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LIST OF ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
AMTSL	Active Management of the Third Stage of Labour
ART	Anti-Retroviral Therapy
CARMMA	Campaign for the Accelerated Reduction in Maternal and Child Mortality in Africa
CPR	Contraceptive Prevalence Rate
CS	Caesarean Section
CYP	Couple Year Protection Rate
DHIS	District Health Information System
DHS	Demographic and Health Survey
HAART	Highly Active Antiretroviral Therapy
HADCC	Health Data Advisory Coordination Committee
HIV	Human Immunodeficiency Virus
iMMR	Institutional Maternal Mortality Ratio
MDG	Millennium Development Goal
MMR	Maternal mortality ratio
MNCWH	Maternal, Newborn, Child and Women's Health
NCCEMD	National Committee on the Confidential Enquiries into Maternal Deaths
NDOH	National Department of Health
NPR	National Population Register
PMTCT	Prevention of Mother To Child Transmission
RMS	Rapid mortality Surveillance
TB	Tuberculosis
WHO	World Health Organisation

EXECUTIVE SUMMARY

Introduction

South Africa has made significant progress with regard to the improvement of maternal health and the reduction of maternal mortality in the last two decades. In 2010, it was estimated that nearly 3 000 South African women died during childbirth, but latest estimates show that maternal deaths have halved. The PMTCT programme, which aims to ensure that HIV-infected women remain healthy and give birth to healthy children, has been expanded rapidly; and many more women have benefited from this programme as a result of both the expansion of the eligibility criteria (as the services are offered to women when they are still healthy), and through integration of PMTCT services into routine antenatal services offered in all healthcare facilities in the country. Modern contraceptive methods are freely available in public health facilities, and there has been an overall improvement in access to reproductive health. The 1996 Choice on Termination of Pregnancy Act made medical and surgical abortion free for all women of any age at public healthcare facilities, and this has seen an increase in the uptake of safe pregnancy terminations.

However, many women still die during childbirth. Despite the expansion of the PMTCT programme, HIV infection in pregnancy is the major contributing factor to maternal deaths, accounting for more than 30% of all these deaths. The national antenatal prevalence of HIV was 7.6% in 1994, but that increased to 30% in 2004, and has since plateaued and stabilised. Avoidable factors, missed opportunities, poor quality of care and the lack of training of front-line healthcare workers have all been found to contribute to maternal deaths from all causes.

This report assesses South Africa's progress towards achieving the Millennium Development Goal (MDG) 5, namely to improve maternal health as outlined in the Millennium Declaration. MDG 5 has two targets:

- A. To reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio. South Africa's target for MMR was thus 38 deaths per 100 000 live births for 2015, from a baseline of 150/100 000 in 1990; and
- B. To achieve by 2015, universal access to reproductive health.

The indicators for the first target (which we will refer to as target 5A), are: the maternal mortality ratio and the proportion of births attended by skilled healthcare personnel. The indicators for target 5B are: the contraceptive prevalence rate; adolescent birth rate; antenatal care coverage; and the unmet need for family planning. Proxies for MDG indicators are used where recent data are not available.

MDG 5 targets and progress

Maternal mortality ratio (MMR)

The baseline maternal mortality ratio was 150 maternal deaths per 100 000 live births at the start of measuring MDG 5 in 1998. MMR initially increased to 311/100 000 in 2009, but by it declined to

270/100 000 by 2010. This decline has been sustained and the latest estimate of MMR is measured at 141/100 000 by the year 2013.

Proportion of births attended by skilled healthcare personnel

The proportion of births attended by skilled healthcare personnel was 84% in 1998 and increased to 91% in 2003. These estimates were made from the population based Demographic and Health Survey (DHS), which was last conducted in 2003. In the absence of DHS data, the percentage of births in public healthcare facilities (facility delivery rate) obtained from the District Health Information System (DHIS) is used as a proxy. The proportion of all births that occur in public healthcare facilities has increased steadily from a baseline of 67% in 2003, to 79.5% in 2010 and 85.6% in 2014. (It should be noted that this figure excludes births that occur in private healthcare facilities, and is therefore likely to underestimate the true figure).

Contraceptive prevalence rate

The last nationally representative population-based estimate of contraceptive use was measured at 50.2% in the 2003 DHS. In the absence of the population based CPR, the couple year protection (CYP) rate is used as proxy. The national average of CYP was 52.7% in 2014, up from 27.6% in 2010 (a 91% increase).

Adolescent birth rate

The adolescent birth rate was measured at 12.5/1 000 in 1996 and increased to 13.7/1 000 in 2011.

Antenatal care coverage (at least one visit and at least four visits)

The antenatal care coverage (first visit for expectant mothers) in South Africa was 92.9% in 2014, an increase of 2.5% from the 2010 estimate. These figures are based on routine facility-based (DHIS) data as population based data on antenatal attendance are not regularly updated. These data however, do not include antenatal visits to private sector healthcare facilities, and thus may underestimate coverage.

Unmet need for family planning

Unmet need for family planning was estimated to be 13.8% in the 2003 DHS survey. No new data on this indicator are available to date.

Drivers to progress

Progress on improving maternal health has occurred due to several policy and programme changes that have increased the coverage of essential interventions. South Africa has a strong prevention of PMTCT programme, which has seen a significant reduction in HIV related deaths during pregnancy. Contraceptives are freely available at public medical clinics/facilities and the 2012 National Contraception Clinical Guidelines and National Contraception has seen an expansion of contraceptive choices. The 1996 Choice on Termination of Pregnancy Act has seen an increase in the uptake of safe and legal pregnancy termination.

South Africa conducts regular audits of maternal deaths, overseen by the National Committee on Confidential Enquiries into Maternal Deaths (NCCEMD), which makes recommendations for the reduction of maternal mortality. Progress on maternal mortality has also been driven by rigorous

programme implementation, guided by the National Department of Health's Strategic Plan for Maternal, Newborn, Child and Women's Health and Nutrition, which covers a period of five years from 2012 to 2016.

Conclusions

Although progress on MDG 5 has been made in the last few years, many women still die during childbirth from preventable causes and more still needs to be done to improve the health of women. This can be done by focusing on reproductive health and tackling the demand and supply side constraints that impede universal access to health.

Despite widespread availability of contraceptives, women, especially adolescents, continue to experience many demand and supply side barriers to accessing these services. More attention should be placed on identifying and addressing these barriers. This would be facilitated by availability of more recent data on the contraceptive prevalence rate and the unmet need for family planning. As the measurement of MDGs draws to a close in 2015, a new set of goals, the Sustainable Development Goals (SDGs), are being discussed and are expected to shape the development agenda in the post-2015 era. South Africa is well positioned to achieve the maternal SDGs by 2030, especially if the gains on reducing maternal mortality are sustained. As South Africa sets its development agenda for the next 15 years, consideration of the evidence of what works towards improving maternal health is important. This evidence is available, and government and other stakeholders need to work together to ensure an end to preventable maternal deaths and access to reproductive health services for all women.

1 INTRODUCTION

Thousands of women die each year from preventable causes during pregnancy and childbirth. Globally, it is estimated that there are about 800 deaths of women from complications of pregnancy or childbirth every day (WHO, 2014). There were 289 000 maternal deaths in 2013, mostly (99%) from low-resource settings in low and middle income countries. Over 60% of all maternal deaths occurred in sub-Saharan Africa and 24% in South Asia. Nigeria and India accounted for one-third of all global maternal deaths.

The maternal mortality ratio (MMR) in developing countries in 2013 was 230 maternal deaths per 100 000 live births, compared to 16/100 000 live births in developed countries (WHO, 2014). The sub-Saharan African region had the highest MMR of 510/100 000, compared to other regions such as Eastern Asia (33/100 000) and South Asia (190/100 000). There are large disparities between countries, with Sierra Leone having the highest MMR at 1 100/100 000, compared to Mauritius with 73/100 000. Disparities are also observed within countries and between women with high and low income and those living in rural and urban areas.

Progress has been made on reducing maternal mortality worldwide, with maternal deaths falling by 45% since 1990 (WHO, 2014). Many countries in sub-Saharan Africa have halved maternal deaths, and significant progress has also been seen in Asia and North Africa. Eleven countries including Rwanda, Nepal, Eritrea, Cambodia and the Equatorial Guinea have achieved more than a 75% reduction in maternal mortality since 1990 and are on track to achieving Millennium Development Goal (MDG) 5. A further 63 countries are categorised as making good progress, while 13 countries have made insufficient progress. Overall, the global MMR declined by 2.6% per year between 1990 and 2013, but this is far below the annual decline of 5.5% required to achieve MDG 5.

