Greener Journal of Medical Sciences
Vol. 10(2), pp. 33-36, 2020
ISSN: 2276-7797

https://gjournals.org/GJMS

Update on Maternal Mortality in Nigeria – The Way Forward, Covid-19 in Perspective

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ARTICLE INFO.

Article No.: *081220098*
***Type*:** *Commentary*

Accepted: *14/08/2020*
Published: *13/09/2020*

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Keywords: *Maternal, mortality, Covid-19.*

COMMENTARY

The covid-19 is a public health challenge that has affected the world's stage in all aspects - economically, socially and health wise.[1] The pregnant women are no exception as regards morbidity and mortality in relation to covid-19 especially in countries with a high prevalence of the disease burden.[2-4] The reasons being that in pregnancy there is reduced immunity as pregnant women are predisposed to infections.[3,4] In addition, in developing countries like Nigeria, the challenges of poverty, ignorance, denial, access to health care as well as the availability of skilled birth attendants at delivery are all factors that contribute to the alarming maternal mortality in the country.[1,5]

In these trying times with the global covid-19 pandemic, the brain drain in Nigeria makes it more difficult for pregnant mothers to receive adequate care from obstetricians and midwives who are not enough to serve the Nigerian populace of over 200 million people.[7-9]

Having introduced the topic in the above paragraph it will be necessary to throw more light on one of the key words of this letter to editor and that is "Maternal Mortality". Maternal mortality is defined as the death of a woman while pregnant or within 42 days of delivery or termination of pregnancy, regardless of the site or duration of the pregnancy from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.[10-18] Late maternal death is the death of a woman due to direct or indirect obstetric causes more than 42 days but less than 1 year after termination of pregnancy.[10-14,19-24] Pregnancy related death is the death of a woman while pregnant or within 42 days of termination of pregnancy irrespective of the cause of death.[12,21]

There are different classifications of maternal mortality. Two of these for discussion are the direct obstetric causes and the indirect obstetric causes or the major causes of maternal mortality and minor causes of maternal mortality.[12-14,21-24]

The direct obstetric deaths results from obstetric complications during pregnancy, labour or puerperum fromomissions, interventions, incorrect treatment or a chain of events resulting from any of the above.[9,12-18]They are due to haemorrhage (mainly post-partum), sepsis or infections, hypertensive diseases in pregnancy mainly severe pre-eclampsia/eclampsia, obstructed labour or labour dystocia, complications of abortions (especially unsafe abortion), interventions, omissions, incorrect treatments or events resulting from any of these.[12,13]

The indirect causes of maternal mortality occurs from previously existing diseases or from diseases

emanating during pregnancy, these diseases are aggravated by the physiological effects of pregnancy.[18-21] Common in the developing countries like Nigeria aremalaria, anaemia, HIV/AIDS and cardiovascular diseases (heart diseases).[12]

Measures of maternal mortality are maternal mortality ratio and maternal mortality rate (MMR).[12,21]The maternal mortality ratio is the obstetric risk faced by a woman each time she becomes pregnant.[21]When women have many pregnancies the risk of maternal death ismagnified.[12] MMR is calculated as the number of maternal deaths during a given year per 100,000 live birth during the same period.[21] The appropriate denominator for MMR would be the total number of pregnancies (live births, still births, abortions, ectopic and molar pregnancies).[12] These figures are seldom available especially in developing countries where most births take place, so the number of live birth is most often used as denominator.[6] For this reason, in developing countries like Nigeria deliveries is used(live + still births). [7-9]

Maternal mortality rate (MMR) measures both obstetric risk and the frequency with which women are exposed to this risk .[8,9] This is calculated as the number of maternal deaths in a given period per 100,000 women of reproductive age (15 – 49 years).[7] Often used interchangeably (rate or ratio). It is essential for the sake of clarity to specify the denominator used when referring to either of these measures.[10]

Life time risk of maternal deaths takes into account both the probability of becoming pregnant and the probability of dying as a result of the pregnancy cumulated across a woman's reproductive age.[11] Example of which is the risk of dying in the developing countries compared to the developed countries.[9-10]

