Invited Article

An Overview Of Maternal And Child Health In Africa At The End Of 2015

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Summary
As we approach 2015, the MDG target year, concerns about maternal and child health (MCH) in sub-Saharan Africa continue to dominate the health discourse. This is because of the unflattering statistics and daily carnage in which the processes of conception, child birth and nurturing the new born which should be occasions for joy are turned into avoidable misery. This is partly because of the poor MCH indices, mostly due to a host of factors including: low uptake of contraceptives, resulting in a high fertility rate. Limited access to maternal health services exacerbated by sociocultural barriers. There are also issues of early marriage and teenage pregnancies, poor nutrition and stress during pregnancy—all of which may result in prematurity and low birth weights with their associated mortality and morbidity. There are many commitments expressed in several fora to address this situation and reverse the tide. However, progress is slow because the required human and physical infrastructure is often not in place. This is exacerbated by the continuing wars/conflicts which slow down progress. The year 2015, the target year for the achievement of MDGs, with reference to MCH is around the corner; there are however indications from periodic review that most of sub-Saharan Africa will not meet the targets. Yet, maternal and child mortality can reduce and be reversed if more can be done. This will require commitment by all, as well as judicious and efficient use of limited resources.

Key words: Maternal, Child, Mortality, sub-Saharan Africa, 2015

Introduction
One of the basic criteria for access, efficiency and effectiveness of any health care system is the outcomes provided to the users.¹ One of these outcomes is MCH. Maternal and child health is crucial, not just because it is an index for measuring the efficiency of the health care system but more importantly because of what it portends for the future and generations to come. In countries where maternal child health indices are poor, the future potential of entire communities is bleak. ²,³ This is because the health of mothers are children are essential for the economic growth and development of nations.
In sub-Saharan Africa the situation of MCH is dire; the continent accounts for over half of the world’s maternal mortality. Out of the 358,000 maternal deaths in 2008, 57.8% occurred in Africa even though the continent has only 17% of global deliveries. The risk of a mother dying in Africa is 1 in 31 compared to 1 in 4300 in the high income countries. The 2013 State of the World Mothers Index by Save the Children indicates that the ten worst countries for maternal health and child mortality are all in sub-Saharan African. Furthermore, in 2011, 1.1 million African babies did not survive their first 4 weeks of life — more newborn deaths than occurred in 1990. This increase in the total number of newborn deaths is related to continued high birth rates and too little progress in reducing newborn mortality. Also, approximately 43% of all child deaths occur during the first month of life, and this percentage is expected to increase over time as child mortality levels continue to drop. Among African countdown countries, this percentage ranges from 25% in Burkina Faso to 56% in Morocco. The risk of death increases several fold from 11-17% during delivery to between 50% and 70% during post-partum. There are however huge disparities in maternal mortality across regions, countries, and across zones within a country. In Nigeria for example, maternal mortality in the southern part of the country is 120/100,000 live births; it is up to 2,500/100,000 live births in the northern part of the country. Available documentation such as Count Down to 2015, indicates that progress towards elimination of maternal and child morbidity and mortality in the continent is slower than other regions of the world. While some African countries have made some progress with regards to attainment of the MDGs directly addressing maternal mortality (MDG 5; but also 4 and 1) in many others, no real progress has been made in the past two decades. Most of the sub-Saharan African countries fall into this lower category. Seventeen countdown countries in Africa reduced their maternal mortality ratios by 50% or more between 1990 and 2010 while Equatorial Guinea, Eritrea, and Egypt reduced maternal mortality by more than 70%.

**Causes of maternal mortality**

The high maternal mortality rate in sub-Saharan Africa is caused by easily preventable and treatable causes. Over 50% of maternal deaths are due to obstetric complication such as haemorrhage (24%); maternal sepsis (12%); abortion (14%) and obstructed labour (5%). Other causes include low uptake of ANC services; lack of skilled birth attendance; and HIV/AIDS. These conditions act in synergy with a poor health system, the lack of political will, sociocultural and socioeconomic factors. Poverty is an underlying factor for most maternal deaths, as 99% of global maternal and child deaths occur in the poorest households with implications for low birth weight. War and conflict is another underlying factor because it limits access to MCH services.
Other structural factors associated with maternal and child mortality include mothers’ low educational attainment, poor geographic access to services, high out of pocket expenditure owing to payment of user fees and poor or non-existent health insurance or other third party coverage. Socio-cultural factors associated with maternal and child mortality include early marriage, female genital mutilation, low status of women, unregulated activities of traditional birth attendants, harmful traditional practices and religious beliefs that prevent women from receiving maternal health services from trained health care providers and skilled birth attendants. Health system related factors include inadequacy both in quantity and quality of health workers, poorly equipped service centres, poorly motivated and over worked staff and, in some cases, the negative attitude of some staff towards providing care for mothers and children.