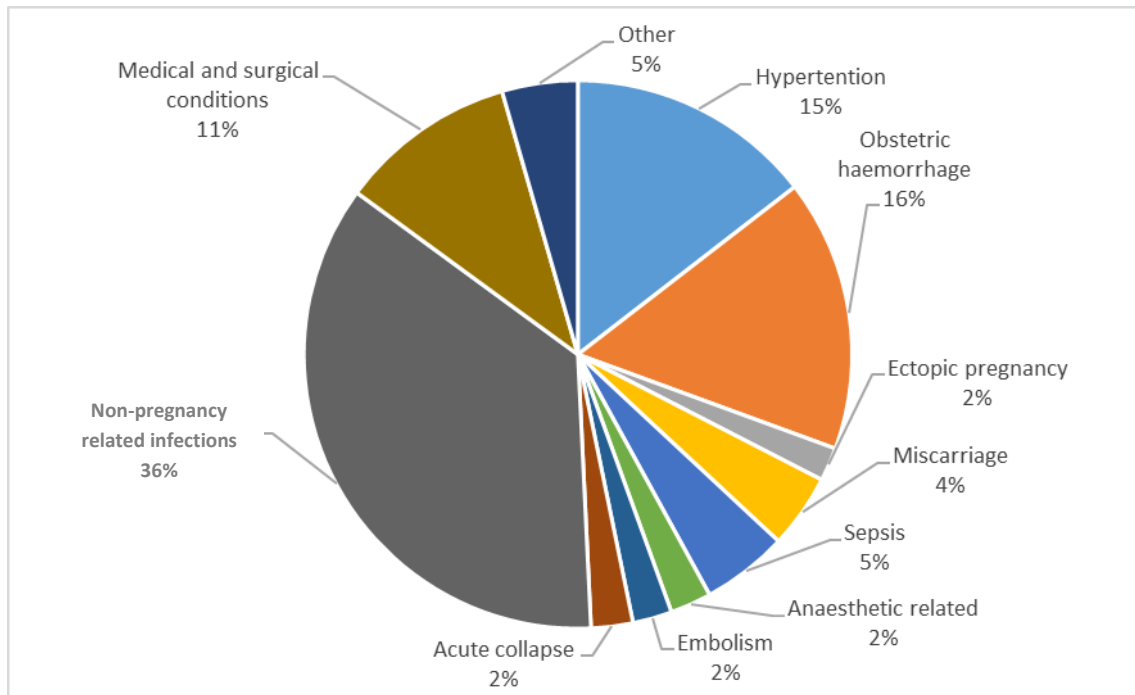
About 75% of maternal deaths are due to four main causes: haemorrhage, high blood pressure, complications from delivery and unsafe abortions (Say et al., 2014). The remainder are caused by non-pregnancy related infections, mainly from diseases such as malaria and AIDS. The essential interventions to prevent maternal deaths are known and mostly of low cost and high impact. (Bhutta et al., 2014). However, despite coverage increases in antenatal care, micronutrient supplementation, HIV management and many other interventions in the last few years, there are still a lot of women who do not access these interventions, or they are delivered with low quality (Hodgins & D'Agostino, 2014).

South Africa has struggled to reduce maternal mortality in the last two decades, but has recently made significant progress. In 2010, it was estimated that nearly 3 000 South African women died during child birth, but latest estimates show that maternal mortality has halved (Dorrington RE, Bradshaw D, & Laubscher R, 2014). The last few years have seen an improvement in coverage of essential interventions, particularly for the prevention of mother-to-child transmission (PMTCT) of HIV, which stands at more than 90%.

HIV infection in pregnancy is still a major source of concern and contributes significantly to maternal mortality in South Africa. The national antenatal prevalence of HIV remains at around 30%, and is

largely unchanged from 2004 (National Department of Health, 2013). Non-pregnancy-related infections, mainly in HIV-positive women, are the single most common cause of maternal mortality, accounting for over 30% of all maternal deaths (Figure 1) (NCCEMD, 2013). Avoidable factors, missed opportunities, poor quality of care and the lack of training of front-line healthcare workers have all been found to contribute to maternal deaths from all causes (R. C. Pattinson, 2013).

Figure 1: Underlying causes of maternal deaths in South Africa



Source: *Saving mothers report 2011–2012, National Committee for Confidential Enquiry*

This report assesses South Africa’s progress towards achieving MDG 5 – to improve maternal health – as outlined in the Millennium Declaration. It reviews the challenges to the achievement of MDG 5 and makes recommendations for the improvement of maternal health in South Africa. MDG 5 has two targets:

- A. To reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio
- B. To achieve by 2015, universal access to reproductive health

The internationally set indicators linked to target 5A are the maternal mortality ratio and the proportion of births attended by skilled health personnel. The indicators for target 5B are: the contraceptive prevalence rate; adolescent birth rate; antenatal care coverage; and unmet need for family planning. South Africa has adopted four ‘domestic’ indicators for target 5B: the delivery rate in healthcare facilities; couple year protection rate; proportion of births to mothers under the age of 18; and the PMTCT rate.

2 TARGETS, INDICATORS AND DATA SOURCES

Table 1: Summary of MDG 5 indicators and data sources

MDG indicators	Data sources
Target 5A: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio	
Maternal mortality ratio (deaths per 100 000 live births)	Stats SA, vital registration data Demographic and Health Survey, 1998 Rapid Mortality Surveillance report, 2012 Department of Health, District Health Information System. Accessed February 2015 (for institutional mortality)
Proportion of births attended by skilled healthcare personnel (per cent)	Demographic and Health Survey, 1998 and 2003
Target 5B: Achieve by 2015, universal access to reproductive health	
Contraceptive prevalence rate (per cent)	Demographic and Health Survey, 1998 and 2003
Adolescent birth rate (per cent)	Census 2011
Antenatal care coverage (at least one visit and at least four visits) (per cent)	Department of Health, District Health Information System. Accessed February 2015
Unmet need for family planning (per cent)	
Delivery rate in health facilities (per cent)	
Couple year protection rate (per cent)	
Proportion of births to under-18 mother (per cent)	
Prevention of Mother-to-Child rate (of HIV for mothers) (per cent)	

Data on the MDG indicators are taken from various sources in South Africa (Table 1). The official estimates of maternal mortality are made by Statistics South Africa (Stats SA) using vital registration data. The Birth and Death Act of 1992 provides for the registration of all births and deaths, including the medical certification of the cause of death, with the Department of Home Affairs using a death notification form. The Department of Home Affairs processes the registrations of birth and death forms, which are then coded and analysed by Stats SA.

The National Department of Health (NDOH) collects routine data from public healthcare facilities, which are maintained in the District Health Information System (DHIS). The DHIS data have been used in this report as proxies for many indicators for which ideal population based estimates are unavailable. South Africa has not conducted a Demographic and Health Survey (DHS) since 2003, and therefore does not have population level information on indicators such as the contraceptive prevalence rate, antenatal care coverage and proportion of births attended by skilled healthcare personnel. However, since the majority of births in South Africa occur in healthcare facilities, DHIS data are used to approximate the levels and trends of some MDG indicators.

3 STATUS AT A GLANCE

Table 2: Summary of goal 5 indicators, current status and target achievability

Goal 5: Improve maternal health							
Indicators	1994 baseline (or nearest year)	2010 Status (or nearest year)	2013 Status (or nearest year) 2015	Current status (2014 or nearest year) 2015	2015 Target	Target achievability	Indicator type
Target 5A: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio							
Maternal mortality ratio (deaths per 100 000 live births)	134 (2002)	270 (2010)	141 (2013)	141 (2013)	38	Not achieved	MDG
	150 (1998)						
		269 (2010)					
Proportion of births attended by skilled health personnel (per cent)	84 (1998)	91 (2003)			100	Not achieved	MDG
Delivery rate in health facilities (per cent) [Proxy for births attended by skilled personnel]	67 (2003)	79.5 (2010)	81.5 (2013)	85.6 (2014)	96	Not achieved	Domesticated
Target 5B: Achieve by 2015, universal access to reproductive health							
Contraceptive prevalence rate (per cent)	50.1 (1998)	50.2 (2003)			100	N/A	MDG
Adolescent birth rate (per cent)	12.5 (1996)		13.7 (2011)		No target	N/A	MDG
Antenatal care coverage (at least one visit and at least four visits) (per cent)	76.6 (2001)	102.8 (2009)	100.6 (2011)	92.9 (2014)	100	Not achieved	MDG
Unmet need for family planning (per cent)	15 (1998)	13.8 (2003)			No target	N/A	MDG
Couple year protection rate (per cent) [Proxy for contraceptive prevalence rate]		27.6 (2010)	36.3 (2013)	52.7 (2014)	55%	Not achieved	Domesticated
Proportion of births to under-18 mother (per cent) [Proxy for adolescent birth rate]		8 (2010)	7.8 (2013)	7.6 (2014)	No target	N/A	Domesticated
Prevention of Mother-to-Child rate (of HIV for mothers) (per cent)							Domesticated
Antenatal first visit before 20 weeks (per cent)		36.7 (2010)	47.7 (2013)	51.8 (2014)	63	Not achieved	
Percent antenatal client initiated on antiretroviral treatment (per cent)		97.4 (2010)	75.4 (2013)	85.4 (2014)	93	Not achieved	

Table 2 gives a summary of the MDG 5 indicators, their current status and target achievability. Though significant progress has been made on all goal 5 indicators, none of them have been achieved. The maternal mortality ratio (MMR) of 141 maternal deaths per 100 000 live births in 2013, is still above the baseline figure (134/100 000) recorded in 2002. There have been no new data collected on the proportion of births attended by skilled healthcare personnel, contraceptive prevalence rate, and unmet need for family planning. The last estimate of the adolescent birth rate showed an increase to 13.7% in 2011, from 12.5% in 1996.