Worldwide, approximately 303,000 women between the ages of 15 – 49 years died as a result of complications of pregnancy and childbirth.[12] Most of which occur in the developing countries of the world.[11-12]In Nigeria the Maternal Mortality Ratio (MMR) was 576 per 100,000 live births in 2013, an increase from 545 in 2008.[13-17]Majority of developing countries of the world are yet to meet up with MMR of the developed countries,which was 230 per 100,000 live births. The MMR in the developing countries of the world is 20 times or more when compared to the developed countries.[10-12] In Nigeria,chances of dying in pregnancy is between 1:16 to 1:22.[13]Every minute every day, somewhere in the world a woman dies as a result of pregnancy and child birth. Nearly 2/3 of 8 million infants die annually as a result from poor maternal health.[13]Majority of these women diefrom preventable causes.[14] For every woman who dies, research indicates that millions of women will suffer disabilities and sometimes for the rest of their life.[15] The suffering goes beyond the physical but affects the woman's ability to undertake their social and economic responsibilities.[15,16] Maternal death is a tragedy to the woman, their family, community and the nation.[16] Researchers have shown that 90% of children do not live up to their 5th birthday on demise of their mothers.[9-10] For the girl child the demise of the mother is more devastating as it increases the chances of death of other children 2-4 times as a result of absence of care and support.[14-16] By reducing the maternal mortality, the dominant effect on perinatal and infant morbidity is reduced.[14-15] This clearly shows that there is a correlation between the mothers health and that of their children.[14-16]

The question to be asked is where do maternal deaths occur? Maternal mortalities occur in places where it is least expected or difficult to measure its indices accurately.[1-4] Developing countries of the world exemplified by Nigeria record over 80% of maternal deaths globally.[6-8] Scholars first documented estimate of maternal deaths around the world in late 1980's.[17]

Why do women die? Maternal mortality is the concluding story of woman from birth until pregnancy, delivery and puerperium due to failure in obstetric care or unsafe motherhood.[16-18] Annually, over 200 million women get pregnant.[19] Of the estimated 7.8 billion people in the world, over 2 billion are mothers.[19-20] Although pregnancy is not a disease, it is potential risk of mortality.[19] Researchers have shown that obstetric complications are unforeseeable or unpredictable.[6-8] Globally 80% of all maternal mortalities are direct results of complications arising from pregnancy, delivery and puerperium.[9,10] Basically, the aetiological factors for maternal death are the same globally.[20] Bleeding or haemorrhagethis happens suddenly and is unpredictable, most often occurring after delivery referred to as post-partum haemorrhage leading to death.[19-20]Puerperial sepsis in myriad of cases linked to unskilled birth attendant and poor hygiene severe after delivery if not managed properly with antibiotics.[18-20] Hypertensive disorders of pregnancy, especially severe pre-eclampsia/eclampsia.[19,20]Prolonged obstructed labour or difficult labour which is a continuum of cephalopelvic disproportion in labour.[20]Labour dystocia is common in the developing countries of the world due to the endemicity of poverty and malnutrition.[20] In addition, in these regions of the world, in traditional settings there are taboos concerning foods which aid in the growth and development of the girl child.[18-21] The vetting of early marriage in these traditional settings is an aetiological factor of labour dystocia in situations where the girl child is made to prove her fertility despite her poorly developed pelvis.[16-20]Complications of unsafe abortion (13%) contribute to approximately one third of maternal deaths in some developing countries of the world.[16-18]

Literatures have revealed that approximately 20% (indirect cause) of maternal deaths are as a result of pre-existing diseases complicating the pregnancy or pre-dating the index pregnancies and there management.[20-21] Examples of such diseases are anaemia, HIV/AIDS and cardiovascular diseases.[19-20]

What are the factors responsible for maternal mortality? In the developing countries of the world the factors that are associated with maternal mortality are linked to the girl child and women.[1,4-8] These factors are socio-cultural and economical.[9-11] Due to the low status of girls and women in the society, they are denied access to basic education which results in their poor economic state.[18-20] The effect of this is poor decision making concerning their health andnutrtion.[17-

[18] Furthermore, girls are discriminated with respect to the allocation to resources of the family.[4-8] In some remote villages in Sub-Saharan Africa, girls are subjected to the position of subordination from the cradle as they over work, denied nutritious foods and basic education.[17-20]

