Motherhood in Sierra Leone.

Word count: 2180

Introduction

Sierra Leone has had one of the worlds' highest maternal mortality rates (MMR) for the last two decades. Although it has decreased since 1990, it was still a shocking 970 in 2008.(1) An 11 year civil war left the already minimal health, education and transport infrastructure of the country in tatters. However from April 2010, Sierra Leone provides free health care for pregnant and lactating women, and children under 5.

This country profile will look at Sierra Leone, its healthcare system, the extent of maternal mortality, what effect changes in the health services have brought for maternal mortality and ultimately what challenges lay ahead.

Methods

World Health Organisation (WHO) and Foreign and Commonwealth Office (FCO) websites were searched. Literature was searched using Medline through OVID and Pubmed, and using the Medical Subject Headings "maternal health" AND "maternal morbidity" AND "Sierra Leone". These were combined with general searches of the same items to gain more scope. The articles were critically appraised and filtered for the most relevant, leaving 13; 3 randomised controlled trials, 5 cross sectional studies, and 2 journal articles pre reform and 3 journal articles post reform.

Results

Sierra Leone

Sierra Leone is in West Africa with a population of 5.7 million, approximately 875 000 of these live in the capital, Freetown. (2) The country is rich in natural resources such as diamonds and rutile for titanium, although the economy does not reflect this. Rebel forces took control of these for most of the civil war from the early 1990s, and committed horrific acts of violence towards civilians throughout this time. The war was finally declared over in 2002.

From a largely rural population, with 75% people earning a living through subsidence farming and mining, the agricultural business disappeared. This corruption and conflict left 74% on less than $2 a day and nearly two thirds of the population illiterate.(2) Figure 1 depicts the kind of inequity Sierra Leone experiences through skilled birth attendants present in labour.

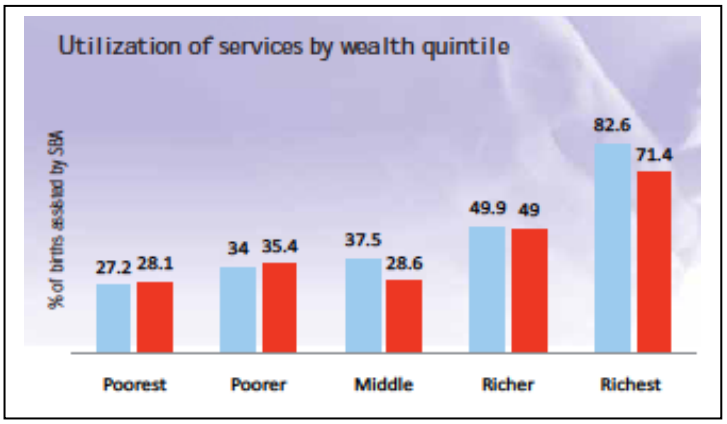

Figure 1; Percentage of births with skilled birth attendant present in different socioeconomic groups.(3)

Things are slowly starting to improve as school attendance is rising and new oil and iron ore discoveries have attracted foreign investors.(2) A large amount of income currently comes from international aid. A third of DFID funds in 2009 were given to rebuilding the country. (3)

Healthcare in Sierra Leone

A primary health care system was launched in the 1970s, with tiered levels of public health provision shown figure 2.

