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Concept of Abiye Programme in Ondo State: an Effective Strategy for Maternal Mortality Reduction in Nigeria

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ABSTRACT

Every day, approximately 830 women die from preventable causes related to pregnancy and childbirth. Nigeria as a country is the second largest contributor to under-five and maternal mortality rate in the world showing poor health indices in relation to maternal and child health. Within the southwestern part of Nigeria, Ondo State was proclaimed by the National demographic health survey of 2008 to have the worst maternal and child health care indices, with maternal mortality ratio of 765 per 100,000 live births. This motivated the Ondo State Government to develop an innovative program called 'Abiye' programme meaning safe motherhood for pregnant women and children under 5 with the aim of addressing the four delays that predisposes to maternal deaths as well as meeting the MDGs 4&5. Evaluation of the program during the pre-Abiye period ((Jan-Dec 2009) and post- Abiye period (Jan 2010-Sept 2011) showed an increase in Antenatal registrations from 240 to 4,693, increase in facility delivery from 98 to 1,668 and TBA/Mission house deliveries decreased from 160 to 32 just in the first eighteen months. There was a great reduction in maternal mortality from 765 deaths per 100,000 live births in 2009 to 112 deaths per 100,000 live births in 2016. As a result of this, World Health Organisation, and Health funding bodies like the World Bank have commended the programme and recommended it for adoption towards mitigating the rise in Maternal and Child Mortality in Africa. However, the major challenge is the sustainability of the programme.

Key Words: *Abiye, Maternal Mortality, Safe motherhood.*

INTRODUCTION

The Abiye programme is a home-grown comprehensive and strategic health policy initiated to address the challenges of maternal morbidity and mortality in Ondo State. Globally, maternal mortality is unacceptably high and constitutes a major public health challenge (World Health Organisation 2016). About 830 women die from pregnancy or children related complications around the world every day, out of which 99% occurs in developing countries (WHO 2016).Estimated data in 2015 showed that approximately 303,000 women die during and after pregnancy and child birth, which occur mostly in low resource settings in developing countries (Alkena et al 2016). Africa has the highest maternal mortality ratio with a lifetime risk of 1 in 16 and a global ratio of 400 maternal deaths per 100, 000 live births (WHO, UNICEF, World Bank and UNPD 2015). In Sub-Sahara Africa, the maternal mortality ratio according to WHO (2015) is 547

per 100, 000 live births, contributing to 66% of maternal deaths in the World despite the fact that Sub-Sahara Africa only constitute 2% of the World population. Nigeria, however accounts for about 14% (40,000) of the World's maternal deaths, only second to India at 19% (56,000) WHO, UNFPA and World Bank (2012).

Meanwhile, efforts put forth by the United Nations in 2000 through the Millennium Development Goal 5 to reduce Maternal Mortality by seventy-five percent between 1990 and 2015 has a significant effect as global maternal mortality ratio declined by 2.3% per year (Carin et al 2012)

According to 2015 Millennium Development Goals (MDGs) report by the United Nations, the maternal mortality ratio has declined by 45 percent worldwide since 2000. Therefore, Sustainable Development Goals (SDGs) officially known as transforming our World by 2030 builds on the achievements of the MDGs but are broader, deeper and far more ambitious in scope have been agreed upon and put in place by all the 193 United Nation member states. One of the target under SDG3 is to reduce the global maternal mortality ratio to less than 70 per 100,000 live births with no country having a maternal mortality rate of more than twice the global average by 2030 (WHO 2016).

It is therefore imperative to develop strategies and policies such as that of "Abiye" Programme in Ondo State to address the burden of maternal mortality especially in developing countries like Nigeria.

STATEMENT OF PROBLEM

Ondo State had the worst maternal and child health indices in the South Western zone of Nigeria (Ondo State Government 2012a) with a Maternal mortality ratio of 765 per 100,000 live births (Adeyanju 2012). A baseline survey conducted in the state in 2009 shows that only 16% of registered antenatal patients delivered in the facilities where they have skilled attendants, about 84% of the women could not be tracked (Adeyanju 2012). The"Abiye" Programme was developed by the state government to reverse this ugly trend. This paper focuses on how the "Abiye" programme had fare in reversing this trend in the state and see if the programme can be recommended for other settings especially in Sub-Sahara Africa with similar maternal and child health indices.

Objectives of Paper

1. To discuss the maternal and child health indices in the state before and after introduction of the "Abiye" programme
2. To discuss the concept of "Abiye" programme in Ondo State.
3. To evaluate the effectiveness of the "Abiye" programme in the

reduction of maternal morbidity and mortality in the state.

4. To suggest adoption of the "Abiye" programme in the reduction of maternal morbidity and mortality in the other settings in Sub-Saharan Africa.