Causes of child mortality
The total annual child death in sub-Saharan Africa is approximately 4.4 million, with wide geographic variations in the mortality rate. Up to eight children under the age of five die every minute. In 36 of 46 countries in sub-Saharan Africa, under-five mortality exceeds 100 per 1000 live births; in 8 others, it is 200 out of 1000 live births. Regions of conflict and displacement record higher proportions. This situation is summed up in the 2013 State of the World Mothers report which reported that countries in sub-Saharan Africa are behind most of the world in the achievement of MDG 4 on child survival, despite the observed 7% decline in child mortality rates. Only Cape Verde, Eritrea, Mauritius, Seychelles, Botswana and Malawi are on course to achieve the MDG 4 target.

Most of the causes of childhood mortality are preventable and treatable. However, annually, about 800,000 children die of pneumonia alone; another 810,000 die from malaria and 600,000 are infected with HIV through mother to child transmission; 315,000 die from AIDS; and one-third of post neonatal deaths are due to undernourishment. In many countries in the continent, children have not been fully reached with immunization services thereby rendering children vulnerable to vaccine preventable conditions. According to Save the Children’s 2013 State of World Mother’s report, up to 2.6 million children die of malnutrition annually. Low-protein diets and other causes of malnutrition lead to stunting which affects up to 40% of children in Africa. An estimated 31 million babies are underweight in sub-Saharan Africa and 90% of infant deaths are among underweight children. In some instances, children die or risk becoming disabled because parents reject the administration of vaccines. This is due to the false belief
that the vaccines contain anti-fertility properties. 21

Maternal and child health: resource mobilization
Huge resources are required to fund activities to bring down the high maternal and infant mortality. According to the UNFPA, an estimated USD 12 billion would be required to make the desired impact and achieve the MDGs related to MCH. 22 Resources are being mobilized by local and national governments as well as some international organizations. While there is some support from UN agencies such as UNICEF, UNFPA, UNAIDS and Global Fund, some international pledges including the need for industrialized countries to devote 0.07% of their GDP to development aid, have not been fully redeemed.22 African Heads of state have consistently called on international partners to fulfil pledges and commitments so as to provide the needed assistance for health reforms. Responses from development partners and African governments have, however, been slow. Furthermore, available scarce health resources are skewed in favor of urban areas. Yet majority of people who require these services reside in the rural communities.23

The agreement to devote 15% of annual budgets to health has not been realized in most countries except Rwanda and South Africa. Per capita health expenditure in Africa hovers around USD 27, compared to USD 1,250-USD 1,350 in industrialized countries. However, analysis of health financing in Africa shows clearly that for sub-Saharan Africa to achieve the Millennium Development Goals, the proportion of government spending on health would need to increase by nearly six-fold and that more than 12% of gross domestic product would have to be spent on health, which is unrealistic.24 Furthermore, even if all countries were able to meet the Abuja target today and allocated 15% of government financing to health, 23 countries still would not reach the $34 spending level. A projection analysis shows that even under optimistic assumptions about economic growth, population growth, and tax revenue collection, and assuming that all countries meet the Abuja target, the majority of governments in sub-Saharan Africa will not meet the Commission on Macroeconomics and Health target even by 2020. Without question, more resources for health are needed in sub-Saharan Africa and donor support would have to continue for a while to come. There is an array of partnerships which span countries within and outside Africa all of whom express strong commitment to change the tide. However, the material resources needed to change the situation are in short supply. This perhaps accounts for the slow progress and the continuing high toll of maternal and child deaths. Most importantly corruption, misappropriation and inefficient use of scarce resources have remained a major barrier to the achievement of MDG 4 target in majority of the sub-Saharan African countries.
Maternal and child health: poverty reduction, health and development