Three domesticated indicators have been introduced to provide proxies on MDG indicators for which data are not available. These are: the delivery rate in health facilities (proxy for proportion of births attended by skilled healthcare personnel); couple year protection rate (proxy for contraceptive prevalence rate); and the proportion of births to under-18 mothers (proxy for adolescent birth rate). In addition, an indicator on prevention of mother-to-child transmission (PMTCT) of HIV has been added as a domestic indicator.

It should be noted though, that it is not easy to assess the current true level of many of the goal 5 indicators, due to inadequate data. For example, the last estimate of maternal mortality was made in 2013, hence does not include a picture of the status in the last two years between 2013 and 2015. There are no data on the contraceptive prevalence rate (CPR) recorded since 2003 and therefore a reliable judgement cannot be made on this indicator. A proxy, the couple year protection rate, has been used for the CPR, though it does not adequately measure contraceptive use.

4 MDG 5 TARGETS AND PROGRESS

4.1 Maternal mortality ratio

Table 3: Maternal mortality ratio

Indicator	1994 baseline (or nearest year)	2010 Status (or nearest year)	2013 Status (or nearest year) 2015	Current status (2014 or nearest year) 2015	2015 Target	Target achievability	Indicator type
Maternal mortality ratio (deaths per 100 000 live births)	134 (2002)	270 (2010)	141 (2013)	141 (2013)	38	Not achieved	MDG
	150 (1998)						
			269 (2010)				

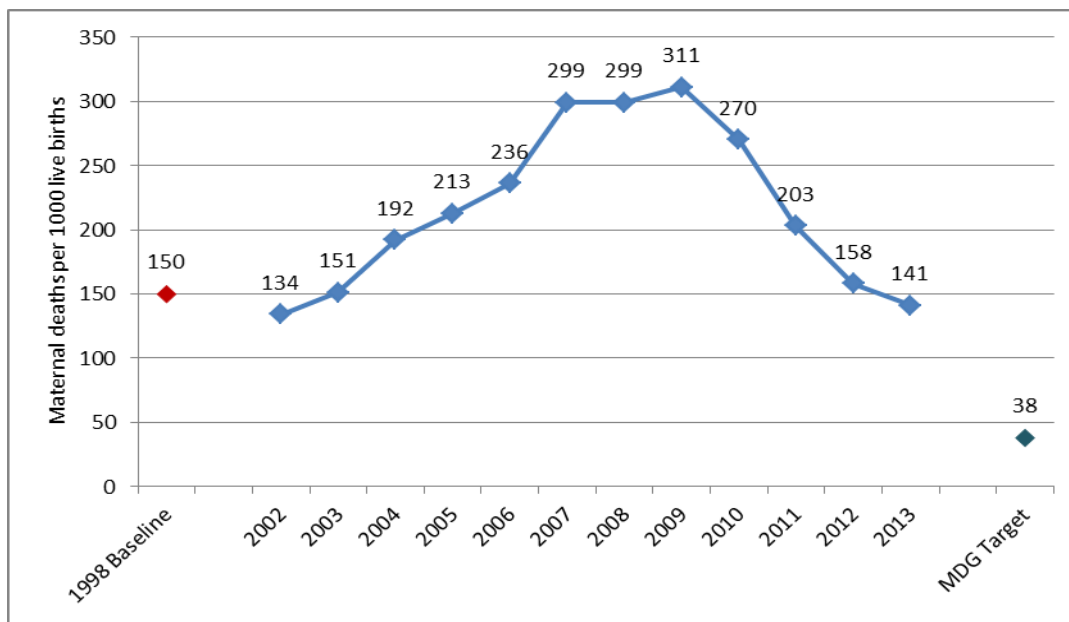
The maternal mortality ratio (MMR) is a measure of maternal mortality and is defined as the number of maternal deaths per 100 000 live births.(WHO, 2014). The MMR is an indicator that represents the risk of death associated with pregnancy. A pregnancy-related death is defined as the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the cause of death.

The accurate measurement of maternal mortality is a difficult undertaking, which requires the comprehensive registration of deaths and their causes. In the absence of adequate vital registration systems, health service records, household surveys and census data are used to estimate maternal mortality (Graham, Ahmed, Stanton, Abou-Zahr, & Campbell, 2008). Survey and census data have thus been used in the past to measure mortality. The Demographic and Health Survey (DHS), considered to be a good source of data for measuring maternal mortality in low and middle income countries, has been conducted twice in South Africa, in 1998 and 2003 (Department of Health, Medical Research Council, & OrcMacro, 2002, 2007). The last reliable survey-based estimate of maternal mortality was made in the 1998 DHS.

Presently, official estimates of maternal mortality are made by Stats SA, using vital registration data. Since 1994, several improvements have been made to the vital registration system, which have seen an overall increase in completeness of vital statistics, with more than 90% of all adult deaths being recorded (Dorrington & Bradshaw, 2011). However, there are concerns about the misclassification of deaths, especially those due to HIV/AIDS and cardiovascular diseases (Burger et al., 2012).

The MDG maternal mortality target was to reduce maternal mortality by 75% between 1990 and 2015. South Africa's target for MMR is thus 38 per 100 000 live births for 2015, from a baseline of 150/100 000 in 1998 (Figure 2 and Table 3). Estimates show that between 1998 and 2009, South Africa experienced a significant increase in maternal deaths (Department of Health et al., 2002; Stats SA, 2007). But by 2010, the MMR had declined significantly to 270/100 000, and this decline has been sustained. The latest estimate of MMR is measured at 141/100 000 (Table 3 and Figure 2).

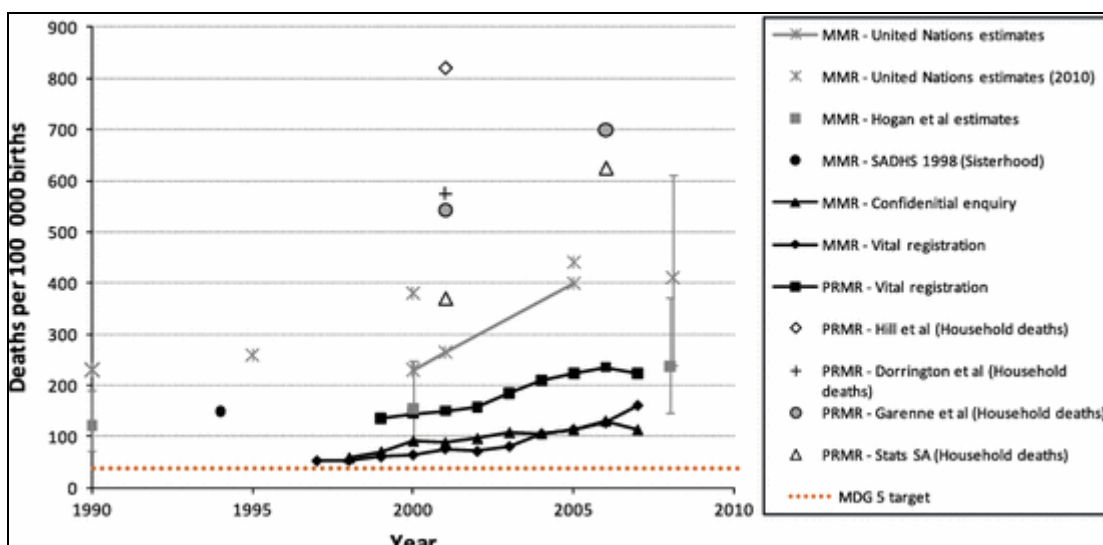
Figure 2: Maternal mortality ratio in South Africa, 1998–2013



Source: 1998 DHS, Stats SA

The difficulty of measuring the progress on maternal mortality in South Africa is that there are no consistent population-based estimates that conclusively show the level of MMR. Dorrington and Bradshaw (2011) analysed data on maternal mortality from several sources in South Africa, including national census reports and household surveys, assessing the differences between them regarding definitions, data and methodological deficiencies (Dorrington & Bradshaw, 2011). The authors showed that the various sources of data provided a wide range of estimates of maternal mortality (Figure 3). Discrepancies in estimates were to some extent due to differences and errors in data processing, and after adjustments, pregnancy related estimates were comparable and the trend in maternal mortality was similar across various measurement approaches.