Maternal Morbidity and Mortality

Maternal morbidity and mortality remain a challenge and a public health issue in developing countries. It includes unexpected outcomes of pregnancy, labour and delivery that results in significant consequences to a woman's health (Kilpatric and Ecker 2016). According to World Health Organisation ICD-10 (2010) "Maternal death is defined as "the death of a woman while pregnant or within 42 days of the end of pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes" while Maternal Morbidity is defined by WHO working group "as a health condition attributed to and or aggravated by pregnancy and childbirth that has a negative impact on the woman's wellbeing"(Firoz et al 2013). Globally, more than 1,500 women lose their lives daily due to complications arising from pregnancy and childbirth. In Nigeria, an estimated 40,000 Nigerian women die in pregnancy and childbirth each year and another 1 to 1.6 million suffer from pregnancy and birth related morbidity annually (USAID 2012). Over her lifetime, a Nigerian woman's risk of dying from pregnancy or childbirth is 1 in 29, compared to Sub-Saharan average of 1 in 39 and a global average of 1 in 180, while in developed regions of the world, a woman's risk of maternal death is 1 in 3,800 (WHO 2012). Significant efforts have been made through the Millennium Development Goal to reduce the maternal mortality rate, unfortunately; only 45% reduction was achieved. The maternal mortality in developing countries in 2015 is 239 per 100,000 live births compared with 12 per 100,000 live births in developed countries (WHO 2016). One of such efforts designed to reduce infant and maternal mortality in Ondo State is through prompt attention to pregnant women and free maternity services across all the State Government owned health care facilities through "Abiye" Programme.

Global Causes of Maternal Mortality

Knowing the causes of maternal deaths helps to improve maternal health policies and enhance maternal survival. According to a WHO study published in "The Lancet Global Health" 2014 which examined the causes of more than 60,000 maternal deaths in 115 countries, it was discovered that 1 in 4 maternal deaths are caused by pre-existing medical conditions such as diabetes, HIV, malaria and obesity whose health impacts can be aggravated by pregnancy. In the same

vein severe bleeding from pregnancy and childbirth also made up a quarter of all such deaths. However Lale Say et al (2014) opined that maternal causes of death can be grouped into direct and indirect causes globally;

Direct causes are those related to obstetric complications of pregnancy, labor and delivery, and the post-partum periods which accounts for 80% of maternal deaths.

Indirect causes are those relating to pre-existing medical conditions that may be aggravated by the physiologic demands of pregnancy.

Lewis (2007) in his confidential enquiry into causes of maternal deaths in United Kingdom described haemorrhage as the leading cause of maternal death worldwide account for 27.1% of maternal mortality. It is further subdivided into Anterpartum (6.5%) Intrapartum 0.9% and Postpartum 19.7%, Hypertension (in form of pre-eclampsia and eclampsia) as the second most common direct cause of maternal mortality worldwide representing 14.0% while Prolonged and Obstructed labour accounts for 8% of maternal death majorly caused by cephalopelvic disproportion; a disproportion between the size of the fetal head and the maternal pelvis; or by the position of the fetus at the time of delivery. In addition, Sepsis contributes to 10.7% of maternal death. Other direct causes of maternal mortality include; abortion 7.9%, embolism 3.2%, other direct causes accounted for 9.6%. The indirect causes of maternal deaths worldwide accounts for approximately 20% of maternal deaths. It occurs as a result of pre-existing medical conditions such as anaemia, malaria, hepatitis, heart disease, and HIV/AIDS. Furthermore, recent World Health Organisation data-QD7X9 on causes of maternal deaths worldwide (%) shows pre-existing medical conditions exacerbated by pregnancy accounts for 28%, severe bleeding 27%, pregnancy induced hypertension 14%, postpartum infections 11%, obstructed labour 9%, abortion complications 8% and blood clot 3%. However, Brown, &Small (2016) were of opinion that causes of maternal mortality worldwide can be attributed to delay in seeking and receiving health care. This delay in seeking and receiving health care accounted for an increase in maternal mortality ratio in Ondo state which was 765 deaths per 100,000 live births before 2009 (Oyeneyin 2014). This was further confirmed by the Nigeria demographic and health Survey of 2008 that put Ondo State as having the worst maternal and child health indices in the Southwestern zone of Nigeria. Causes of maternal mortality identified within the state according to Oyenehin (2014) include; postpartum haemorrhage accounting for 37%, antepartum haemorrhage (APH) 5%, eclampsia 24%, uterine rupture 8%,Septicaemia 15%, abortion complication 3%, HIV/AIDs 5%, others 11% and 6%

unknown. Factors identified to be contributing to maternal mortality within the state were; age within 31-36 years having the highest frequency (37.7%), parity(1-4) having 47.4%, and place of delivery, public health facilities having 88.6% in addition to the delays in seeking and receiving health care. Adeyanju (2016)

