

Will South Africa meet the Sustainable Development Goals target for maternal mortality by 2030?

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In September 2015, South Africa (SA) and 192 countries adopted Agenda 2030, which included the Sustainable Development Goals. With a mere 6 years to go before 2030, it is useful to understand what progress SA is making towards their attainment. In this short report, we assess progress towards meeting the maternal mortality target, globally and in SA. The maternal mortality ratio that countries are expected to reach is no more than 70 deaths per 100 000 live births. A range of sources is used to show progress, with an emphasis on the reports of the National Committee on Confidential Enquiries into Maternal deaths, which reports on the number of maternal deaths in health facilities, together with reasons for these deaths and recommendations to reduce preventable mortality.

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The Sustainable Development Goals (SDGs) agreed by most members of the United Nations (UN) in 2015 for achievement by 2030 set various targets for selected health outcomes. The SDG target for maternal mortality that countries are expected to reach by 2030 is no more than 70/100 000 live births. There is global concern that the early decline in maternal mortality has slowed. According to the UN, a pregnant woman dies from preventable causes every 2 minutes, with the global maternity mortality ratio in 2020 being 223 per 100 000 live births.^[1] The Goalkeepers Report notes that between 2000 and 2015, the annualised rate of decline was 3%, but that this reduced to only 0.5% between 2016 and 2022.^[2]

The most recent maternal mortality data from national surveys is the Demographic and Health Survey (DHS) published in 2016, which found that the pregnancy-related maternal mortality ratio was 536 per 100 000 (95% confidence interval (CI) 270 - 802) compared with the DHS survey finding in 1998 of 150/100 000 (95% CI 77 - 223).^[3] However, the method used to determine maternal mortality in the survey was self-reported by the biological sister of each deceased pregnant woman. Another source of data on maternal mortality is from Statistics South Africa (SA), which reported a maternal mortality in-facility ratio of 88/100 000 live births in 2020, with a low of 45.6 in the Western Cape Province and a high of 116.2/100 000 in the Free State Province.^[4] Another source of data for maternal mortality is the SA Medical Research Council's Rapid Mortality Surveillance Reports. The most recent report estimates that the maternal mortality ratio for 2020 was 109, down from 164/100 000 live births in 2015 – a 33.5% decline.^[5]

With a mere 6 years to go to the 2030 SDG deadline, how is SA faring?

As noted above, recent total maternal mortality ratios that include deaths that occur in health facilities and outside health facilities are not available. However, as >96% of births are delivered by skilled birth attendants, it can be assumed that most deliveries occur in health facilities, which means that most deaths will be known.^[6]

The National Department of Health (NDoH) established the National Committee on Confidential Enquiries into Maternal

Deaths (NCCEMD) in 1997.^[7] Its remit was to report on the number of maternal deaths and causes of death, as well as to make recommendations on preventing deaths to the Minister of Health. It has since published seven triennial reports.

In 2023, the NDoH released the latest report from the NCCEMD, which provides recent data (2020 - 2023) against which to assess progress.^[8] Even though this and previous reports of the NCCEMD only focus on deaths that take place in public health facilities (and exclude those in the community), the trend data that they present over several years provide information on the trajectory towards the SDG target.

Every triennial report of the NCCEMD from 2008 onwards found that institutional maternal mortality has declined in SA, as reflected in Table 1. The overall institutional maternal mortality ratio (iMMR) declined since 2008 - 2010. There was a 12.8% change between 2008 and 2010 and 2011 and 2013, and a 12.5% decline between 2011 and 2013 and 2014 and 2016 – contributing to a cumulative 24% between 2008 and 2016, coinciding with a significant increase in access to antiretroviral therapy (ART).^[9-11] This is noted in the NCCEMD report for the 2014 - 2016 period, which showed 'an almost 47% reduction in deaths in non-pregnancy-related infections (NPRIs) (mainly from HIV deaths) from numbers in 2011'.^[10] Despite these gains, it is of concern that the 2020 - 2022 report noted that 'HIV status was unknown for 13.4% of deaths, and that 14.4% of HIV-infected women were not on ART'.^[8]

The increase in the iMMR in the 2020 - 2022 triennial report has been attributed to deaths associated with COVID-19.^[11] In 2019, the iMMR was at its lowest at 98.8/100 000 live births, as reflected in Table 2. The recently released report covered the period 2020 - 2022 and included the impact of the COVID-19 pandemic on maternal deaths.^[8] Essentially, this report found that COVID-19 contributed to 124 (38.5%) NPRIs in 2020, rising to 369 (66.6%) NPRIs in 2021, and reducing to 12 deaths due to COVID-19 in 2022. This is in contrast to the pre-COVID era, when much of the NPRIs were attributed to HIV – even though these had declined from about 2008, largely owing to HIV testing of pregnant women and initiation of ART, as noted above.