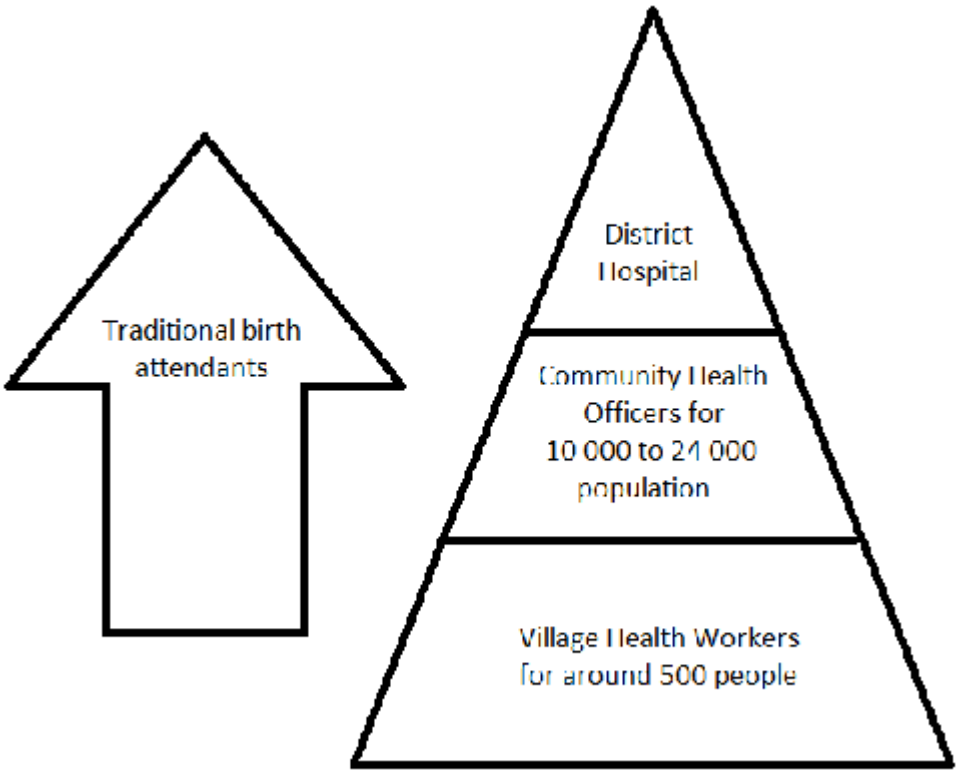

Figure 2; Organisation of the health system in Sierra Leone.

There were numerous drawbacks to this public system and traditional birth attendants proved most popular with the population. The facilities were not evenly distributed leaving up to 20km for some people to reach a centre.(4,5) These distances stand in the way of drugs being distributed and of health care workers being trained. Staff needed to seek out additional employment to add to their wages.(4) Most of this minimal infrastructure was demolished during the civil war anyway.

Thanks to the president, Ernest Bai Koroma, from April 2010 the Free Health Care Initiative was passed which states free health care services to children under 5, and pregnant and lactating women. This includes consultations, treatment, beds, obstetric care and drugs, (6) providing social justice for many women. There was resistance and scepticism but a well organised and funded scheme with combined effort from government, NGOs, United Nations and service providers with a set date for action allowed maternal and child health to be put at the top of the priority list. With the government investing in their own healthcare, donors have followed suit. Up to 850 phantom workers were hunted down enabling 1000 new staff to be put on the pay roll, and workers can now be hired in a day. (7)

<u>Maternal mortality</u>

Maternal mortality is death during pregnancy, childbirth and up to 40 days post partum.(8) It can be direct through labour or indirect such as malaria, tuberculosis or under nutrition.

MMR is a good indicator to measure the success of a health system as a whole, by taking into account the factors shown in figure 3.

- Nutrition and general health of a pregnant women
- Education
- Socioeconomic status
- Interval between pregnancies, fertility ratio
- Access to skilled health provider, birth attendants and emergency care.
- Availability of drugs and clean equipment

Figure 3; Factors affecting maternal mortality ratio

Maternal health has finally made it onto the international health agenda through the millennium development goals, shown in figure 4.

Millennium Development Goals

MDG 4: Reduce child mortality

Target 4.A

Reduce by two thirds, between 1990 and 2015, the under-five mortality rate.

MDG 5: Improve maternal health

Target 5.A

Reduce by three quarters the maternal mortality ratio.

Target 5.B

Achieve universal access to reproductive health.

By improving the health of mothers, the under-5 mortality rate will improve. MDG 3 is to eliminate gender disparity in primary and secondary education. Improving education of women can have a knock on effect on maternal and child mortality.

