NIGERIA

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PRE COVID- 19 OUTBREAK: ANTENATAL CARE

Nigeria, a country with vast differences between urban and rural care, has a varying quality of antenatal care. Despite being a rapidly developing country, many factors hinder access to a high standard of antenatal care. In Nigeria, over a third of pregnant women do not receive any antenatal care. (1) When women do receive antenatal care, studies have reported that the lack of access to medicines and medical equipment strongly impact the satisfaction that pregnant women have with the services provided. A more robust adherence to the national guidelines has also been recommended, suggesting this has not been followed, perhaps due to the lack of resources earlier stated. (2)

For this reason, available testing mechanisms in secondary healthcare settings are limited in their capacity to diagnose anaemia or malaria. Despite Nigeria being a malaria-endemic country, and the diagnostic connection between malaria and anaemia, a 2014 study reported a 54.5% prevalence of anaemia in the pregnant women in their study. The percentage of women with anaemia was lowest in those who booked an antenatal appointment in the first trimester (3). This suggests an important link to a further study, where iron supplementation in pregnant women in their third trimester was not enough to treat their anaemia. Maternal mortality due to anaemia is 20% in developing countries, even though it's a treatable condition.(4). Therefore, a link can be drawn between delaying an antenatal appointment to the third trimester, and not being able to treat the condition purely with iron supplementation as a result.

One possible contributing factor explaining the mortality rates, is the lack of awareness around disease preventative practices, as suggested by an early prominent study. The study determined the use of Insecticide Treated Nets (ITN), only around one third of the pregnant women attending an antenatal clinic were aware of its purpose and had ever used ITNs before. Of the remaining two thirds who had never used ITNs, around three quarters of the study listed lack of awareness as the main reason. This is despite government initiatives providing free ITNs for all vulnerable groups and ITNs proven success in decreasing rates of malaria. Furthermore, this study was only able to have maximum impact on women who attended antenatal clinics, automatically eliminating representation from those in rural areas without easy access to clinics. (5)

This is more prominent in rural areas; a 2009 study (6) of a group of villages in northwest Nigeria with 107 participants showed that 88% were not receiving antenatal care at the time. Though distance is assumed to be a primary factor in the lack of access to antenatal care, only 2.3% of participants cited this as reason. The most commonly noted reason was financial constraint. The chance of dying during pregnancy, childbirth or after an abortion is 1 in 22 (7) for the average Nigerian woman. In Ghana, a country with a similar landscape, the rate rests significantly lower with 1 in 313. Another factor worthy of mention is the prevalence of domestic violence and how this may impact vulnerable groups such as pregnant women. A questionnaire (8) given to pregnant women showed that more than 40% had experienced violence and 15% were experiencing violence in their current relationship. It has been reported that there has been an increase in domestic violence against women and girls during the COVID-19 pandemic. There is a complex backdrop of social issues facing women in Nigeria and the pandemic has not only upset this delicate balance, but amplified it to disproportionately affect pregnant women.

*Malaria is thought to cause anaemia through haemolysis of RBCs in a process known as plasmodium parasitization.

POST COVID- 19 OUTBREAK: ANTENATAL CARE

Despite a recent global shift towards the virtualisation of medical appointments, including those aimed at providing antenatal care, logistical difficulties ensue in places where availability of smartphone technology is low. This inhibits the capacity of particular countries to successfully provide alternative digital care. Less than 20% of Nigeria's population have smartphones, compared with a relative figure of 79% of adults (9) in the United Kingdom. This means that the model of care allowing pregnant women to have virtual appointments for non-essential cases is unviable for the entire population, especially those situated in rural Nigeria. In many cases, pregnant women requiring antenatal care in Nigeria will be required to visit hospitals in-person regardless of the type of care they require and their own personal preference. Although there is no evidence to suggest that pregnant women are more likely to fall seriously ill from COVID- 19, (10) these repeat hospital visits can certainly increase their risk of exposure to COVID-19 as many doctors and other healthcare workers have to pay for their own PPE(12). .

In southeastern Nigeria, a questionnaire (13) answered by 284 pregnant women attending an antenatal clinic showed that whilst 60.9% knew about the preventative measures that needed to be taken during COVID-19, 69.7% were not following these. Some key determinants for not adhering to the guidelines included: being married, having no formal

education, and residing in a rural area. This could suggest that the awareness of appropriate COVID-19 measures does not correlate with understanding the seriousness of the disease and the advantages of following the guidelines.

The social determinant of being married draws immediate parallels to the aforementioned 2009 study (5), where 17.2% of pregnant women in a group of villages in northwestern Nigeria felt that they could not seek antenatal care due to their husband's wishes.

The contribution of living in a rural area, despite varying distance once again becomes prominent and the reason for this could be that the awareness of appropriate COVID-19 measures does not correlate with understanding the seriousness of the disease and the advantages of following the guidelines.

Despite the urban and rural disparity earlier discussed, and in light of the increased exposure of the virus to pregnant women visiting hospitals, a practical guideline developed by the Obstetric and Neonatal Team at Lagos University Teaching Hospital has provided thorough advice. This advice includes all non-essential items being removed from a room before the arrival of the woman and visitors being kept to a minimum. These guidelines have been recommended in accordance with the guidelines of many certified bodies such as The World Health Organisation and the Royal College of Obstetrics and Gynaecology in the United Kingdom. (14) The assets of these guidelines are not only in managing the interruption of the flow of transmission but in maximising quality of care and ensuring maternal-infant bonding which has been widely accepted to improve the outcomes of both parties. Regardless of the efforts, it is difficult to currently ascertain the success of the revised clinical practice guidelines.

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