Facts and Figures | the Sierra Leone Demographic and Health Survey 2013

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What does the DHS 2013 tell us about maternal and newborn health in Sierra Leone?

The most significant change suggested by the 2013 results is the doubling in use of health facilities for childbirth. This is likely to reflect, in part, the introduction of free health care.

Maternal mortality and child mortality both remain very high and there is little evidence of decline in neonatal mortality.

Ensuring services provide quality care needs to be the focus for Sierra Leone if we are to translate increased use into better outcomes over the longer term. These preliminary figures indicate Sierra Leone still has a long way to go.

Family planning is too low. HIV risk behaviours have increased. Malaria insecticide treated nets are increasingly being used by pregnant women, but nearly half reported not using them. There has been little if no change in prevalence of anaemia.

Nearly 100% of women, however, access at least one antenatal care appointment. The increase in service uptake indicated by these results is an opportunity not to be missed.

The highs

- **Facility birth:** doubling in the percentage of women giving birth in health facility
- **Equity gains:** the equality gap closing with a notably large increase in the percentage giving birth in health facility in rural areas
- **Antenatal care:** almost 100% of women attend at least one visit
- **Postnatal care:** the proportion of women receiving postnatal check-up within two days of delivery has increased to two thirds
- **Fertility:** there has been some decline in fertility among 15-19 year olds
- **Family planning**: a doubling in modern family planning use, but utilisation is still very low
- **Malaria prevention:** increase in use of insecticide treated nets among pregnant women, but still remains relatively low
- **Child mortality:** some improvement
- **Breastfeeding:** doubling of exclusive breastfeeding in first month of life

The lows

- **Skilled birth attendance:** nearly two in five women give birth with no support from a skilled provider
- **Inequity remains:** large disparity remains between the rural and the urban, and between the more educated and less educated in many health indicators.
- **Fertility**: little change
- **Family planning:** very low use of family planning
- **Anaemia:** constant and high
- **Child mortality:** still a long way to go
- **Neonatal mortality:** little change
- **HIV:** increase in risky behaviours
- **Breastfeeding:** less than 50% exclusively breastfeed in first month of life and only 10% by 3-4 months

Introduction

The report of the second ever Sierra Leone Demographic and Health Survey[2] (DHS) conducted in 2013, provides evidence of the health status of mothers and children in Sierra Leone and of the use of services. The results provide some insights into changes in health utilisation and outcomes over the period during which the Free Care Initiative was implemented.

This facts and figures brief presents an overview of and preliminary results for key reproductive, maternal, newborn and child health indicators that are available, and for most indicators are presented alongside the previous DHS findings from 2008[3]. The number of respondents included in the 2013 DHS was more than double those included in the 2008 DHS.

Fertility and uptake of family planning

Fertility and family planning indicators		DHS 2008	DHS 2013
Total fertility rate[a]:	Overall	5.1	4.9
	Urban	3.8	3.5
	Rural	5.8	5.7
Current use of modern family planning method		6.7%	15.6%
Unmet need for family planning[b]		27.6%	25.0%

Overall, the total fertility rate measured for the three years preceding the survey remains high at 4.9 children per woman and has not changed notably since 2008. Age-specific fertility rates appear to have undergone a more substantial decrease for women between 15 and 19 years old than other age groups in the period from 2008 to 2013 (from 146 to 125 per 1,000 women, respectively). Age-specific fertility rates remain consistently higher in rural areas throughout the childbearing years.

The use of family planning remains low in Sierra Leone, with 16% of married women reporting using family planning in 2013. This is over double reported use in 2008 (7%).

Maternal health

The indicators presented in the report for 2013 show some progress in service use from those in 2008. However, this is not reflected by an improvement in outcomes as measured by maternal mortality ratio.

[a] Total fertility rate per woman is the average number of children women of reproductive age would bear in their lifetime if the current age-specific fertility rates were to remain unchanged.
[b] Currently married fecund women who want to postpone their next birth for two or more years or who want to stop childbearing altogether but are not using a contraceptive method are considered to have an unmet need for family planning.

Reproductive and maternal health indicators[c]		DHS 2008	DHS 2013
Maternal Mortality Ratio, MMR (95% confidence interval [d])		857 (615 - 1099)	1,165 (951 - 1,379)
Facility birth:	Overall	24.6%	54.4%
	Urban	39.5%	68.1%
	Rural	19.0%	49.7%
Skilled birth attendance		42.4%	59.7%
Attended for at least one antenatal care visit		86.9%	97.1%
Attended four or more antenatal care visits		56.1%	76.0%
Pregnant women received full tetanus toxoid course:	Overall	79%	90%
	Urban	75.7%	89.8%
	Rural	87.3%	90.5%
Postnatal care within two days after birth		58.0%	72.7%

Maternal mortality

According to the DHS 2013, the maternal mortality ratio (MMR) is estimated as 1,165 per 100,000 live births during the seven year period before the survey (2006-2012). The estimated age-specific maternal mortality rates are higher at the younger ages, being highest at age 15-19[e]. Maternal deaths accounted for 36% of all deaths to women age 15-49 years and these estimates show that at current mortality rates, 6% of the women in Sierra Leone will die from maternal causes during their reproductive lifetime.