Figure 4; Millennium Development Goals (9)

Maternal mortality patterns

Figure 5 shows the MMR trends since 1990, it is decreasing slowly even before the reform, however comparing this to the UK MMR of 12 in 2008, there is still a long way to go.

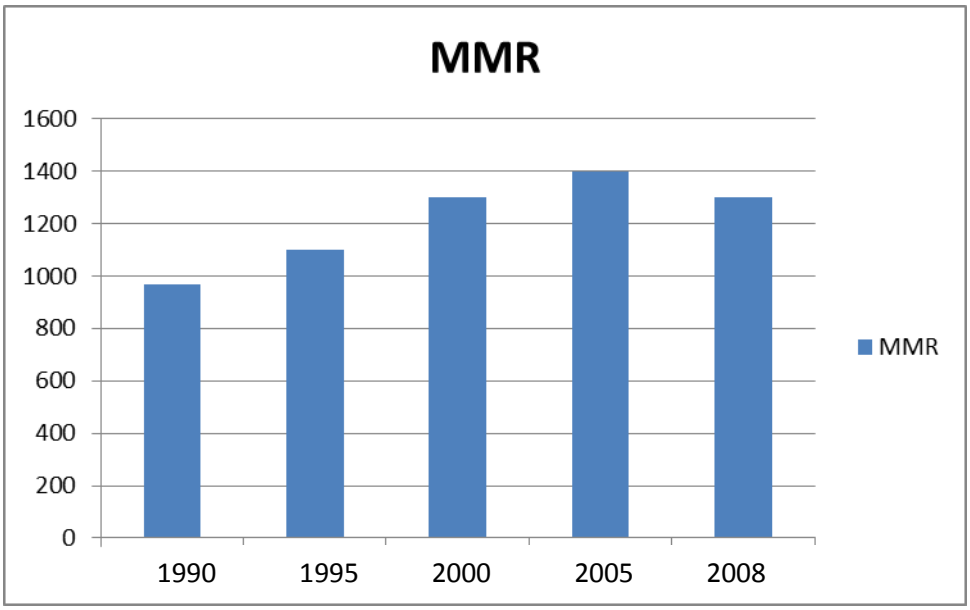

Figure 5; Graph to show the changes in MMR in Sierrra Leone since 1990.

The major contributors to direct maternal deaths are obstructed labour, haemorrhage, unsafe abortion, eclampsia and infection. At least 20% is attributable to indirect causes. (10)

Demand and use of services

A needs assessment cross sectional study from 2008 exposed the poorly distributed infrastructure. Emergency specialised obstetric care was particularly under addressed, with severe shortages of staff, equipment and supplies. Nationally only 2% of health centres were able to perform an assisted vaginal delivery(11) and just 5% of facilities had obstetricians.(12)

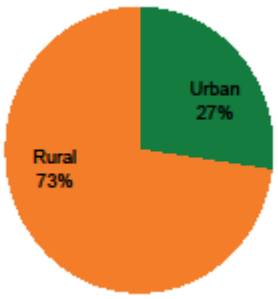

Figure 6; Pie chart to show proportion of births in rural and urban settings.(13)

There was low demand for these services. Most women had no professional present, if they did it was more likely a traditional birth attendant, especially in rural areas where the majority of births take place.(11) WHO statistics in figures 6 and 7, show a similar picture, only the small percentage of higher socioeconomic status urban women have a trained professional present.