Prevention of maternal death should be the responsibility of all because without women, there will be no procreation and the continuity of the human race.[22] This is the reason why some researchers have described maternal mortality as a tragedy.[14-16] For this reason, both the developed and developing countries of the world should synergize to prevent maternal mortality.[23] Different authors have approached prevention of maternal mortality from myriad perspectives.[24] Some viewed it from addressing the obstetricconditions such as haemorrhage, hypertensive diseases, puerperialsepsis, complications of unsafe abortion and obstructed labour.[19-20] Other authors have looked at the medical conditions that pre-date or aggravate pregnancies examples of which are anaemia, HIV/AIDS and cardiovascular diseases.[20-21] However, some other researchers have looked at it more comprehensively by combining the former with addressing the issues of the 3 types of delay that predispose to maternal death, as well as reproductive health issues, child spacing and harmful traditional practices such as early marriage and female genital mutilation.[25]

This aspect of prevention of maternal death will beam the search light on primary prevention, antenatal care and clean/safe delivery.[20-23]As a follow-up of primary prevention of maternal mortality, the place of advocacy for basic education for the girls and women cannot be over emphasized in line with the Sustainable Developmental Goals.[16-20] This is because an educated girl and woman will be able to take the right decision concerning her reproductive health, when to get pregnant, how to space her children, the number of children to have, the right nutrition and the importance of ante natal care.[24] Family planning service is one of the pillars of safe motherhood, preventing unwanted pregnancies, too early pregnancies, too close together pregnancies, too many or too latepregnancies.[26] Studies have shown that 1 in 4 maternal deaths could be prevented by family planning. At present the world's population is 7.8 billion with approximately 60% of unintended pregnancies in the developing countries of the world.[27]It has been projected that if the corona virus pandemic continues for the next 6 months over 40 million women will not gain access to contraception/family planning services.[27]

Basic maternity care comprising of ante natal care (ANC) and clean and safe delivery has been proven to reduce maternal mortality.[20-24] Accessibility to ANC which is also a pillar of safe motherhood reduces incidence of obstetric complications and morbidity associated with pregnancy, hence maternal morbidity.[16-20] Studies have revealed that women who attend regular ANC have privilege to early detection and treatment of diseases.[10-12] In addition, they have adequate information on place of delivery, prophylactic administration of iron, folic supplement, malaria prevention and tetanus toxoid.[18-20] Clean and safe delivery comprising of aseptic procedures, oxytocics,antibiotics cover and post-partum have been revealed to reduce maternal mortality.[19-21]

The question is how can we reduce maternal mortality during the corona virus (covid-19) pandemic?

- Enlightenment on the ante natal mothers on the preventive measures of corona virus as recommended by the centre for disease control (CDC).
- Emphasis on the importance of ante natal care for pregnant women at 8 weeks after the last menstrual period as emphasized by the World Health Organization (WHO).
- Disabuse the populace on the superstitious believes about covid-19.
- Advocacy for the support by the Government, Non-Governmental Organizations,
- International agencies on the need to provide testing kits for ante natal mothers especially in communities with increasing numbers of covid-19.
- Training and re-training of obstetricians and mid-wives on preventive measures on covid-19.
- Non-stigmatization of positive mothers for covid-19 ante natal mothers.
- Multidisciplinary approach in the management of covid-19 positive mothers involving the obstetrician, mid-wives, paeditrician, internist, pathologist, pharmacist, psychologist and social workers.
- The need for grants in the support of research amongst ante natal mothers in communities with high prevalence of covid-19 infections especially in the area of vaccines for disease prevention. The emphasis should be on pre-conception care.
- Formation of community participation groups to help support pregnant women that are positive for covid-19 especially from survivors of covid-19 in pregnancy.

CONCLUSION

Prevention of maternal mortality during this corona pandemic is beyond the confines of the consulting room. The issues to be addressed are social, economic, religious and cultural. The woman should be empowered economically, cultural barriers that hinder safe motherhood should be discouraged which entails proper decision making. In addition, education of the girl child is paramount in the prevention of maternal deaths because this will help her take the right decision on accessing family planning services. This will further strengthen her choice of when to get pregnant, the number of children to have and the spacing of the children.

Keywords: Update, maternal, mortality, Nigeria, COVID-19.

Conflict of Interest:

There was no conflict of Interest

Acknowledgement

Mother and Baby Care Global Foundation (Mother, Baby and Adolescent Care Global Foundation)

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Cite this Article: Briggs NCT; Eli S; Kalio DGB (2020). Update on Maternal Mortality in Nigeria – The Way Forward, Covid-19 in Perspective. *Greener Journal of Medical Sciences*, 10(2): 33-36**.**