The DHS 2013 estimate is corroborated by the WHO *et al.* (2014)[1] which rank Sierra Leone as having the highest MMR globally at 1100 maternal deaths per 100,000 live births. The estimated number of maternal deaths for 2013 is 2400; and the lifetime risk of maternal death as 1 in 21.

Maternal care

In 2013, most women (97%) who had given birth in the preceding five years reported receiving antenatal care from a skilled provider for their last birth and 90% of women had received the required number of tetanus toxoid injections to protect their last newborn against neonatal tetanus. This represents a slight increase from 2008, when 87% of women reported receiving antenatal care (ANC) and 79% of women had their last birth fully protected against tetanus. Whilst gains have been made in the proportion of women who received at least four ANC visits, around a third of all pregnant women have not been provided with this minimum standard.

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[c] Whilst the DHS data was collected during 2008 and 2013, the indicator MMR is based on retrospective data that covers the seven years preceding the survey and the other indicators in this table are based on data that covers the five years preceding the survey (antenatal and postnatal care and tetanus toxoid indicators include only the most recent live birth in the preceding five years, whilst facility birth and skilled birth attendance indicators include all live births in the preceding five years). Therefore caution should be taken when interpreting the changes in terms of before and after the Free Health Care Initiative of 2009.

[d] The 95% confidence interval is a statistical estimate that gives the range of possible MMRs that we could expect 95% of the time if we were to repeat the same type of measurement again and again on different samples. As the confidence intervals for the 2008 DHS estimate and this current DHS overlap, we cannot say for certain that the MMR has increased over this time.

[e] Age-specific maternal mortality rate for women aged 15-19 years is estimated at 2.62 per 1,000 woman–years of exposure. However, the age-specific mortality pattern should be interpreted with caution as very few maternal deaths were recorded and included in the calculation in the seven-year period preceding the survey.

For both indicators, the gap between urban and rural areas closed between 2008 and 2013. For example, in 2013 the proportion of women whose last live birth was fully protected against neonatal tetanus was similar in urban and rural areas. Similarly, the proportion of births attended by skilled providers also increased between 2008 and 2013, from 42% to almost 60% in total.

The percentage of women who reported giving birth in a health facility (public or private) has increased notably from 54% of those who gave birth between 2008 and 2013 from 25% between 2003 to 2008. However, large inequalities in use of maternal health services remain between women living in urban and rural areas. 28% fewer women living in rural areas gave birth in a facility compared to those living in urban areas.

The proportion of women who received postnatal care in the two days after birth has increased, but around a third of women still do not receive this support.

Morbidity and health among women

Health indicators of conditions that contribute to indirect causes of maternal deaths or illness		DHS 2008	DHS 2013
Proportion of women with anaemia		45.2%	44.8%
% of pregnant women who slept under an ITN in the previous night		27.2%	53.1%
Prevalence of HIV among adults aged 15 – 49 years, %:		1.5%	1.5%
	Women	1.7%	1.7%
	Men	1.2%	1.3%
% of people who know that HIV can be prevented through consistent use of condoms and limiting sexual intercourse to one uninfected partner can prevent HIV:			
	Women	37.9%	63.3%
	Men	56.2%	74.3%
% reporting two or more sexual partners in previous 12 months, aged 15-49:			
	Women	3.5%	6%
	Men	15.7%	25.3%
Condom used during last sexual intercourse among those reporting two or more partners:			
	Women	6.8%	4.7%
	Men	15.2%	12.6%
Proportion of women who have undergone some form of Female Genital Cutting :		84.7% *	89.6%

*DHS 2008 asked women who had daughters about whether their daughters had been circumcised or intended to have them circumcised.

Anaemia in women aged 15-49 years has remained constant and high, with approximately 45% of women (roughly one in two women) classified as having any type of anaemia in both DHS survey periods.

Malaria: 2013 data show that 45% of women who gave birth in the two years preceding the survey received Intermittent Preventive Therapy (IPT) during an antenatal visit (with at least two doses of SP/Fansidar). This represents a rise from just 10% in 2008. However, whilst the proportion pregnant women aged 15-49 that had slept under an insecticide treated net the night before the 2013 survey has almost doubled since 2008, this still remains low at 53%.

