

## Diabetic Screening in Rural Lesotho, Southern Africa

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**Abstract :** The prevalence of diabetes mellitus is increasing worldwide. In Sub-Saharan Africa, type 2 diabetes represents over 90% of all types of diabetes with the number of diabetic patients expected to rise. This represents a huge economic burden in an area already contending with high rates of other significant diseases, including the highest worldwide prevalence of HIV. Diabetic complications considerably impact on morbidity and mortality. The epidemiological data for the region quotes high rates of retinopathy (7-63%), neuropathy (27-66%) and microalbuminuria (10-83%). It is therefore imperative that diabetic screening programmes are established. It is recognised that in many parts of the developing world the implementation and management of such programmes is limited by a lack of available resources. The International Diabetes Federation produced guidelines in 2012 taking these limitations into account suggesting that all diabetic patients should have access to basic screening. These guidelines are consistent with the national diabetic guidelines produced by the Lesotho Medical Council. However, diabetic care in Lesotho is delivered at the local level, with variable levels of quality. A cross sectional study was performed in the outpatient department of Maluti Hospital in Mapoteng, Lesotho, a busy rural hospital in the Berea district. Demographic data on gender, age and modality of treatment were collected over a six-week time period. Information regarding 3 basic screening parameters was obtained. These parameters included eye screening (defined as a documented ophthalmology review within the last 12 months), foot screening (defined as a documented foot health assessment by any health care professional within the last 12 months) and secondary prevention (defined as a documented blood pressure and lipid profile reading within the last 12 months). These parameters were selected on the basis of the absolute minimum level of resources in Maluti Hospital. Renal screening was excluded, as the hospital does not have access to reliable renal profile checks or urinalysis. There is however a fully functioning on-site ophthalmology department run by a senior ophthalmologist with the ability to provide retinal photography, retinal surgery and photocoagulation therapy. Data was collected on 183 type 2 diabetics. 112 patients were male and 71 were female. The average age was 43 years. 4 patients were diet controlled, 140 patients were on oral hypoglycaemic agents (metformin and/or glibenclamide), and 39 patients were on a combination of insulin and oral hypoglycaemics. In the preceding 12 months, 5 patients had undergone eye screening (3%), 24 patients had undergone foot screening (13%), and 31 patients had lipid profile testing (17%). All patients had a documented blood pressure reading (100%). Our results show that screening is poorly performed in the basic indicators suggested by the IDF and the Lesotho Medical Council. On the basis of these results, a screening programme was developed using the mnemonic SaFE; secondary prevention, foot and eye care. This is simple, memorable and transferable between healthcare professionals. In the future, the expectation would be to expand upon this current programme to include renal screening, and to further develop screening pertaining to secondary prevention.

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