

A Cost-Effectiveness Analysis of Laparoscopic Versus Open Colectomy for Benign Disease in Lagos State, Nigeria: A Two-Year Public Sector Perspective

A, m, i, n, a, S, u, l, e, i, m, a, n, -, B, e, l, l, o, ,, C, h, i, n, w, e, i, k, e, O, k,
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| Abstract

Open colectomy is the standard surgical procedure for benign colorectal disease in Nigeria. Laparoscopic colectomy, though established elsewhere, is not routinely available in the public sector. Local economic evaluations to guide surgical service investment are lacking. This working paper conducts a cost-effectiveness analysis comparing laparoscopic and open colectomy for benign disease from a public healthcare provider perspective in Lagos State, Nigeria. Its primary objective is to determine the incremental cost-effectiveness ratio (ICER) of the laparoscopic approach. A decision-analytic model was constructed using a two-year time horizon. Clinical parameters were derived from a retrospective patient cohort at two major public teaching hospitals. Direct medical costs, obtained from hospital finance departments, included consumables, theatre time, and length of stay. Outcomes were measured in quality-adjusted life years (QALYs). Deterministic sensitivity analysis was performed. This is a working paper; empirical results from the full analysis are pending. Preliminary data exploration indicates laparoscopic colectomy is associated with a notably shorter average length of stay, by approximately three days, compared to open surgery. However, the higher initial procedural costs are a significant consideration. Pending final results, the conclusion will determine whether laparoscopic colectomy is a cost-effective intervention for benign disease within the constraints of the Nigerian public health system and will discuss

the key drivers of cost-effectiveness. Final recommendations will be provided upon completion of the analysis. They will be directed at hospital management and health policymakers regarding the potential adoption and funding of laparoscopic colorectal services in the public sector. cost-effectiveness analysis, colectomy, laparoscopic surgery, benign colorectal disease, Nigeria, public health, surgical economics This work provides a foundational economic evaluation to inform policy on minimally invasive colorectal surgery within a Nigerian public sector context.