Maternal and child health issues are closely related to socio-economic status of individual families and the general level of poverty.\(^{25}\) It is estimated that 40\% of sub-Saharan Africans.\(^{25}\) Poverty in sub-Saharan African has persisted, and in many instances accelerated, in spite of robust figures of economic growth. Poverty affects maternal health in many ways such as limited access to needed nutrition and medicines during pregnancy; the associated risk of anaemia; and teenage pregnancy and with low birth weights.\(^{25}\) Crucial factors include the extent to which parental income levels affect food security, pay for needed pre and postnatal care, and child care. The significance of parental income is underscored by the general lack of welfare services or safety nets for the most vulnerable segments of the population in most countries on the continent. In the final analysis, what translates into the unacceptably high maternal and infant mortality statistics are rooted in the socio-economic conditions of parents.\(^{17,19,25}\) The foregoing suggests that poverty reduction efforts must proceed in tandem with efforts to reduce maternal and infant mortality.\(^{19,25}\) Across the African continent, there are the challenges associated with health service delivery. There is a lack of basic of equipment and skilled health workers necessary to deliver basic MCH services.\(^{5}\) This is exacerbated by the migration of qualified personnel to high income countries. The net effect of brain drain is the unavailability of trained skilled birth attendants and other MCH personnel. There are also health system challenges including the unavailability of essential medicines, mal-distribution of scare health personnel, poorly motivated staff who are expected to provide quality care in a challenging and hostile environment, and the poor attitude health workers.\(^{26}\)

Maternal and child health: strengthening health systems

The nature of MCH is an outcome that depends on many interrelated factors including general wellbeing, gender equality, access to family planning and other services, good health governance and a functional health system.\(^{2,16-18}\) To attain the desirable outcome, all spheres of the health care system must be functional and effective. Capacity building in MCH has significantly improved in Nigeria and most other African countries over the past two decades. However, most of the highly skilled personnel such as paediatricians, obstetricians and midwives are clustered around the major cities and thus, remain out of reach of the vast majority of the rural populace who need their services.\(^{8,9,12,18}\) A survey by the Paediatric Association of Nigeria showed that out of about 600 registered Paediatricians in Nigeria, over 98\% practice in the teaching or specialist hospitals located in the city centres.\(^{27}\) To achieve MDGs 4 and 5, health system strengthening in general and funding mechanisms in particular are crucial. Because health sector strengthening is all inclusive, a holistic strategy is required. In 2007, the African Union Conference of
Health Ministers developed the African Health Strategy (2007-2015) to guide health system strengthening. Many countries have also developed their own health strategic plans for specific periods. Therefore, the challenge is now about the efficient implementation of these strategic plans as well as ensuring that MDGs and other targets are kept on track.

**Maternal and child health: disease prevention**

Maternal and child health is adversely affected by preventable communicable diseases such as measles, chicken pox and malaria. The challenge remains strengthening the weak health care system enough to deliver a comprehensive immunisation regime. Malaria can be prevented through prophylactic use of anti-malarial drugs, long lasting insecticide treated nets (LLITN) and environmental control, all of which requires a strengthened health care system. Maternal and child health is affected by some non-communicable conditions such as diabetes, obesity and under-nutrition. Africa is facing a double burden non communicable chronic diseases (NRCDs) due to macro and micro nutrient deficiency in children. Micro nutrient deficiency leads to stunting and macro nutrient deficiency leads to diabetes and coronary heart conditions. These conditions can be prevented through growth monitoring, provision of adequate critical macro and micro nutrients and increased advocacy for a healthy nutrition regime for adults.

**Maternal and child health: disease treatment**

There are effective prevention, treatment and control strategies for most maternal and child communicable diseases. Measles and chicken pox can be prevented with appropriate vaccines and managed with appropriate medications. Malaria can be prevented with the use of long lasting insect treated nets (LLITN), chemotherapy and environmental measures and treatment effectively with artemisinin-based combination therapy (ACT) which are widely available in most health facilities in sub-Saharan Africa. However, there are challenges with access to quality vaccines and drugs, the lack of quality assured laboratories and delay and or inaccurate diagnosis of many disease conditions. There are also challenges of inappropriate drug dosing and expired vaccines and medicine purchased from unapproved facilities. The challenges associated with treatment access continue to be related to issues of access, quality, availability of necessary drugs and equipment, and above all, trained personnel.

**Maternal and child health: access to affordable medicines and technology**

Most of the annual maternal and child deaths in Africa could be prevented with better access to affordable medicines and simple technology. Most countries in sub-Saharan Africa rely on the high income countries for the production of essential medicines. Unfortunately, most of what is available is driven by the marketing strategies of manufacturers rather than the health needs. There is currently very
little investment in the research and development of drugs, vaccines and devices that can facilitate the prompt diagnosis and effective prevention of many diseases affecting mothers and children. The best illustration is malaria of which there is little new research regarding the development of new drugs.\textsuperscript{30} Improved access to affordable medicines could prevent up to 50% of women from bleeding to death during delivery. It would also save babies from deaths from treatable infections such as malaria, diarrheal diseases and pneumonia. Improving the availability of simple but needed technologies must remain part of efforts to strengthen the health system. This should include efforts to enable preterm babies to have access to specialized care by skilled personnel.\textsuperscript{5,6,8}