Figure 3: Various estimates of maternal and pregnancy related mortality ratios for South Africa

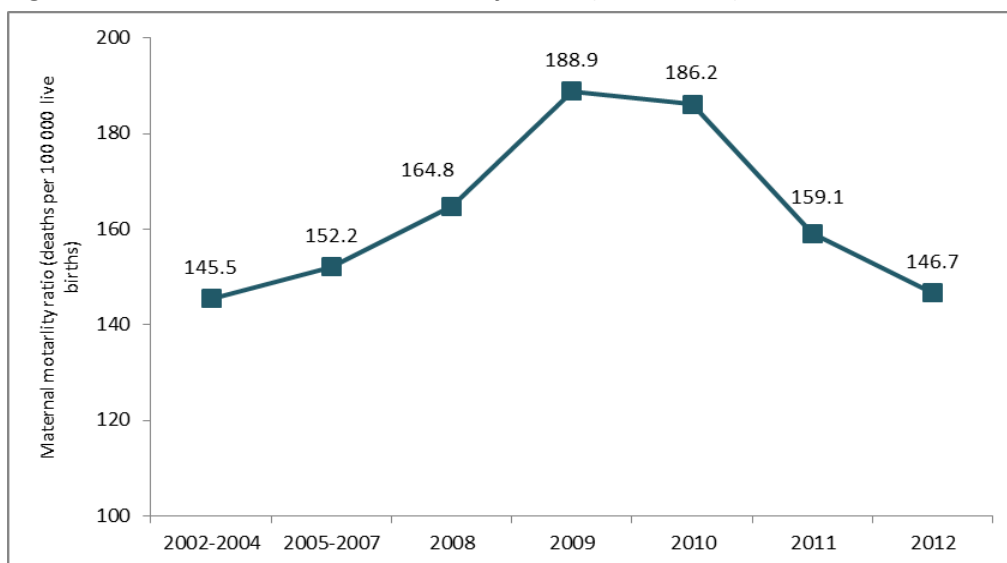


Source: (Adapted from Dorrington and Bradshaw 2011)

Institutional maternal mortality

Institutional maternal deaths are monitored by the National Committee on Confidential Enquiries into Maternal Deaths (NCCEMD), which administers the confidential enquiries into maternal mortality reports. The confidential enquiries reports outline the causes of deaths as well as the institutional maternal mortality ratio (iMMR) in public health facilities in South Africa. The general trend of iMMR is close to that for the population MMR. Estimated at 145.5/100 000 in the period 2002–2004, iMMR increased to 188/100–000 in 2009 and declined to 146/100–000 in 2012 (Figure 4). This decline has mainly been attributed to the increased coverage of treatment of HIV in pregnancy, which led to a significant decline in HIV related maternal deaths.

Figure 4: Institutional maternal mortality ratios (2002–2012)



Source: *Saving Mothers 2005–2007 Report. Saving Mothers 2011–2012 report, National Committee for Confidential Enquiry*

The confidential enquiries reports however, are only focused on maternal deaths that occur in public healthcare facilities. This is a major weakness as there are many more deaths that could occur outside public healthcare facilities, which are excluded from the analysis. However the trends are likely to be similar. And in the absence of adequate means to monitor population maternal mortality, the Confidential Enquiry reports provide useful insight into the reasons for maternal deaths and the adequate response that can be effected at the healthcare facility level.

4.2 Proportion of births attended by skilled health personnel

Table 4: Proportion of births attended by skilled health personnel

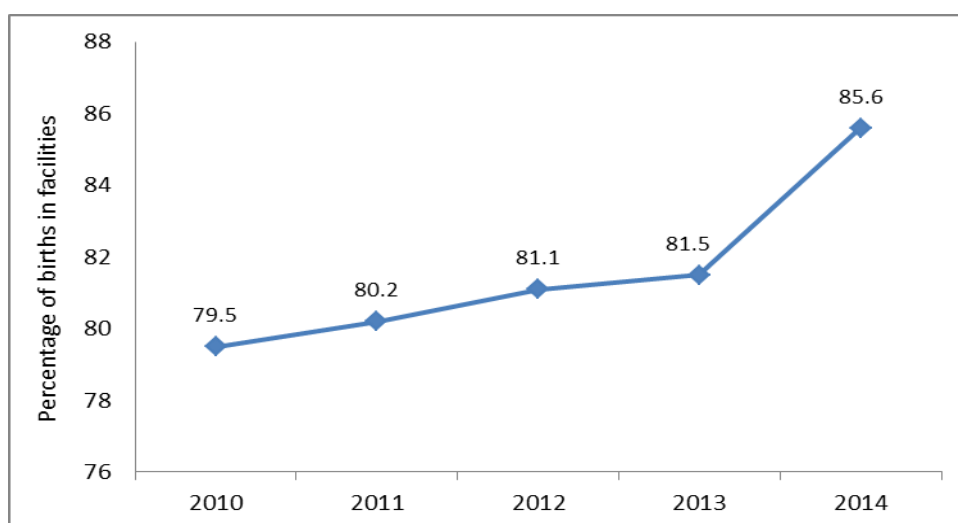
Indicators	1994 baseline (or nearest year)	2010 Status (or nearest year)	2013 Status (or nearest year) 2015	Current status (2014 or nearest year) 2015	2015 Target	Target achievability	Indicator type
Proportion of births attended by skilled health personnel (per cent)	84 (1998)	91 (2003)			100	Not Achieved	MDG
Delivery rate in health facilities (per cent) [Proxy for births attended by skilled personnel]	67 (2003)	79.5 (2010)	81.5 (2013)	85.6 (2014)	96	Not Achieved	Domesticated

This indicator shows the percentage of births in a country that are delivered in the presence of a skilled birth attendant. A skilled birth attendant is considered to be “an accredited healthcare professional such as a midwife, doctor or nurse who has been educated and trained to be proficient in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of complications in women and newborns” (WHO, 2004). The presence of a skilled healthcare professional during delivery is crucial in reducing maternal and child deaths.

The ideal data to measure skilled attendance at birth is from population based data. However, due to inadequate population-based data in South Africa, the percentage of births that occur in public healthcare facilities (facility delivery rate) is used as a proxy (Table 4).

Figure 5 shows the proportion of births in healthcare facilities in the period 2010 to 2014. Births that occurred at facilities have increased steadily in the last five years, increasing by 6.1 percentage points from 79.5% in 2010 to 85.6% in 2014.

Figure 5: Percentage of births in health facilities (2010–2014)



Source: District Health Information System (DHIS), Department of Health

The proportion of facility births was relatively high in all provinces (Table 5) in 2014. Gauteng (95.6%) recorded the highest proportion, followed by Limpopo (91.6%), while the lowest was recorded for North West (74.4%). However, there were generally increases in all but one province, Free State during 2010 to 2014, which experienced a 3.3 percentage points drop in facility deliveries.

Table 5: Percentage of births in health facilities by province, 2010–2014

	2010	2011	2012	2013	2014
Eastern Cape	66.2	70.9	74.3	73.8	78.6
Free State	89.6	84.6	85.0	82.9	86.3
Gauteng	94.4	91.8	93.0	93.6	95.6
KwaZulu-Natal	73.5	74.8	75.8	76.6	81.7
Limpopo	85.6	88.0	86.4	86.3	91.6
Mpumalanga	73.9	74.3	75.5	75.2	80.4
North West	69.1	71.3	72.7	73.0	74.4
Northern Cape	86.2	82.9	80.5	84.1	88.2
Western Cape	84.1	81.6	81.4	83.0	88.1

Source: District Health Information System (DHIS), Department of Health.

A limitation of using DHIS data is that it provides information on public healthcare facilities and does not include private institutions. Therefore, all proportions based on DHIS data are likely to be underestimates. With percentage of births in healthcare facilities, for example, the numerator excludes private sector deliveries whilst the denominator includes all births. As a case in point, nearly all births in the Western Cape occur in an institution and because a significant proportion of the pregnant female population is on medical aid, there are likely to be a large number of private facility births that are not accounted for in the DHIS. Thus the difference between the number stated in Table 5 and 100% of births is likely to be mainly private sector deliveries.

4.3 Contraceptive prevalence rate

Table 6: Contraceptive prevalence rate

Indicators	1994 baseline (or nearest year)	2010 Status (or nearest year)	2013 Status (or nearest year) 2015	Current status (2014 or nearest year) 2015	2015 Target	Target achievability	Indicator type
Contraceptive prevalence rate (per cent)	50.1 (1998)	50.2 (2003)			100	NA	MDG
Couple year protection rate (per cent) [Proxy for contraceptive prevalence rate]		27.6 (2010)	36.3 (2013)	52.7 (2014)	55	Not Achieved	Domesticated

The use of contraceptives in a population is key to understanding fertility and improving reproductive health. Contraception can mitigate against unwanted and high risk pregnancies. The high level of teenage pregnancies and unsafe abortions in South Africa can be reduced by ramping up access to family planning. Contraceptive methods can either be modern or traditional. Modern

methods include female and male sterilisation, oral hormonal pills, male condoms and injectables, and more recently the implant for South Africa, which was added to the contraceptive options in 2014. Traditional methods include periodic abstinence, withdrawal and breastfeeding.

