



ORIGINAL RESEARCH

Cost Effectiveness Analysis of Sertraline Versus Amitriptyline in Depression Management in a Psychiatric Hospital in South Southern Nigeria

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ABSTRACT

Background: In Nigeria, cost effectiveness data is rare therefore, resources allocated to the management of patients with depression can hardly be said to be optimized.

Objective: The study aimed to determine the cost-effectiveness of sertraline versus amitriptyline in the management of depression.

Methods: It is a prospective study of patients suffering from depression and who are receiving treatment from Psychiatric Hospital, Benin City, Nigeria. Costs were collected with the aid of a data collection sheet, while clinical improvement in depression was assessed by Hospital Anxiety Depression Scale- Depression (HADS-D) subscale instrument. Graph Pad InStat version 3.10 was used for inferential analysis. Markov Chain Monte Carlo model with sensitivity analysis of $\pm 50\%$ on the effects of the antidepressants was used for pharmacoeconomic evaluation which was conducted from a third-party payers' perspective with the real-world sample bootstrapped to 1000 respondents. Cost-Effectiveness Ratios (CER) was gotten, and Incremental Cost-Effectiveness Ratios (ICER) was calculated.

Results: Females accounted for 60.8 % (84) of the total sample. First scenario of sensitivity analysis of sertraline 50mg versus amitriptyline 50mg gave ICER of NGN10847 which means sertraline will be more cost effective if the cost of making one depression free person in a month is worth more than NGN10847 (USD 27.12) and this amount is enough to treat 10 persons on amitriptyline. The second scenario of the sensitivity analysis gave ICER of -NGN16346 (USD40.87) meaning that sertraline is more expensive and less effective than amitriptyline.

Conclusion: Sertraline is more effective but from a third payer perspective it is less cost effective than amitriptyline in depression management.

Keywords: Antidepressants, sertraline, amitriptyline, depression, cost effectiveness analysis, pharmacoeconomic analysis