**Maternal and child health: research**

Maternal and child health related research in Africa is advancing and is now proposing new solutions. There is now a widely known dietary regime comprised of local and affordable ingredients to tackle childhood nutritional deficiencies. Similarly, ministries of health have for decades promoted simple salt-sugar solution for rehydration to combat childhood diarrhoea. Mothers are taught how to tepid sponge feverish babies and ton report to the clinic as necessary.. Maternal child health research has also examined socio-cultural factors that promote and sustain practices adverse to MCH, such as early marriage and female genital mutilation. There is more complex research about mother to child transmission of HIV and eclampsia during labour in most countries. Similarly, research on an effective malaria vaccine is on-going in some countries. While research to support MCH is being conducted mostly in research centres and teaching hospitals within the continent, the paucity of funds to support research in the continent has tended to lead to reliance on partners from industrialized countries.

**Maternal and child health: programme implementation**

The African continent is not short on pronouncements to promote MCH programmes. Individual countries have local programmes that address MCH. Many countries have safe motherhood programmes, special clinics and hospitals for children, and child nutrition centres. The challenge however, is implementing these programmes in ways that are effective and can bring relief to the continent.\textsuperscript{6} The implementation agenda should be comprehensive and ensure access to services provided for all facets of maternal and child care, such as pre and post natal care, nutrition for mothers and for children under five and full immunisation regimes. This would require functional health service systems, political commitment and funding. It would also require effective monitoring and evaluation structures to be in place so that emerging problems can be identified and addressed in a timely manner. Across Africa, some special centres have been
established for research as well as to serve as model care centres, especially for challenges such as vesico-vagina-fistula. However, the problem is, the uneven nature of distribution of most maternal and child care services. There are huge disparities between regions as well as within countries. The essential test of the MCH programme implementation is the extent to which it solves recognized problems.

Maternal and child health: partnership

There are various alliances and partnerships through which countries have addressed MCH. There is a partnership for Maternal, Newborn and Child Health founded in 2005, hosted at the World Health Organisation in Geneva. This joins the maternal, newborn and child health (MNCH) communities into an alliance of more than 300 member organizations. There is the Africa MNCH Partnership Coalition, which is a multi-stakeholder organization of African partners concerned with promoting reproductive, maternal, newborn and child health. This was set up in 2010, following the African Union’s Heads of State Summit on MNCH, held in Kampala, Uganda. Other partnerships are supported by various foundations and civil society organizations.

Irrespective of the type of partnerships, the purposes of the partnerships have always been to promote the wellbeing of mothers and children, to foster their rights, and to provide access to the highest standards of care. To this end, MCH partnerships should focus on advocacy, information sharing, and universal access to comprehensive, high-quality, child health care. Partnerships promote accountability. Accountability promotes services which are acceptable, accessible and affordable. Maternal and child health partnerships are invariably part of the efforts to attain better outcomes as well as place countries in strong positions to achieve the MDGs.

Maternal and child health: monitoring, evaluation and reporting

Monitoring and Evaluation (M&E) should be part of all stages of MCH programmes, starting with the project design and continuing through the assessment of final outcomes. Besides these general benefits, M&E can collect core data to inform the allocation of resources. In specific maternal areas, data would include: numbers of mothers who deliver in a health facility; numbers of attended by skill birth attendant; service availability and distance to the nearest service facility. In child health, data would include numbers of stunted and wasted children, general growth monitoring, and numbers fully immunized for age.

An appropriate M&E regime should cover all phases of the crucial aspects of maternal life including prenatal care, the delivery process (where, who attends) and postnatal care. In a similar manner it must give special attention to crucial periods in the child's development i.e. the neonatal period and the period between two and five years. In spite of the advantages, M&E components of the many programmes are the least effectively
implemented. As a result, many programmes objectives are not achieved.

**Conclusion**

The situation of MCH in Africa is in many respects deteriorating. Virtually all African countries now have initiatives to fast track MCH. However, many of these initiatives do not reach those who need them most. Some socio-cultural and religious values promote early marriage and discourage against immunization and attendance of antenatal care. This will improve MCH, training and re-training of health personnel on MCH must be continually encouraged. In addition, incentives should be provided for skilled personnel to work in rural settings in order to reduce imbalances in human resource distribution.

African governments must not relent to scale up current MCH services, as well as making them more affordable and user friendly. Until MCH improves dramatically, substantial growth and development of African nations as a whole, remains bleak. The challenge is therefore one of apprehending the urgency of the situation and taking steps to save Africa’s mothers and children. The continent can address the right to health for mothers and children as a matter of priority.

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