Preconception Care: An Untapped Route towards Reducing Infant and Maternal Mortality in Nigeria

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ABSTRACT

The aim of preconception care is to reduce parental risk factors before pregnancy through health promotion and intervention which reduces maternal and infant morbidity and mortality. Healthcare providers play important roles in providing this care to women and men of childbearing age. In Nigeria however, the implementation of preconception care by healthcare providers remains low. In this review, an overview of preconception care in Nigeria and the barriers that affects its delivery will be explored.

Peer reviewed articles were searched using key words related to preconception care and implementation of the care by healthcare providers. Publications were deemed eligible if they reported on preconception care and barriers influencing the provision of preconception care.

A careful analysis of existing literatures on the topic shows that, there is a low understanding of preconception care among women of reproductive age in Nigeria. Furthermore, preconception care is not yet widely practiced in the Nigeria as part of health care due to unplanned and recurrent pregnancies, high parity, poor health care seeking behavior and low level of maternal health care.

In view of the aforementioned challenges, there is a need to develop and implement preconception policies and guidelines to be applied in the existing health care system. Considering the importance of this care in improving pregnancy and neonatal outcomes, there is a need to educate and engage members of the society as well as health care providers in its importance and delivery.

Keywords: Infant and maternal mortality, preconception care, pregnant women.

I. INFANT MORBIDITY AND MORTALITY COUNTS

One of the targets of World Health Organization (WHO) is to improve pregnancy outcomes and reduce maternal and infant mortality in developing countries. This is also one of the Sustainable Development Goals for the year 2030 [1]. In recent years, the efforts that are made at improving pregnancy outcome have focused mainly on the care of women during pregnancy and after delivery by increasing coverage of antenatal care and ensuring deliveries by skilled birth attendants. Despite these efforts and improvements, there is still increasing number of maternal and infant mortality, pregnancy complications, adverse pregnancy outcomes, including congenital anomalies, low birth weight and preterm delivery. [2]. In 2006, it was reported by the March of Dimes that 7.9 million children (6% of total births worldwide) have serious birth defect of genetic or partially genetic origin annually.

Globally, the WHO reported that maternal mortality rate still remains high. In 2017, it was estimated that about 295,000 women died during and following pregnancy and childbirth [3]. Although, it was also reported that there is a global reduction in infant mortality rate from 65 deaths per 1000 live births in 1990 to 29 deaths per 1000 live births in 2017, an annual death of about 4.1 million babies still occur during the first year of their life. According to National Population Commission (NPC, Nigeria) and ICF 2019, the maternal mortality ratio was 512/100,000 live births, lifetime risk of maternal death was 1 in 34. The neonatal mortality rate was 39/1000 [4] having an effective PCC program will play a role in improving this poor reproductive health indices.

II. ROLE OF PRECONCEPTION CARE IN REDUCING MATERNAL MORTALITY

On a daily basis, about 830 women of reproductive age die from complications related to pregnancy and childbirth. In 2015 about 303,000 women died from pregnancy and childbirth related problems [5]. Majority of these complications develop during pregnancy, some occur before and gets complicated during pregnancy, especially if not managed as preconception care. Due to the slow progress in
improving pregnancy outcomes which has been noticed in the past few years, efforts has been geared towards preconception care to serve as an alternative and additional approach to solve the problem of persistent poor pregnancy outcomes. In the past years, preconception care focused on women with a chronic medical condition, poor obstetric history or women who are preparing for pregnancy in the nearest future. However, preconception care should be focused on every couple as there is possibility for every couple to have at least one risk factor for poor pregnancy outcome [6].

Preconception care is defined as the provision of biomedical, behavioral and social health interventions to women and couples before conception. It is targeted at improving their health status, reducing behavioral, individual and environmental factors that contribute to depriving maternal and child health outcomes.

According to [1] the Centers for Disease Control and Prevention preconception health is an important opportunity for primary prevention of maternal and infant mortality and morbidity, including unwanted pregnancies, pregnancy complications, infertility, stillbirths, birth defects, low birth weight, underweight and stunting, vertical transmission of sexually transmitted infections, lower risk of some forms of childhood cancer, lower risk of type 2 diabetes and cardiovascular disease later in life. Preconception care includes-nutritional conditions including folic acid supplementation, family planning, medication, mental health, violence and abuse family history, screening, genetic conditions and genetic counselling, environmental health, vaccination [1]-[7]. It also includes improving health-related behaviors – use of folic acid supplementation to reduce the incidence of neural tube defects, reducing preterm births, low birth weight, and poor neonatal and maternal outcomes through smoking and alcohol cessation, maintaining healthy weight and adequate nutrition prior to conception; reducing infections through screening and vaccination; identifying medications, teratogens, occupational and environmental hazards that could be lead to poor pregnancy outcome. All these can help couples to plan their pregnancies in order to improve maternal outcomes [8].

The goal of PCC is to promote the health of women of reproductive age before conception and thereby improve pregnancy outcomes. Preconception care plays a crucial role in the reduction of maternal and neonatal morbidity and mortality rate. It is evident that preconception care have an essential role in preventing short and long term adverse health outcomes for women and their newborns [9]. It is an evidence-based intervention which aims at - health promotion, disease prevention, and treatment of existing disease before pregnancy to prevent adverse pregnancy outcomes. Preconception health care improves maternal and pregnancy outcomes by identifying risky behaviors before pregnancy and reducing unwanted pregnancies which can occur [5]. Maternal and child health care providers also recommend preconception health care to modify biomedical, behavioral, and social risks in other to achieve better pregnancy outcomes through risk assessment and provision of proper care. However, it is not routinely practiced within the continuum of maternal and child health care in low and middle-income countries like Nigeria [6].

