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**Clinical and financial implications of medicine consumption patterns in Kenya**

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**ABSTRACT**

Introduction: Medicines can constitute up to 70% of total health care budgets in developing countries and considerable expenditure in hospitals. Inventory management techniques can assist with managing resources efficiently. In Kenyatta National Hospital (KNH) over 30% of expenditures are for medicines and this needs optimal management. Consequently, we investigated drug consumption patterns, their costs and morbidity patterns at KNH. Methodology: Cross-sectional retrospective record review. Inventory control techniques, ABC (Always, Better, Control), VEN (Vital, Essential and Non-essential) and ABC-VEN matrix analyses were used to study drug expenditure patterns. Morbidity data extracted from Medical Records. Results: An average of 811 medicine types are procured annually (ATC 5), 80% were formulary drugs and 20% were non-formulary. Class A medicines constituted 13.2% to 14.2% of different medicines procured each year but accounted for an average of 80% of total annual drug expenditure. Class B medicines constituted 15.9%-17% of all medicines procured but accounted for 15% of annual expenditure, whilst Class C medicines constituted 70% of total medicines procured but only 5% of total expenditure. Vital and Essential medicines consumed the highest proportion of drug expenditure. ABC-VEN categorization showed 31% medicine types consumed an average of 85% of total expenditure. Therapeutic category and morbidity patterns analysis showed a mismatch between expenditure and morbidity which needs investigation. Conclusion: Class A medicines are few but consume the largest proportion of hospital drug expenditure. Vital and essential items account for the highest drug expenditure, and also need to be carefully managed. ABC-VEN categorization identified medicines where major savings could potentially be made helped by Therapeutic category and Morbidity pattern analysis. There was a high percentage of non-formulary items, which needs to be addressed. Inventory control techniques should be applied routinely to optimize medicine use within hospitals within available budgets especially in low and middle income countries. This is now being implemented.

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