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Evaluating the Impact of Mandatory Premarital Screening on Genetic Counselling Uptake for Sickle Cell Carriers in Lagos, Nigeria: A Pre- and Post-Policy Analysis

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Abstract

Sickle cell disease is a significant public health burden in Nigeria. While premarital genetic screening is advocated for prevention, its influence on subsequent genetic counselling attendance by identified carrier couples remains poorly understood. This study evaluated the impact of a mandatory premarital screening policy on genetic counselling uptake among sickle cell carrier couples in Lagos, Nigeria. A comparative pre- and post-policy analysis was conducted using clinic records from six major health facilities in Lagos. Quantitative data on counselling attendance for identified carrier couples were collected for a six-month period immediately before and after policy implementation. Descriptive and inferential statistics were employed. Qualitative notes from records were also reviewed. A significant increase in genetic counselling uptake was observed following the policy's introduction. The proportion of carrier couples attending at least one counselling session rose from 32% in the pre-policy period to 68% in the post-policy period. Qualitative insights indicated persistent concerns regarding stigma and logistical challenges in attending multiple sessions. The mandatory premarital screening policy was associated with a substantial increase in genetic counselling uptake. This indicates that policy mandates can effectively improve engagement with genetic services. Policy implementation should be accompanied by concerted efforts to reduce stigma and enhance the accessibility of

counselling services. Further research is required to assess long-term behavioural outcomes, such as reproductive decision-making. sickle cell disease, genetic counselling, premarital screening, health policy, Nigeria, carrier couples This study provides original empirical evidence on the direct impact of a mandatory health policy on genetic service utilisation within an African context, informing future public health strategies for sickle cell disease prevention.