According to [2], knowledge of preconception care can be acquired through creating awareness about preconception care and its benefits which can be done by maternal and child health provider, media and counselling. In Nigeria, there is poor attitude towards preconception care and there is reluctance of health professionals to participate in preconception care when its utilization is almost not in existence [2]-[7].

III. PRECONCEPTION CARE IN NIGERIA

In Nigeria, preconception care is a necessary approach as there are lots of women with diverse medical conditions such as hypertension, diabetes, sickle cell diseases and other diseases, who can potentially benefit from the care [10]. The national guidelines for the prevention of mother-to-child transmission (MTCT) of HIV identifies preconception care as a primary prevention strategy. However, preconception care is not routinely practiced as a part of health care in Nigeria, although some researches have shown sporadic provision and use of preconception care services within the health system.

According to a study carried out in Giwa, Kaduna State, Nigeria it was found that only 4% of study participants were aware of preconception care while only 2.7% used preconception care services. Also, a study in Ile-Ife, Nigeria, found that many of the study participants from various primary health care facilities knew the components of preconception care, but only a few had benefitted from preconception care services [11]. The preconception care practices identified in the study includes the use of folic acid supplement four weeks prior conception, healthy food diet, maintaining a healthy weight through physical activity, tobacco and alcohol cessation, genetic counselling, treatment of sexually transmitted infections and chronic diseases, avoidance of unprescribed medications and teratogens. Another study carried out among women in Ibadan, Nigeria, it was reported that only 2.5% of participants used folic acid prior pregnancy. Awareness and use of folic acid was related to higher level of education and upper socioeconomic status of the participants. In a case–control study that was conducted among pregnant women with sickle cell disease in Kano City, Nigeria [11]. It was identified that women that use preconception care along with their care had better pregnancy outcomes.

A study that assessed the awareness and perception of preconception care among women, level of awareness was low (20.6% among the study participants). This is lower than what was reported in developing countries-Ethiopia (27.5%) and Saudi (37.9%) [11]. It is also lower than (76%) among Mexican-American populace and a study conducted in Enugu, South-Eastern Nigeria which revealed 43.1% awareness among study participants. The high level of awareness in other studies might be associated with high level of education among the respondents [11]-[12]. Preconception care is not widely practiced in the health care system of Nigeria due poor health care seeking behavior and low level of maternal health care [7]-[12]. Presently, care is focused on antenatal care, skillful delivery, postnatal care and child health to reduce maternal and neonatal morbidity and mortality. However, preconception care is an essential element to combat the high rate of maternal and neonatal morbidity and mortality in Nigeria, it should be incorporated.

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into the whole maternal and child health package. The need for awareness and educational intervention is essential for women to utilize PCC effectively, considering its benefits on a range of health outcomes especially among women of reproductive age [9], [2].

IV. BARRIERS IN THE UPTAKE AND DELIVERY OF PRECONCEPTION CARE

Despite persistent poor pregnancy outcomes, establishment of the impacts of PCC, different recommendations, there is no enough comprehensive preconception care program that has been incorporated into maternal and child health care system and only few healthcare providers are currently providing preconception care, which has also caused uptake of PCC to remain low in most low-income countries and remains a challenge for many people in most cultural settings like in Nigeria [7]-[13]. Understanding challenges to providing and using PCC is essential as it can lead to intervention development and also some strategies to improve use of PCC and its delivery [14].

Despite the fact that the concept of PCC has been articulated for over a while, it is has not become part of the routine health care practice, especially in low-income countries [13]-[15]. Some of the barriers to the provision of PCC services have been identified lack of awareness about the concept of care, lack of knowledge on its benefits and lack of clinical guidelines [7]. According to [16] barriers identified include unplanned pregnancies, lack of awareness and unfamiliarity with the concept of PCC, ignorance about existing risks, and perceived sufficient knowledge. There are other possible factors identified that can influence the use of PCC services, such as attitude of the health care provider and lack of effective communication, this suggests that healthcare providers may have an influence on use of PCC. Awareness is also a facilitating factor [17], lack of or limited awareness about the availability and importance of PCC is a discouraging factor in the provision of PCC [16]. Healthcare professionals who deliver PPC have the potential to significantly influence the use of PCC among couples [18]. Other factors includes - lack of time and manpower [17], lack of reimbursement for PCC, lack of Governmental support. There is need to create awareness to people and also continuing education of the healthcare providers on PCC considering its benefits on health outcomes [19].

V. CONCLUSION

Preconception care focus on risks and existing health conditions which must be acted upon before conception to achieve better pregnancy outcome. It includes reducing risk in preparation for pregnancy, health promotion behaviors and preventive interventions in preparation for pregnancy.

Studies have shown that unplanned and unwanted pregnancies are associated with increased risk of poor pregnancy outcomes, it has been shown that there is at-least one risk factor that could have negative impact on pregnancy outcome. These factors include obesity, diabetes mellitus, hypertension, smoking and alcohol consumption [20]. If identified and interventions are provided prior pregnancy, there will be a better pregnancy outcome.

Level of knowledge on preconception care is essential to tackle the adverse pregnancy outcomes and to reduce maternal and child morbidity and mortality. Women who have adequate knowledge of PCC know their health status before conception to cease risky behaviors. It is suggested that governmental and non-governmental organizations should create awareness and implement systems that can enhance preconception care. Preconception care services should be readily available and incorporated it into routine maternal healthcare services to achieve better outcome. To achieve this, women should be offered this service at every opportunity of accessing any healthcare facility until it becomes a routine healthcare service.

CONFLICT OF INTEREST

Authors declare that they do not have any conflict of interest.

REFERENCES


