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The Direct medical cost of Acute Appendicitis Surgery in a resource-limited setting of Papua New Guinea

Ian Umo

Alotau Provincial Hospital, Papua New Guinea

Background: Acute appendicitis is a common surgical emergency, and challenges in access to surgery in a low middle-income country can direct cost implications.

Methods: A prospective cost of illness study was conducted at Alotau Provincial Hospital (APH) from October 14, 2019, to June 1, 2020. A bottom-up approach of microcosting was used to estimate the direct medical cost of consecutive patients with acute appendicitis undergoing surgery.

Results: The mean cost of acute appendicitis surgery for each patient was K39,517.66 (US\$11,460.12) for uncomplicated appendicitis, K45,873.99 (US\$13,303.46) for complicated appendicitis and K38,838.80 (US\$ 11,263.25) for a normal appendix. In total, the direct medical cost for acute appendicitis in this study was K4,562,625.29 (US\$ 1,323,161.33) with the majority of expenditure incurred by surgical ward expenses.

Conclusion: This study demonstrates that direct medical costs for uncomplicated appendicitis surgery in a resource-limited hospital are less expensive. As the pathology progresses, the cost also exponentially increases. Policy makers and clinicians must establish appropriate curative surgical services at secondary (NOM of acute appendicitis and laparoscopic surgery) and primary health-care levels to address acute appendicitis surgery as this can reduce costs.

Recent Publications:

1. Ian Umo, et al., The direct medical cost of trauma aetiologies and injuries in a resource limited setting of Papua New Guinea: A prospective cost of illness study. *The Lancet Regional Health - Western Pacific* 2022;20: 100379 Published online 24 January 2022 <https://doi.org/10.1016/j.lanwpc.2021.100379>
2. Borchem I, Umo I, James K, Ikasa R. Tracheostomy in Papua New Guinea: A Retrospective Analysis of 33 Cases in a Subspecialty Limited Setting. *Am J Otolaryngol Head Neck Surg.* 2022; 5(5): 1189.
3. The direct medical cost of trauma aetiologies and injuries in a resource limited setting of Papua New Guinea: A prospective cost of illness study Umo, Ian et al. *The Lancet Regional Health – Western Pacific*, Volume 20, 100379
4. Factors associated with loss to follow up among TB patients in Rural Papua New Guinea. *Public Health Action.* 2021. Volume 11. No 4. December
5. Umo, I., James, K. The Direct Medical Cost of Acute Appendicitis Surgery in a Resource-Limited Setting of Papua New Guinea. *World J Surg* 45, 3558–3564 (2021). <https://doi.org/10.1007/s00268-021-06290-2>.

Biography

Ian Umo obtained his MBBS degree from the University of Papua New Guinea in 2016. He have worked in various rural hospitals in Papua New Guinea and currently aspiring to be a surgeon.

sawavmvs@gmail.com