

Is HbA_{1c} testing in Nigeria only for the rich?

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Abstract

Glycated haemoglobin (HbA_{1c}) is the most important biochemical indicator of long-term glycaemic control in diabetes, but it is a relatively expensive test. Our study in a Nigerian diabetic clinic shows that only 24% of type 2 patients could afford to have the test. There is an urgent need to either reduce the cost of the test, or to provide subsidies to reduce the patient cost.

Introduction

The measurement of glycosylated haemoglobin (HbA_{1c}) is central to diabetes care since high HbA_{1c} levels are important in the development of diabetic complications.¹⁻³ The test is currently not widely available in Nigeria due to high cost.⁴

Most patients have to pay out of pocket for their required investigations and medications in Nigeria due to lack of health insurance. The test costs US\$19 in the Federal Medical Centre (FMC) Abeokuta. This is unaffordable in a developing economy where many individuals live on less than 1\$ a day.⁵⁻⁸ The required testing of 2 to 4 times a year^{9,10} is impossible for most diabetic patients in Nigeria. This study therefore assessed the number of patients able to perform the test at least once a year.

Methodology

This prospective study was conducted from September 2009 to September 2010 in the Diabetes Clinic of FMC, Abeokuta, located 30 km from Lagos, Nigeria. Its catchment area includes three states in the south-western part of Nigeria and the neighbouring country of Benin Republic. All patients in the Diabetes Clinic were sent to the central laboratory for HbA_{1c} level estimation as part of their routine investigations using the DCCT aligned Clover A1c Analyser (Infopia Co. Ltd., Korea) with a test range of 4–14%.

Ethical clearance was obtained from the hospital's Ethics and Research Committee.

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Results

A total number of 967 patients were seen in the Diabetes Clinic during the course of the study; 409 were males and 558 females. Out of the 967 patients seen, 237 (24%) were able to do the test; 119 (50%) of these were males and 118 (50%) were females. All the patients had type 2 diabetes. Of the total clinic population over this period, 119 (29%) males did the test, as did 118 (21%) females. The overall mean HbA_{1c} was 7.9±2.4%.

Discussion

The vast majority of patients (75%) were not able to do the test, principally due to cost issues as most of them have to pay out of pocket for their health needs, which include multiple medications and testing. In the absence of health insurance, this is financially burdensome. A significant majority of Nigerians are currently economically disadvantaged; this fact has been shown worldwide to put such individuals at a disadvantage health-wise. A lot of these patients have to choose between using the available money to buy medications or to do laboratory tests. They usually choose the former.

Urgent steps need to be taken to reduce the cost of the test and make health insurance more available in order to reduce the risk of development of life threatening complications of diabetes in individuals with diabetes in Nigeria.

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