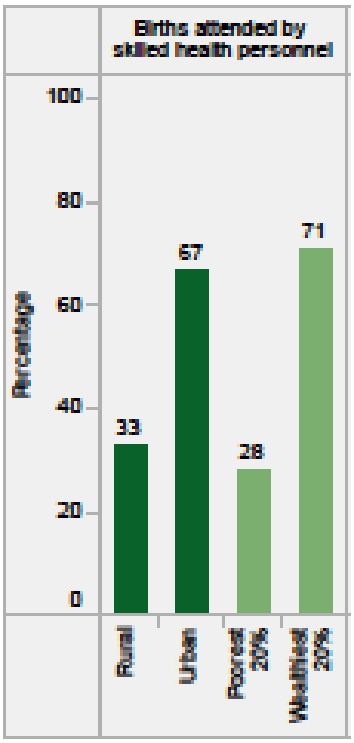

Figure 7; Graph showing inequalities between rural and urban in Sierra Leone(3)

This was confirmed again in a paper from 2009 looking at access to care for subgroups of the urban population in 5 districts. Being in a low socioeconomic group was more disadvantageous than having a disability. (14) Higher socioeconomic group and educational status are greatly important in maternal survival from other studies in Sierra Leone and other African countries.(15, 16)

Having trained personnel to hand drastically improves MMR, as childbirth can be so unpredictable and sudden complications can occur. Emergency care is a massive part of obstetrics. Caesarean sections are underused in a lot of sub-Saharan Africa.(16) Before the free health care a caesarean section would have cost between $80 and $250.(11) Patients could be charged extra out of pocket costs on arrival or discharge. There were no studies published after the reform to compare outcomes to.

Similar evidence was found in a group of cluster randomised controlled trials in the northern districts in the late 1990s. On all 3 levels of healthcare from community to district, there was under recognised complications of labour and delay in referral and transport. (5, 17, 18) Improved maternal mortality rates were shown with a cost recovery system for patients (5) and better trained health care workers in better equipped hospitals. Simple modifications and addition of electricity improved rates.(18) Community motivators and educators teaching women and health care workers how to improve health, what care was available and recognising complications was particularly successful.(17) Gender discrimination and education of women are often barriers which are forgotten.

The major barriers of access to health care for mothers can be summarised in figure 8.

Cost of consultation and drugs
Transport – cost, roads, cars, availability, especially in an emergency
Poor education – for trainees and for mothers, worries of what healthcare would be provided
Low volume and quality of resources
Uncertain of whether staff would be at the health centre.
Gender discrimination

Figure 8; Barriers of access to care, pre health reform

Figure 9 is data collected nearly ten years later by World Health Organisation showing that barriers remain the same.

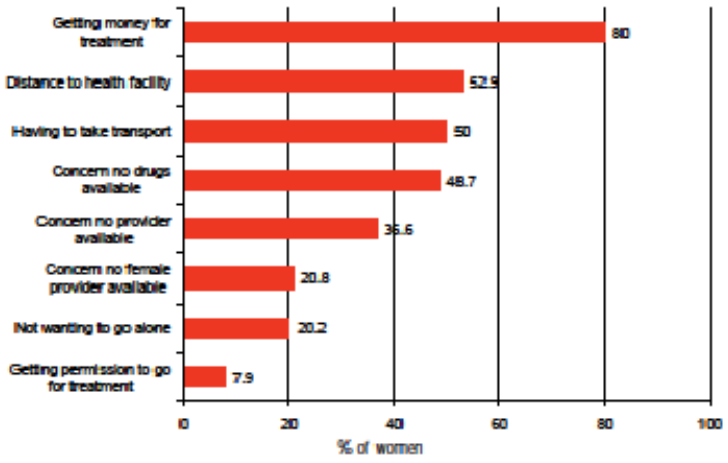

Figure 9; Graph to show barriers to care for pregnant women from 2008.(13)

What are the main barriers now? With little data published since the reform it is difficult to tell whether removing cost of treatment for these women has had a big effect on access to healthcare. A journal article 6 months post reform explains the number of women attending the main hospital in Freetown monthly has doubled. (19) Although it may be too early to measure changes in mortality rate, there have been no deaths in the same hospital in this time from its previous record of 1 or 2 a month. The first potential pitfall was discovered on day one when pharmacies were running out of antibiotics, maintaining funding and supplies appear to be the biggest worries in its sustainability. (6,7)

Discussion

Firstly much more data is needed, records of births and deaths, newly hired and current doctors, nurses and midwives as well as their attendance to work, in rural and urban areas. This is particularly important from April 2010 to monitor the effect of the free health care. Until comprehensive national and regional needs assessments have been done, it is difficult to judge how to improve services for the greatest effect with such minimal resources. Even though women are a marginalised group in themselves, there are sub groups of the gender with even greater need of services.

