cost analysis of the total PED hospital encounter and demonstrates PEDs contributed between 25-30% of the total hospital encounter cost. The most significant costs of the total PED encounter were radiology (44-70%), ICU (15-36%) and ward bed (6-12%).

Biography

Laura Lamprell is currently working at the Townsville Hospital, Australia, in the role of Ear, Nose and Throat and Maxillofacial Surgery Principal House Officer. She has graduated from the University of Queensland with MBBS Honours in the field of surgery and prior to this, obtained a Bachelor of Science degree majoring in human anatomy. Over the past 2 years, She has undertaken research into the cost benefit analysis of pipeline flow-diverting stents for intracranial aneurysms in collaboration with the Department of Medical Imaging at the Royal Brisbane and Women's Hospital.

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