Contraceptive use is monitored by measuring the contraceptive prevalence rate (CPR), which is defined as the percentage of women who are currently using, or whose sexual partner is currently using, at least one method of contraception. CPR is usually reported for married or in-union women aged 15 to 49 years. Monitoring the contraceptive prevalence is important because it helps to measure progress towards the attainment of women's access to reproductive health. Contraceptive use is a complement to the indicator on unmet need for family planning, and the sum of contraceptive prevalence and unmet need gives the total demand for family planning.

The CPR is calculated from nationally representative household surveys such as the DHS, which contain questions on contraceptive use. These surveys have not been regularly conducted in South Africa. The last nationally representative estimate of contraceptive use was measured in the 2003 DHS. As such, the couple year protection rate is used as proxy for the CPR (Table 6).

The couple year protection (CYP) rate is the estimated protection provided by family planning services during a one-year period, based on the volume of all contraceptives sold or distributed during that period. CYP is calculated by multiplying the quantity of each method distributed by a conversion factor, to yield an estimate of the duration of contraceptive protection provided per unit of that method. The CYPs for each method are then summed over all methods to obtain a total CYP figure. The problem with the CYP is that it does not show the number of individuals represented and it primarily reflects distribution and not actual use or impact.

Table 7 shows the national and provincial estimates of CYP in the five-year period 2010 to 2014. The national average of CYP was 52.7%, up from 27.6% in 2010 (a 91% increase). In 2014 the Western Cape had the highest CYP with 73.1% and Gauteng the lowest at 37.2%.

Table 7: Estimates of the couple year protection rate (per cent), 2010–2014

	2010	2011	2012	2013	2014
Eastern Cape	28.0	28.6	29.2	30.1	54.0
Free State	29.7	30.8	36.0	35.1	52.5
Gauteng	20.7	20.2	21.2	23.9	37.2
KwaZulu-Natal	22.3	24.8	32.1	44.2	59.3
Limpopo	29.2	31.9	32.9	35.7	55.1
Mpumalanga	26.8	28.0	29.7	35.3	43.0
North West	22.7	22.3	24.6	31.7	64.2
Northern Cape	31.4	31.2	31.6	32.2	45.0
Western Cape	51.8	51.2	56.7	61.7	73.1
National	27.6	28.4	31.5	36.3	52.7

Source: District Health Information System (DHIS), Department of Health.

4.4 Adolescent birth rate

Table 8: Adolescent birth rate

Indicators	1994 baseline (or nearest year)	2010 Status (or nearest year)	2013 Status (or nearest year) 2015	Current status (2014 or nearest year) 2015	2015 Target	Target achievability	Indicator type
Adolescent birth rate (per cent)	12.5 (1996)		13.7 (2011)		No target	NA	MDG
Proportion of births to under-18 mother (per cent) [Proxy for adolescent birth rate]		8	7.8	7.6		NA	Domesticated

The sexual and reproductive health of adolescents is important because of the risks associated with pregnancies in this age group. Adverse effects and complications in pregnancy such as anaemia, postpartum haemorrhage and depression, are more serious in adolescents than older women. Adolescent pregnancies are also more likely to end in stillbirths or deaths. The rates of preterm birth, low birth weight and asphyxia are higher among children born to adolescent mothers. Teenage pregnancy also has negative socio-economic consequences on girls, who are more likely to leave school. Delaying adolescent births could significantly lower population growth rates, potentially generating broad economic and social benefits, in addition to improving the health of adolescents.

The adolescent birth rate is measured as the number of births per 1 000 women aged 15 to 19 years. The indicator was measured at 12.5/1 000 in 1996 and increased to 13.7/1 000 in 2011 (Table 8). Measurement of the adolescent birth rate has not been done regularly, the last measurement being in the 2011 national population census. The National Department of Health thus adopts a proxy indicator for the adolescent birth rate – the delivery rate in public health facilities, of women under the age of 18 years (Table 8).

Table 9 presents the national and provincial estimates of deliveries for girls under the age of 18 years for the period 2010 to 2014. Under 18 facility deliveries reduced by 0.4 percentage point nationally, from 8% in 2010 to 7.6% in 2014. There were reductions in this estimate for all but two provinces, KwaZulu-Natal (0.4 percentage point) and Northern Cape (0.9 percentage point).

Table 9: National and provincial estimates of under 18 facility deliveries (per cent), 2010–2014

	2010	2011	2012	2013	2014
Eastern Cape	10.5	10.7	10.4	10.2	9.8
Free State	7.7	7.6	7.3	7.2	7.0
Gauteng	5.6	5.5	5.0	5.5	5.0
KwaZulu-Natal	8.7	9.1	9.1	9.2	9.1
Limpopo	8.3	8.2	7.8	7.9	7.6
Mpumalanga	10.0	9.5	8.9	9.1	8.9
North West	7.5	7.5	7.2	6.9	7.0
Northern Cape	9.0	9.5	10.0	10.1	9.9
Western Cape	6.8	6.8	6.5	6.4	6.2
National	8.0	8.0	7.7	7.8	7.6

Source: District Health Information System (DHIS), Department of Health.

4.5 Antenatal care coverage (at least one visit and at least four visits)

Table 10: Antenatal care coverage

Indicator	1994 baseline (or nearest year)	2010 Status (or nearest year)	2013 Status (or nearest year) 2015	Current status (2014 or nearest year) 2015	2015 Target	Target achievability	Indicator type
Antenatal care coverage (at least one visit and at least four visits) (percent)	76.6 (2001)	102.8 (2009)	100.6 (2011)	92.9 (2014)	100	Not achieved	MDG

Regular contact with a health professional such as a doctor or nurse during pregnancy is important because it allows women to access health services that can potentially improve the health of the mother and child. Antenatal care helps women to prepare for delivery and to understand warning signs during pregnancy and childbirth. Antenatal services provided in facilities are also an opportunity to administer HIV testing and medications, especially in a country like South Africa that has a high antenatal HIV prevalence rate.

The antenatal care coverage (first visit) in South Africa was 92.9% in 2014 (Table 11). This was an increase of 2.5 percentage points from the 2010 estimate. (Note: as indicated earlier, these data do not include private sector births so they may be underestimated). The figure above 100% for Gauteng province could have been due to the underestimation of the population of potential antenatal care clients. There was no relative change in Western Cape, which maintained antenatal care coverage at about 85% between 2010 and 2014.

Table 11: National and provincial estimates of antenatal care coverage (first visit), 2010–2014

	2010	2011	2012	2013	2014
Eastern Cape	81.4	86.4	81.7	80.9	85.4
Free State	98.4	91.8	90.1	86.7	92.1
Gauteng	109.4	110.6	114.4	102.5	111.5
KwaZulu-Natal	89.0	84.4	63.9	82.0	91.3
Limpopo	85.5	88.6	80.8	81.9	88.7
Mpumalanga	83.0	81.9	82.0	80.5	86.0
North West	82.3	84.7	88.6	87.5	88.0
Northern Cape	91.8	85.9	89.0	87.3	90.7
Western Cape	85.7	78.5	79.8	79.8	85.3
National	90.4	89.8	84.9	86.2	92.9

Source: District Health Information System (DHIS), Department of Health.

4.6 Unmet need for family planning

Unmet need for family planning was estimated to be 13.8% in the 2003 DHS survey. No new data on this indicator are available.