HIV: prevalence remains constant at 1.5% among adults of reproductive age and remains higher among women than among men. The prevalence varies between districts, being higher in the Western Rural (3.4%). Of concern, 43% or women and 85% of men who tested positive in this DHS survey had not been tested previously. Whilst knowledge of HIV prevention and behaviour has increased, it remains lower among women than men. Further, risky behaviours have increased; more women and men reported having two or more sexual partners in the 12 months preceding the survey and condom use was lower.

Female Genital Cutting: FGC remains highly prevalent with nine out of every 10 women of reproductive ages being circumcised; this is more common among women living in rural areas (94%) compared to women living in urban areas (81%); and higher among women who align with Islam (93%) than Christianity (78%). Two thirds of women reported being circumcised before the age of 14 years. The most common form of FGC was where genitals were cut with some flesh removed (among 75.2% of circumcised women); 9% were cut and sewn closed.

Child mortality

Women in the 2013 DHS were asked about the survival of their children born in the 15 year period before the survey.

This figure show the changes in the mortality rates over this period indicating a decline in early childhood mortality with little change in newborn mortality.

Comparing the responses from interviewees about child mortality in 2008 with those interviewed in 2013, the results are not clear and indicate little change (considering potential impact of sample size and confidence intervals).

On balance, this needs to be better understood. Given the reported child survival of those interviewed in this survey, the findings are fairly clear that there has been a decline in child mortality but little change in neonatal mortality and this should be the take home message.

The 2013 report shows progress on exclusive breastfeeding for all age groups until 6-8 months, especially for babies up to one month old; 42% of the babies aged 0-1 month were exclusively breastfed in 2013, almost double the proportion in 2008. However, the percentage of babies exclusively breastfed consistently decreases from 0-1 month onward, despite the fact that best practice recommends six months of continuous exclusive breastfeeding.

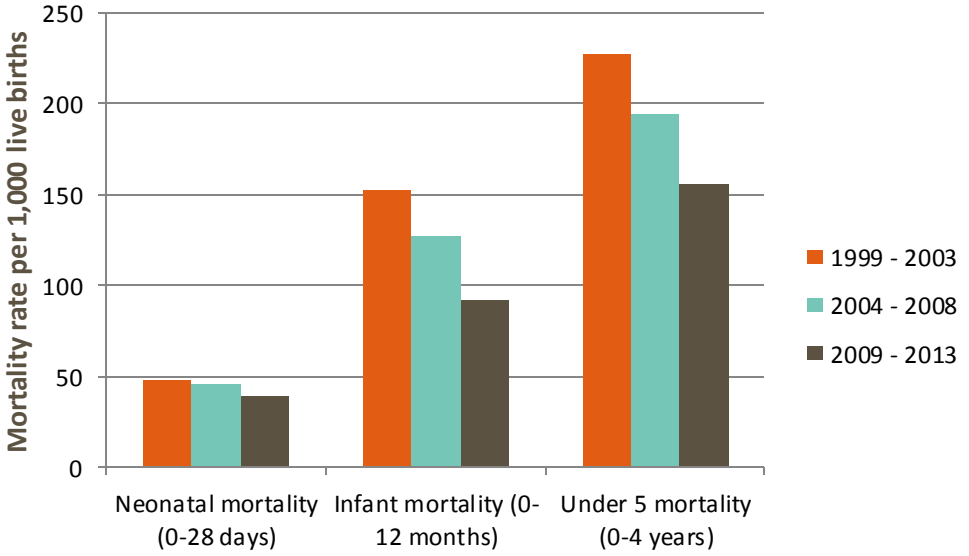

Figure showing neonatal, infant and under five mortality rates for five year periods preceding the 2013 DHS survey

Child health indicators		DHS 2008	DHS 2013
Exclusive breastfeeding among:	0-1 month	22.3%	42.2%
	2-3 months	11.5%	32.2%
	4-5 months	3.4%	24.5%
	6-8 months	0%	10.2%

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References

1 World Health Organization, UNICEF, UNFPA, the World Bank and the United Nations Population Division. (2014). *Trends in Maternal Mortality: 1990 – 2013. Estimates by WHO, UNICEF, UNFPA, the World Bank and the United Nations Population Division*

2 Statistics Sierra Leone, Measure DHS, and ICF Macro. (2014). *Sierra Leone Demographic and Health Survey 2013*. Freetown and Rockville: SSL, MEASURE DHS, and ICF Macro.

3 Statistics Sierra Leone, Ministry of Health and Sanitation [Sierra Leone], and ICF Macro. (2009*). Sierra Leone 2008 Demographic and Health Survey*. Freetown: Statistics Sierra Leone, MoH, and ICF Macro.