Intervention to Reduce Maternal Mortality: Concept of "Abiye" Safe Motherhood Initiative

"Abiye" is the Yoruba literal translation of safe motherhood. It is a language that we usually say to pregnant women on their way to the labour room meaning that they will actually come back alive with their babies. In Ondo State, it is "a concept", "a wish", "a prayer" and "a proclamation" Ondo State Ministry of Health (2012). Abiye programme came into being in 2009 as a result of the declaration made by the National Demographic and Health Survey of 2008 which put Ondo State as having the worst maternal and child health indices in the South Western zone of Nigeria. A baseline survey conducted in the state in 2009 shows that only 16% of registered antenatal patients delivered in the facilities where they have skilled attendants, about 84% of the women could not be tracked Adeyanju (2012).As a result of this, many of these pregnant women who could not be helped when facing challenges during childbirth obviously might have contributed to increase in mortality in the state. To address this low utilization of maternity health care facilities manned by skilled birth attendants, the State government in her wisdom introduced the concept of "Abiye Programme". According to the state government the "Abiye" programme was developed to bring free qualitative and effective health care to women and children where they live, work and play; develop sustainable equity-based health care for women and children where they live; work and play; reduce child and maternal mortality by 50%; and increase health facility utilization for maternal health by 60%, all by year 2011. The "Abiye" programme is an innovative free health programme for pregnant women and children under-5 launched on 28th October 2009 at Ifedore Local Government Area of the state as a pilot: it is a programme that unveils a creative approach in tackling maternal mortality not only from the point of view of health care, but also from the perspective of the Millennium Development Goal which sought to reduce maternal mortality in appreciation of the role of women in the growth and sustenance of the family, the economy and ultimately in the overall interest of the people with the following goals;

--Reduce infant and maternal mortality within two years.

-Eliminate the four major delays contributing to maternal death

-Train and re-train health workers in the state.

-Provide essential drugs and services for emergencies.(Ondo State Ministry of Health 2009). Ondo State of Nigeria is one of the seven states carved out of the former western states on 3rdFebruary 1976, with Akure as the State Capital. The state is blessed with different levels of health care facilities such as Primary Health Care Centres, General Hospitals, and State Specialist Hospitals. However, these facilities were poorly founded with gross inadequate health infrastructure and ill-motivated & demoralized professional workforce. (Oyeneyin 2014). The concept highlighted four important areas of delay in mothers receiving maternity care that had contributed to high maternal mortality in the state. These areas of delay include: delay on the part of patients to seek care when complication arises; delay in reaching the healthcare facility due to poor infrastructural support, communication challenges and transport; delay in accessing care due to poor facilities; and delay in referral care for "at risk cases" or emergencies. Adeyanju (2016). The plan to remove the delay in seeking care was achieved by educating the pregnant women on dangers of delivering at home, community health workers otherwise known as Health Rangers, were made to reach the pregnant women where they live, work and play. Each Ranger was assigned 25 registered pregnant women whom they were expected to visit, regularly communicates with, know where they live and solve their problems with a customized checklist to determine women who are at risk in pregnancy and ensure close monitoring, counseling on family planning and birth preparedness. Also each pregnant woman was provided with a mobile phone linked up to a caller user group, so that they can maintain free contracts with their health rangers and health care providers. (Adeyanju 2012). Appropriate means of transportation suitable for the area of operation to help evacuate patients as required, was put in place to resolve the problem that pregnant women encounter in order to access skill birth attendants. These range from motorcycle to four-wheel drive ambulances, speed boats and tricycle ambulances which were distributed to the various facilities.

Delay in assessing care was countered by improved facilities, done by upgrading and renovating existing health facilities in all localities within the state. Ensuring that these facilities are well equipped and manned by skilled birth attendant trained on safe delivery practices, emergency obstetric and newborn care as well as life saving skills. Also there is provision of drugs, consumables, and other necessary materials which helps to attend to these patients promptly. Delay in referral was countered by the establishment of world class Mother and Child Hospitals in the state which address the need for a well-structured and

functional two-way referral system, from the basic and comprehensive health facilities. To further reduce maternal death in the state as part of Abiye programme, the AGBEBIYE concept was introduced, in which traditional Birth Attendants (TBAs) and Faith based practitioners were encouraged to stop taking deliveries in their homes rather refer pregnant women to government healthcare facilities where there are availability of skilled birth attendants, for every patient being referred, there is remuneration for them. They are also being engaged in skill acquisition such as; tie and dye, hat and beads making, soap making, catering among others so that they will have something to fall back on when they are stopped from taking deliveries. A team of ward monitors, called "Vanguards" keep eye on local TBAs to ensure compliance. TBAs who continue to operate face sanctions or in extreme cases would have their premises closed by authorities. (Downie 2016)

The concept did not discriminate between indigenes and non-indigenes as pregnant women from neighbouring states usually come to access the programme. As a result, the programme has made positive impacts on the reduction of maternal and child mortality in Ondo State. (ODSG website 2012)

Results of the "Abiye" Safe Motherhood Initiative.