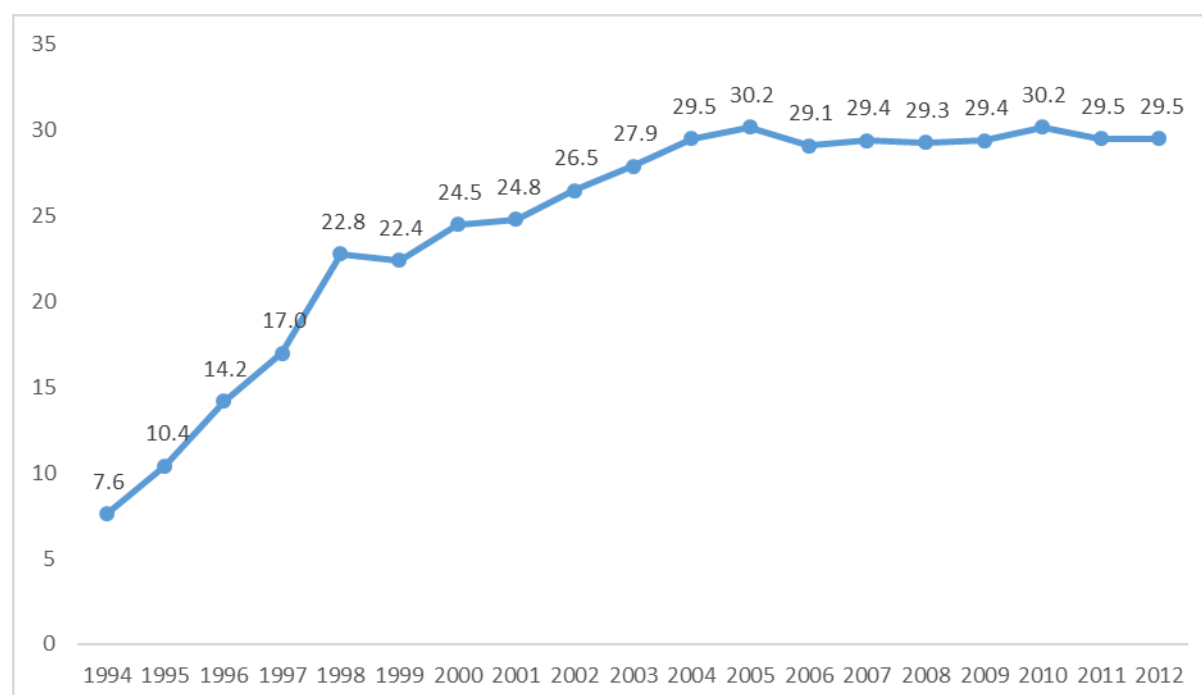
4.7 Prevention of mother-to child-transmission (of HIV for mothers)

Table 12: Prevention of mother-to-child transmission of HIV

Indicators	1994 baseline (or nearest year)	2010 Status (or nearest year)	2013 Status (or nearest year) 2015	Current status (2014 or nearest year) 2015	2015 Target	Target achievability	Indicator type
Prevention of Mother-to-Child rate (of HIV for mothers) (percent)							Domesticated
Antenatal first visit before 20 weeks (per cent)		36.7 (2010)	47.7 (2013)	51.8 (2014)	63	Not achieved	
Per cent antenatal client initiated on antiretroviral treatment (per cent)		97.4 (2010)	75.4 (2013)	85.4 (2014)	93	Not achieved	

South Africa has the largest number of people living with HIV in the world. An estimated 6.4 million people, mostly young women are said to be living with HIV in South Africa (Shisana O et al., 2014). About 30% of pregnant women presenting to antenatal care facilities in South Africa are HIV positive (National Department of Health, 2013). Antenatal HIV prevalence was estimated at 7.6% in 1994 but had increased to 22% by 1998. It then peaked at 30% in 2005 and has since stabilised at this level (Figure 6).

Figure 6: Trends in antenatal HIV prevalence in South Africa, 1994–2012



Source: *The 2012 National Antenatal Sentinel HIV & Herpes Simplex Type-2 Prevalence Survey in South Africa, NDOH*

Non-pregnancy related infections in HIV positive women account for over 30% of all maternal deaths in South Africa (NCCEMD, 2013). Prevention of mother to child transmission (PMTCT) of HIV is therefore important to the survival of mothers and their babies. PMTCT strategies can reduce the risk of mother to child transmission from nearly 40% to less than 5%.

The PMTCT programme involves the uptake of antenatal services, HIV testing during pregnancy, antiretroviral treatment (ART) for HIV positive pregnant women, safe childbirth practices and appropriate infant feeding, uptake of infant HIV testing and other postnatal healthcare services. Owing to the importance of HIV, South Africa has included an indicator on PMTCT in its domesticated MDGs. The indicators on PMTCT available from the DHIS used in this report are: antenatal care attendance before 20 weeks and the proportion of HIV positive antenatal clients successfully initiated on ART.

Antenatal first visit before 20 weeks

Timely and frequent visits to antenatal care are essential in order for women to receive the full benefits of interventions during pregnancy. Enrolment in the antenatal care programme is a crucial first step in the PMTCT service cascade. The WHO recommends a minimum of four antenatal care visits, and a first visit before 20 weeks. Early antenatal attendance is important, especially for HIV positive women, since it presents an opportunity for early initiation of ART. Early treatment of HIV in pregnancy can reduce the risk of mother to child transmission of HIV and also halve the possibility of maternal mortality (Li et al., 2014).

Table 13 shows the proportion of clients who registered for antenatal care before 20 weeks. The antenatal visits before 20 weeks increased by 15.1 percentage points nationally, from 36.7% in 2010 to 51.8% in 2014. Western Cape (63.3%) had the highest proportion of antenatal visits before 20 weeks, and Eastern Cape had the lowest (45.0%) in 2014.

Table 13: Antenatal first visit before 20 weeks

	2010	2011	2012	2013	2014
Eastern Cape	31.3	33.0	37.5	42.8	45.0
Free State	44.7	46.3	52.3	56.1	57.4
Gauteng	28.8	34.4	36.6	42.1	46.2
KwaZulu-Natal	35.7	40.2	29.8	50.5	56.0
Limpopo	42.0	41.6	41.6	44.8	47.9
Mpumalanga	34.6	37.8	40.5	47.3	53.7
North West	39.1	41.9	43.9	48.0	53.5
Northern Cape	50.2	52.4	53.1	54.6	56.5
Western Cape	51.6	55.6	57.6	60.3	63.3
National	36.7	39.8	40.2	47.7	51.8

Source: District Health Information System (DHIS), Department of Health.

Antenatal client initiated on ART rate

Table 14 shows the percentage of eligible antenatal patients initiated on ART. Just over 85% of all eligible women received ART in 2014. This was up from 75.4% in 2013, but much lower than the 97.4% recorded in 2010. Initiation of ART decreased by 12.0 percentage points in the five-year period between 2010 and 2014. Antenatal ART initiation increased substantially in Mpumalanga, from 43.0% in 2010 to about 86.6% in 2014.

Table 14: Per cent antenatal client initiated on antiretroviral treatment

	2010	2011	2012	2013	2014
Eastern Cape	101.2	71.2	75.9	76.9	87.4
Free State	57.1	62.6	80.5	80.4	84.1
Gauteng	54.2	77.9	83.0	62.1	78.6
KwaZulu-Natal	311.1	90.0	83.5	84.0	91.5
Limpopo	74.9	75.4	70.2	74.4	89.6
Mpumalanga	43.0	65.7	76.8	72.8	86.6
North West	68.1	71.6	73.3	77.2	87.4
Northern Cape	50.5	52.3	76.1	78.6	86.9
Western Cape	97.6	99.6	95.0	87.1	60.9
National	97.4	78.7	80.6	75.4	85.4

Source: District Health Information System (DHIS), Department of Health.

5 POLICIES AND PROGRAMMES

Progress on improving maternal health has occurred due to several policy and programme changes that have improved the coverage of essential interventions.

Health legislation

The right to health is enshrined in the Constitution and the National Health Act, (Act No. 61 of 2003), and provides for a number of basic healthcare rights. Other legislation related to healthcare that help to create a conducive environment for the improvement of maternal health include, among others: the Nursing Act of 2005, which provides for the introduction of mandatory community service for nurses; the Medicines and Related Substances Amendment Act, No. 59 of 2002, which provides for transparency in the pricing of medicines; and the National Health Amendment Bill (2010), which ensures that all health establishments comply with minimum standards through an independent entity.

The 1996 Choice on Termination of Pregnancy Act made medical and surgical abortion free of charge for all women of any age at public healthcare facilities. The introduction of free abortion services has seen an increase in the uptake of legal abortions. In 2012, there was approximately double the number of abortions (82 920) compared to 2005 (45 409), (Massyn N et al., October 2013). However, despite the enactment of the Choice on Termination of Pregnancy Act, there are still many illegal and unsafe abortions that occur every year. It is estimated that 50% of all abortions in the country are performed illegally.(MRC, 2008) This may be due in part to the fact that only 57% of designated abortion services are in fact operational (Trueman & Magwentshu, 2013). Further, limited awareness of the legality of abortion hinders access, which is further exacerbated by some health workers who may at times refuse to perform abortions, or relay judgemental opinions regarding abortion (Harries, Stinson, & Orner, 2009).

Family planning

Contraceptives have been freely available in public medical clinics in South Africa since 2001. The South African government is committed to expanding its family planning programme, and is party to Family Planning 2020, a global partnership between governments, civil society, donors and other stakeholders to expand contraceptive use to 120 million more women and girls by 2020 (FP2020, 2013). In line with this commitment, South Africa developed a new family planning policy, with emphasis on dual protection (using condoms together with other contraception), (National Department of Health, 2012). The 2012 National Contraception Clinical Guidelines and National Contraception and Fertility Planning Policy and Service Delivery Guidelines sought to expand choice of contraceptive methods and to increase public awareness of these choices. In early 2014, new subdermal contraception implants were introduced, adding to the available array of family planning options.