The results showed that MMR has been slowly decreasing; this could be due to the end of the war. It will be interesting to see how these trends develop in the next few years.

Mobilising and adapting existing resources is usually the most cost effective option to improving health care, so decentralising may be best. Train birth attendants in monitoring labour through partograms, and recognising signs of complications in stage one of labour to enable early referral. As there is little emergency transport infrastructure, either improving this and having better communication, such as radio signalling, or training birth attendants in emergency treatments, assisted vaginal delivery and caesarean sections , as well as basic life saving techniques would be most beneficial. Birth attendants in refugee camps and during the civil war have been shown to exceed their usual roles.(20) Education on sterilised equipment and infection control is a simple and cheap way of reducing infection, one of the top 5 causes of mortality.

More women giving birth in the community may lead to a false sense of security and prevent women from seeking medical attention. If women know they will receive good quality care in hospitals from knowledgeable ethical health practitioners they will choose to return. Incentives for women, especially those with complex pregnancies, to deliver in hospitals may be a way to start this change. Reducing the workload for the already overburdened current health professionals is important. This has already begun through the reform, by finding phantom workers, employing more staff, increasing salaries and improving training.

To maintain salaries and supplies of drugs and equipment through the free maternal health care needs a serious amount of funding. It is estimated to cost $34 million extra in first year. Even though the government has already increased health spending from 7.8% to 9% of national budget,(6) there is still great dependence on aid, so a national health insurance scheme may be the next step.

The mothers in all socioeconomic groups need to be educated as well as the health care workers to close the gap on the inequity visible in Sierra Leone. Literacy and later school leaving age improves MMR and reduces gender discrimination, giving more empowerment to young women, enabling them to make their own decisions about relationships, sex and family planning which could have an effect on fertility ratio as well. Women need to know what is available for them before they can get access to it.

This essay has looked at care surrounding labour; however this is only the tip of the iceberg for maternal health. With a greater word count, the continuum of care through pregnancy could have been researched. Sierra Leone has just a 5% contraception prevalence rate and only 50% of

women have any antenatal visits at all.(1,3) Antenatal care and immunisation programmes, postnatal care, family planning and contraception can all be improved somewhat through better education of women and health care professionals. Increased contact with health services provides an opportunity to educate mothers about breastfeeding and child care. Improving the survival of mothers will have a knock on effect on the survival of children, not only the babies they are giving birth to at the time but to the other members of their family.

Maternal morbidity and fistulae, sexual abuse, and unsafe and illegal abortions are much more common in Sierra Leone and other developing countries.(21) Not only do they cause a severe amount of physical sequale but a great amount of stigma and social exclusion as well. A huge proportion of lives can be saved and the quality of life of even more women can be saved by investigating and treating these human rights issues.

Greater international awareness of maternal health will lead to countries concentrating on their own statistics. A combined effort from the government, NGOs and public services in Sierra Leone focusing on the remaining barriers to care for the most vulnerable populations should continue to drive down these high MMR.

Conclusion

Sierra Leone has taken a huge step forward by passing the free health care law, although the lifetime risk of death for a woman in Sierra Leone is still 1 in 21 women. (1) Just being female can be dangerous to your health in low income countries. Sierra Leone needs to keep a focus on maternal health, ensuring it stays free with no hidden costs, that it is accessible to all through transport links, emergency care and training of rural birth attendants is essential in reducing inequity even further. Socioeconomic factors and the general health and poverty of the population must be looked at. Education and empowerment of women, by improving school leaving ages and giving them a political voice, is the key to the sustainability of maternal health.

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