According to Mimiko *et al* (2013) in the first year (2009-2010), the results showed an increase in Antenatal registration by 1,855%, facility deliveries increased by 1,602%, TBA/ mission house deliveries decreased by 400% and there was a great reduction in maternal mortality rate, 1,099 safe deliveries were recorded out of the initial, 1,217 pregnant women who registered with one maternal death. Evaluation report conducted by Institute of Public Health, Obafemi Awolowo University Ile-Ife/ Bill Gate partnership revealed that the Abiye Safe motherhood programme has achieved the three set goal. The programme increased facility utilization to 69.6% as compared to 60% targeted; based on the increase in the proportion of deliveries taken by Skilled Birth Attendants (SBA) from 43.3% in 2008 to 69.6% in 2012, with the likelihood that the MMR have decreased by 31% within the period. By extrapolation the MMR in the state reduced by 15% and by 13% in 2 years. Due to these satisfying outcomes of the programme, several national, intercontinental and international bodies like Society of Gynecology and Obstetrics of Nigeria (SOGON), World Health Organisation and Health funding Organisations like the World Bank have commended the programme recommending it for adoption towards mitigating the rise in Maternal and

Child Mortality in Africa (National Network 2013). Abiye programme became a success in Ondo State after which the factors contributing to maternal morbidity and mortality such as delays in seeking and receiving health care were identified and resolved, This is in line with the World Health Organisation Partnership for Maternal, Newborn and Child Health view that Problems such as; obtaining money for treatment, distance to health facility, the lack of access to or use of quality delivery services are responsible for elevated maternal mortality in Nigeria.(WHO 2015). Increase in the proportion of deliveries taken by Skilled Birth Attendants (SBA) from 43.3% to 69.6% has also been recognized as part of the success story in mortality reduction in Ondo State, this findings support the view of Kawakatsul *et al*(2014) who were of the opinion that skilled attendance at delivery is one of the most important factors in preventing maternal death.

Challenges to the Abiye Safe Motherhood Initiative

According to Olatunji (2013) Abiye programme was faced with several challenges despite its achievements. Some of which are; Sustainability of the programme after the tenure of the government that initiated it which was viewed from the perspective of discontinuity of project as a result of change in government and political party in power, this is a threat that is very real. From antecedent events, the understanding of 'continuity' by Nigerian politician ends with an extra tenure of office and not with on-going projects. Every political Chief Executive has the idea that new projects must be initiated to demonstrate that he/she has an idea to move the society forward, in this way; many lofty ideas and projects initiated by past governments get abandoned and are left unfulfilled. Strategies however, have been put in place to ensure the sustainability of the programme after 2015 and beyond. These are community based health insurance scheme, introduction of a health tax, research grants, training fees, Donor agencies support and health trust fund. According to Mimiko, Nair, Muritala, and Cooke (2013) there is a funding gap to the tune of N3.0billion (18.73 million USD) as the Mother and Child Hospital model is wholly funded by the Ondo State government to the tune of 2.207 billion (13.8 million US Dollars).

Another challenge faced on this project is the unwillingness of the participating pregnant women to surrender the mobile phones given to them and maintained free of charge until after delivery. Such phones are meant to be given to other newly registered pregnant women on the project. In addition to this, there is shortage of qualified health personnel (midwives) to cope with the number of pregnant women who came out of the rural areas of the state to register in maternity

facilities established by the project across the state. In view of this government had to embark on emergency recruitment and training of more midwives to cope with the human resources in relation to the project.

RECOMMENDATIONS

Midwives play an important role in the reduction of maternal mortality in all three levels of health care provision. They are the skilled birth attendants and in most cases handle most of the deliveries in the primary and secondary facilities. Thus, the government at all levels should recognize this significant role and employ more midwives with special incentives at the grass root in order to manage maternal and child health instead of embarking on task shifting and task sharing to people who do not have the basic knowledge of midwifery practice.

CONCLUSION

The "Abiye" concept is a laudable programme/initiative that has contributed tremendously to maternal and child mortality reduction in Ondo State. Despite numerous benefits inherent in the concept, there are still a number of challenges to its continued operation such as; funding now made worse by the economic recession currently faced by the nation. Since the benefits still outweighs the challenges, Africa and the developing nations of the world in general need to adopt a similar concept in mitigating the unacceptable high maternal and child mortality as recommended by the international bodies.

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