While basic contraceptive services are provided at every public healthcare facility, they have often been neglected amid HIV focused attention and promotion of condom use. There are many barriers to contraceptive use on both the demand and supply side (Culwell, Vekemans, de Silva, Hurwitz, & Crane, 2010; Prata, 2009). Some of the documented reasons for not using contraceptives in South

Africa include concerns regarding side effects, opposition by partners and judgemental attitudes (Richter & Mlambo, 2005; Wood & Jewkes, 2006). Many adolescents do not use contraception or use it inconsistently. Adolescents often require parental consent and may thus not end up using contraception altogether. Sex is in many cases still a taboo topic and sexually active adolescents may not easily access contraception even if it were made available (Lebese, Maputle, Ramathuba, & Khoza, 2013). On the supply side, many challenges are faced, including inadequate logistics and protocols (Baumgartner et al., 2007). There is need to strengthen training of front-line health workers in the provision of family planning (Richter & Mlambo, 2005). It is also important to deal with the problem of health worker biases and judgmental attitudes, particularly with regard to adolescents who wish to access family planning services (Wood & Jewkes, 2006).

Prevention of mother to child transmission of HIV

Despite the huge burden of HIV, South Africa did not have a PMTCT programme until 2002, when a court order forced the Department of Health to provide treatment to mothers and babies. Initially, PMTCT services had a single goal of preventing vertical transmission and mothers were denied all access to treatment that was essential to keep them alive (Barron et al., 2013). Presently, South Africa has a strong PMTCT programme. Over the years, there has been a push to increase uptake of PMTCT services, with latest estimates showing that more than 80% of all HIV positive pregnant women are receiving treatment (Mureithi L, 2014). The government is committed to providing essential treatment to all HIV positive mothers who need it, as shown by the widening of the treatment eligibility criteria for pregnant women in 2010. As of 2015, all pregnant women who test HIV positive are placed on lifelong antiretroviral treatment upon diagnosis. The changes in the PMTCT programme that have taken place over the years are outlined in Box 1 (Barron et al., 2013).

Box 1. Main steps in the evolution of South Africa's policy on the prevention of mother-to-child transmission of HIV, 1998–2014

- 1998–1999: a PMTCT programme was started at two midwife obstetric units in Khayelitsha, Cape Town by the Western Cape Department of Health, despite the lack of a national policy.
- 2000: thirteenth international HIV conference, Durban. Data presented indicated that antiretroviral drug regimens were effective in reducing mother-to-child transmission.
- 2001: the South African Ministry of Health endorsed the establishment of two research sites in each of the nine provinces for a period of 2 years to understand better the operational challenges of introducing antiretrovirals during pregnancy to reduce mother-to-child transmission.
- 2001: this policy was challenged in the courts. In December 2001, the government was ordered by the court to develop a fully capable and effective national programme to reduce mother-to-child transmission by the following year.
- 2002: the government challenged the court order, but was unsuccessful. The PMTCT programme commenced.
- 2003: the government published a new operational plan for treating and caring for those infected with HIV. The plan included increased provision of nevirapine, the extension of treatment to all HIV-infected pregnant mothers and their children and the expansion of related health-care services, such as voluntary counselling and testing.
- 2004: introduction of comprehensive care management and treatment of HIV-infected individuals. Pregnant women with a CD4+ T-cell count < 200 cells/mm³ became eligible for HAART.
- 2008: the Department of Health updated the PMTCT policy to include: (i) dual prophylaxis with zidovudine and nevirapine from 28 weeks' gestation; (ii) nevirapine treatment for pregnant women during labour and for their babies within 72 hours of delivery; and (iii) HAART for pregnant women with a CD4+ T-cell count < 200 cells/mm³.
- 2008: the Minister of Health launched the national PMTCT accelerated plan (A-plan) which aimed to reduce mother-to-child transmission of HIV from 12% in 2008 to less than 5% by 2011, in accordance with the National Strategic Plan 2007–2011.
- 2009: President Zuma's speech on World AIDS Day outlined changes to be implemented in 2010. This gave a clear indication that the political leadership required to address the scale of the problem was available.
- 2010: the Department of Health revised the PMTCT policy again to include lifelong HAART for HIV-positive women with a CD4+ T-cell count ≤ 350 cells/mm³ and dual ART from 14 weeks onwards in the pregnancy for HIV-positive women with a CD4+ T-cell count > 350 cells/mm³, in line with option A of World Health Organization guidelines. Infant prophylaxis was daily nevirapine for 6 weeks for all infants. Daily nevirapine was continued for all breastfeeding infants whose mothers were not on HAART, to reduce postnatal transmission.
- 2011: following a national conference on breastfeeding, the Minister of Health endorsed a policy that breastfeeding should be exclusively used at public health facilities, with formula milk being reserved for when there are medical indications, and that the provision of free formula milk should be phased out.
- 2011: in line with a call from global agencies, the Department of Health developed a national action framework for eliminating mother-to-child transmission of HIV.
- 2013: all pregnant HIV positive women placed on treatment regardless of CD4 count
- 2015: adoption of option B+, with lifelong treatment for HIV pregnant women starting at diagnosis

Adapted from Barron et al, 2013.

The Campaign for Accelerated Reduction in Maternal and Child Mortality in Africa

South Africa has endorsed international campaigns to improve maternal health, paving the way for creating a conducive environment in which to effect change. One such campaign is the Campaign for Accelerated Reduction in Maternal and Child Mortality in Africa (CARMMA) CARMMA, which was initiated in 2009 by the African Union, to influence action towards improving maternal and newborn health and survival across the African continent. South Africa formally adopted CARMMA in 2012. CARMMA is focused on six priorities, namely strengthening access to comprehensive sexual and reproductive health services, promoting early antenatal care, improving access to skilled birth attendants and strengthening human resources, improving child survival by promoting interventions

that are shown to be effective, as well as improving access to ART. CARMMA does not aim to develop new strategies and plans, but to ensure coordination and effective implementation of existing ones. Activities of the campaign include mobilising the necessary political will to make the lives of women count, coordinating and harmonising interventions around country-led plans/roadmaps and supporting ongoing efforts and initiatives to improve maternal, newborn and child health.

Strategic Plan for Maternal, Newborn, Child and Women’s Health (MNCWH) and Nutrition in South Africa

South Africa’s maternal health agenda is outlined in the National Department of Health’s Strategic Plan for Maternal, Newborn, Child and Women’s Health and Nutrition (MNCWH&N) in South Africa, which was initiated and implemented in 2012. The Strategic Plan covers a period of five years from 2012 to 2016, and aims to identify and strengthen priority interventions that will have the greatest impact on reducing maternal, neonatal and child mortality. Eight key strategies are identified for improving coverage, quality and equitable access of these interventions, including addressing social determinants of health, strengthening primary healthcare (PHC) interventions at district level and strengthening capacity of health systems and human resources among others. (Health Systems Trust, 2013) The strategies adopted in the plan are outlined in Box 2.

Box 2. Maternal, newborn, child and women’s health and nutrition strategies

Strategy 1:	Address inequity and social determinants of health
Strategy 2:	Develop a comprehensive and coordinated framework for MNCWH & Nutrition service delivery
Strategy 3:	Strengthen community-based MNCWH & Nutrition interventions
Strategy 4:	Strengthen provision of MNCWH & Nutrition services at PHC and district levels
Strategy 5:	Strengthen delivery of MNCWH & Nutrition services at district hospital level
Strategy 6:	Strengthen the capacity of the health system to support the provision of MNCWH & Nutrition services
Strategy 7:	Strengthen human resource capacity for delivery of MNCWH & Nutrition services
Strategy 8:	Strengthen systems for monitoring and evaluation of MNCWH & Nutrition interventions and outcomes

Source: Strategic Plan for Maternal, Newborn, Child and Women’s Health (MNCWH) and Nutrition in South Africa

The goals of the strategic plan were set to reduce by 10% by 2016, the maternal mortality ratio, under-five, infant and neonatal mortality rates. The Department of Health aims to reach this target by ensuring that every woman and mother receives priority intervention services as part of a comprehensive service package at the community, primary healthcare and hospital levels. The specific actions for maternal and women’s health outlined in the strategic plan are:

- Provision of basic antenatal Care (4 visits for every pregnant women starting in the 1st trimester)
- Initiation of HIV testing and antiretroviral therapy (ART) during pregnancy as well as other services which support the prevention of mother- to-child transmission (PMTCT) of HIV
- Introduction of dedicated obstetric ambulances and establishment of maternity waiting homes

- Improved intrapartum care focusing on the correct use of the partogram and standard protocols for complication management
- Provision of post-natal care within 6 days of delivery
- Increased access to contraceptive services including but not limited to pregnancy confirmation and emergency contraception
- Provision of post-rape care for adults and children
- Provision of youth-friendly counselling and reproductive health services at healthcare facilities and through school health services
- Improvement of coverage of cervical screening and strengthening of follow-up mechanisms

Confidential enquiries into maternal deaths

Institutional maternal deaths are closely monitored in South Africa, which is the only country in sub-Saharan Africa to routinely implement an inquiry into maternal deaths. The National Committee on Confidential Enquiries into Maternal Deaths (NCCEMD) was established in 1997 to monitor and recommend solutions to reduce maternal mortality (NCCEMD, 2013). Thus far, the Committee has produced five Saving Mothers reports for the periods 1998, 1999–2001, 2002–2004, 2005–2007, 2008–2010 and 2011–2012.

