Prescribing Patterns and Drug Cost Implications for Diabetic Patients in Eastern Province, Kenya

Patrick Mutunga Mwanza

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ABSTRACT

Achieving best practice in management of chronic diseases such as diabetes, which requires long duration of treatment and multiple therapies, remains a major challenge in primary health care settings worldwide. As healthcare costs continue to rise, much attention has been placed on ensuring good prescribing practice to optimize patient care within available resources. An essential component of evaluating and improving diabetic care is the assessment of drug prescribing standards and quality of care. It is in this context that this study was conducted. The main objective was to establish the prescribing patterns and drug cost implications for diabetic patients in Eastern Province, Kenya. A cross-sectional study design was used in which data was collected retrospectively in Machakos District and Embu Provincial General Hospitals between July 1st and 5th of August 2008. Data collection tools included a pre-tested data abstraction form and selection of study subjects done by systematic random sampling technique. Data were entered, cleaned and analyzed using Statistical Package for Social Sciences (SPSS) version 12.0. A total of 218 diabetic patients were selected for the study. The study findings revealed that 59.6% were females while the mean (±SD) age for women was 55.60 (15.19) years and that of men was 54.57(18.58) years. The age ranges were 63 years (25-88) and 79 years (19-98) for females and males respectively. Majority of the study population (90%) had type 2 diabetes. Those with a duration of diabetes of >20 years were mainly in age older than 60 years. Among the oral hypoglycemic agents (OHA), sulfonylurea class was widely prescribed (39%) while antihypertensive drugs were the most prescribed (57.8%) among the non-antidiabetic category. The major co morbid condition was Hypertension (50.2%). Prescription by brand name dominated with 56.1% for antidiabetic drugs while for non-diabetic category generic prescribing scored 53.4%. Overall females were more likely to be treated with sulfonylurea compared to

males though this was not statistically significant, P >0.05. Men had 22% less likelihood to be treated with biguanide OR=0.78 compared to females. The use of biguanide among the age group 31-40 years was statistically significant P<0.05, compared to age group >60 years. Men were more likely to have insulin prescriptions compared to females, P >0.05. The mean number of drugs per prescription was 3.4 with females being prescribed more drugs than males. Majority, 27% (n=59) were prescribed >4 drugs per prescription. Insulin was the most expensive among antidiabetic drugs costing 10 Ksh (0.13 US$) per day and for non-diabetic drugs, multivitamins were more costly dispensing at 13 Ksh (0.18 US$) per day. In review of the prescribing patterns and drug cost implications among the diabetic patients, there may be significant contribution by the clinicians to the relatively costly diabetic treatment. This study suggests an urgent need for the review of current prescribing guidelines for diabetic patient's management.