The Saving Mothers audit process provides a unique opportunity to gain insight into the problems of maternal deaths and to tailor adequate responses that can save the lives of women. During the audit process, data are obtained for all maternal deaths in order to capture causes, avoidable factors and substandard care related to all maternal deaths. Maternal deaths are reported to the provincial Maternal, Child, and Women’s Health coordinators through the completion of a maternal death notification form and submission of copies of the case notes. Provincial assessors analyse every case with respect to primary and final causes of death, and the care that was given. These assessors’ reports are then sent to a national committee for collation and analysis of the deaths. Recommendations for the care of pregnant mothers are made by the national committee in a report that has to be cleared by the Minister of Health.

6 TOWARDS SUSTAINABLE DEVELOPMENT GOALS (SDGS)

As the MDGs expire in 2015, a new set of goals, the Sustainable Development Goals (SDGs), are being discussed and are expected to shape the development agenda in the post-2015 era. The draft SDG framework includes 17 goals and 169 targets developed by the United Nations' Open Working Group on Sustainable Development Goals. Goal 3, a broad health goal: "Ensure healthy lives and promote well-being for all at all ages", includes two targets that influence maternal mortality and reproductive health:

- Goal 3.1: by 2030 reduce the global maternal mortality ratio (MMR) to less than 70 per 100 000 live births.
- Goal 3.7: by 2030 ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes.

To reach the goal of a global average target of 70 deaths per 100 000 live births, each country will need to contribute a two-thirds reduction in its MMR by 2030, regardless of their MMR at baseline. To eliminate the wide inequity in MMRs between countries, a secondary goal is that by 2030, no country should have an MMR that is more than 140, or twice the targeted global average MMR.

Achieving these targets will not be easy, but lessons can be drawn from the experiences with the MDGs. South Africa is well positioned to achieving the maternal SDG goals, as noticed in the gains made on reducing maternal mortality in the last five years. Maintaining the current momentum is key, and there's need to identify and scale up essential interventions that will be critical to improving reproductive health and reducing maternal mortality.

In an exercise for the MDG Countdown to 2015, the South African National Department of Health identified five essential interventions that will be crucial to saving the lives of mothers in childbirth: labour and delivery management; early detection and treatment of HIV in pregnancy; TB management in pregnancy; clean birth practices; and dedicated maternal inter-facility transport (Chola L et al., 2015). Focusing on these interventions could save over 1 000 additional maternal lives annually. The Department of Health has adopted these interventions as the official Countdown to 2015 interventions, and in late 2014 an exercise was launched to garner provincial support around the implementation of these interventions.

Prioritising family planning is also critical, as it can save additional lives by reducing unintended pregnancies and subsequent abortions (Michalow et al., 2015).

As South Africa sets its development agenda for the next 15 years, consideration of the evidence of what works towards improving maternal health is important. This evidence is available, and government and other stakeholders need to work together to ensure an end to preventable maternal deaths and access to reproductive health services for all women.

7 CONCLUSION AND RECOMMENDATIONS

South Africa has made progress with regard to MDG 5 in the last few years, but many women are still dying during childbirth, and the country will not attain its goal of reducing the maternal mortality ratio by three-quarters between 1990 and 2015. This is despite having a high proportion of births attended to by skilled healthcare personnel. The last DHS in 2003 recorded a contraceptive prevalence rate of about 50% among all women aged 15 to 49 years, higher than many other sub-Saharan African countries such as Zambia (40%) and Ghana (34%). Yet, there are many abortions, especially among adolescents, which end up being terminated. It is estimated that around 50% of all abortions conducted in South Africa are done illegally, and cause many deaths. This is in spite of legislation in place that legalises the termination of pregnancies. Antenatal care coverage is high, with over 90% of women accessing antenatal services at least once during pregnancy. However, many women book late for antenatal care and thus may be too late for some interventions such as PMTCT that are administered during pregnancy to take effect.

More still needs to be done to improve the health of women, especially during childbirth. If progress is to be achieved, maternal health needs to be viewed in a broader context than preventing maternal mortality. Focusing on reproductive health is essential and there is need to tackle the demand and supply side constraints that impede universal access to health. The fact that the contraceptive prevalence rate and the unmet need for family planning have not been measured nationally in two decades is worrying, as this makes planning and informed decision making on contraception difficult. Prevention of unwanted pregnancies among adolescents requires specific focus and an aggressive campaign to provide contraception, but this is not easily done without knowledge on the contraceptive use, sexual behaviour and tendencies of this age-group. There is also need to provide contraception for women with medical problems, which may become life threatening in pregnancy.

Several stakeholders have made recommendations for improving maternal and women's health in South Africa since 1994. Some of these recommendations have been adopted, but many have been sparsely and sketchily implemented (NCCEMD, 2013). The NCCEMD made ten key recommendations for improving maternal health in each of the Saving Mothers reports, noting that the problems faced remained relatively unchanged. The latest saving babies report (NCCEMD, 2013) identified the three main causes, which account for approximately 67% of all preventable maternal deaths: non-pregnancy-related infections, obstetric haemorrhage and complications of hypertension in pregnancy. The NCCEMD came up with five recommendations to deal with factors related to the three conditions, which it referred to as the 5Hs:

- Reducing deaths due to **HIV/AIDS**
- Reducing deaths due to **Haemorrhage**
- Reducing deaths due to **Hypertension**
- **Health worker training**
- **Health system strengthening.**

The specific actions that need to be taken to fulfil the key recommendations are detailed in the 2013 Saving Mothers report (NCCEMD, 2013) and in an article by Pattinson (B. Pattinson, 2012) and are reproduced here.

1. HIV and AIDS

- Promote the 'Know your status' and 'Plan your pregnancy' messages in communities and in the health sector, and ensure non-judgemental approaches.
- Ensure that every maternity facility is able to screen for HIV infection and perform early initiation of highly active antiretroviral therapy (HAART), and to recognise and treat co-infections, especially respiratory infections.

2. Haemorrhage

- Promote preventive interventions: community education, prevention of prolonged labour, prevention of anaemia; use safe methods for induction of labour; and practise active management of the third stage of labour (AMTSL).
- Severe obstetric haemorrhage must have the status of a 'major alert' requiring a team approach, with immediate attention to diagnosis of the cause of haemorrhage, resuscitation and a stepwise approach to arresting the haemorrhage.

3. Hypertension

- All maternity facilities must provide calcium supplementation to all women throughout their antenatal care and ensure the detection, early referral and timely delivery of women with hypertension in pregnancy.
- Severe hypertension, imminent eclampsia, eclampsia and haemolysis, elevated liver enzymes, low platelets (HELLP) syndrome must be recognised as life-threatening conditions (major alerts) requiring urgent attention. All maternity facilities must be able to administer magnesium sulphate to prevent convulsions, administer rapid-acting agents to lower severely raised blood pressure, provide close monitoring before and after delivery, and manage fluid balance safely.
- Promotion of family planning services in the population at large (for women, their partners, families and communities).

4. Health worker training

- Train all health care workers involved in maternity care in the ESMOE-EOST programme and obstetric anaesthetic module, with emphasis on the following:
- Standardised observation and monitoring practices that stipulate the frequency of observations and aid interpretation of severity, e.g. early warning monitoring charts. These would enable earlier detection of haemorrhagic shock following delivery and after caesarean section (CS), and also enable earlier interventions for complicated pre-eclampsia.
- The skills of safe labour practices; use of and interpretation of the partogram, AMTSL, use of uterotonic agents, safe CS, and additional surgical procedures for complicated CS.
- To achieve competence in the management of obstetric emergencies, e.g. postpartum haemorrhage, eclampsia, acute collapse.

- Train all healthcare workers who deal with pregnant women in HIV advice, counselling, testing and support (ACTS), initiation of HAART, monitoring of HAART and the recognition, assessment, diagnosis and treatment of severe respiratory infections.

5. Health system strengthening

- Ensure 24-hour access to functioning emergency obstetric care, both basic and comprehensive:
- Adequate and appropriately trained staff for acute areas such as labour wards and theatres, but also for antenatal clinics and postnatal monitoring areas
- Maternity-dedicated inter-facility transport system within healthcare facilities
- Standardised referral criteria for set conditions, e.g. hypertension
- Development of maternity waiting homes
- Maternal mortality and morbidity audit meetings to occur regularly with minutes documenting plans for rectifying modifiable factors. Progress on key indicators to be displayed as graphs and charts for staff to review.
- Ensure accessible and appropriate contraceptive services for all women, which are integrated into all levels of healthcare and which must be available on site for women post miscarriage and postpartum.

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