Table 1. Institutional maternal mortality ratio by triennia, 2008 - 2022, per 100 000

	2008 - 2010	2011 - 2013	2014 - 2016	2017 - 2019	2020 - 2022
SA average	177.22	156.66	137.58	113.80	126.0

SA = South Africa.

Table 2. Institutional maternal mortality ratios for selected provinces and South Africa: 2017 - 2022, per 100 000^[8-11]

Area	2017	2018	2019	2020	2021	2022
FS	139.14	186.78	144.83	185.75	232.31	116.20
LP	141.82	134.97	126.20	118.11	144.20	114.70
KZN	131.81	99.14	82.22	116.40	128.80	87.80
WC	73.52	72.09	50.77	93.30	102.30	70.80
SA	125.89	117.69	98.82	119.20	148.40	109.70

FS = Free State Province; LP = Limpopo Province; KZN = KwaZulu-Natal Province; WC = Western Cape Province; SA = South Africa.

Discussion

Apart from the overall impact of access to HIV testing and initiation of ART on the average decline in iMMR in SA, there was a significant decrease in one province relative to all others, as reflected in Table 2. One province also stands out as that with the highest maternal mortality ratio over the years covered by the NCCEMD reports, as reflected in Table 2. While the iMMR for 2022 shows a significant reduction from 2021, the national trend compared with KwaZulu-Natal and the Western Cape provinces reflects poor performance. To contribute to more rapid reduction in maternal mortality in SA, poorly performing provinces such as the Free State should benchmark their maternal health services against those of KwaZulu-Natal, which have shown steady progress despite having the highest HIV burden. In addition, the Free State Province can learn from Limpopo Province, which showed a significant decline in iMMR between 2017 and 2020.

The latest NCCEMD report provides some reasons for the differences between provinces.^[8] For example, it notes that the caesarean delivery case fatality rate was the highest in the Free State for the 2020 - 2022 triennium, while it was the lowest in KwaZulu-Natal, as a result of the latter implementing a safe caesarean delivery programme. In addition, the Free State had the highest rate of deaths due to obstetric haemorrhage and hypertensive disorders of pregnancy, while KwaZulu-Natal and the Western Cape had the lowest rates – again, the Free State could learn lessons from these provinces. Similarly, the report speculates that Limpopo Province has improved due to the deployment of obstetric response teams launched in early 2020.

The Western Cape Province has had a number of advantages since 1994, which may be argued to contribute to its low iMMR. These include its lack of a former homeland being included as part of its post-1994 boundary, better health infrastructure, higher numbers of doctors and specialists as well as good management. What are the reasons for the significant declines in KwaZulu-Natal, which it may be argued does not have the advantages of the Western Cape?

There are various reasons for the declines in the iMMR in SA. These include the appointment of provincial specialist obstetrician gynaecologists in 2011 to support the district clinical specialist teams through direct supervision and the production of a number of protocols and guidelines.^[12] In addition, KwaZulu-Natal was able to appoint a specialist anaesthetist in 2020 who, although based in one district in the province, provides support throughout the province and nationally through, for example, a YouTube video entitled 'Approaches to district anaesthesia'.^[13]

The latest triennial report (2020 - 2022) makes a number of recommendations on what can be done to further reduce maternal mortality.^[8] These include:

- sustained political commitment
- increased funding for maternal health, including ring-fencing of funding
- implementation of signal functions of maternal and neonatal health
- integration of HIV, COVID, contraception, safe surgery, mental health and community issues into maternal care services
- establishment of onsite midwife-run birthing units at regional and tertiary hospitals
- a range of interventions to strengthen clinical management, including ongoing training and use of clinical guidelines and protocols
- building on Morbidity and Mortality Review meetings to ensure that decisions at these meetings are implemented within fixed time periods and by the appropriate persons/administrators
- implementation of the recommendations of the NCCEMD committee and regular monitoring of these by the National Department of Health.

However, many of these recommendations have been made in previous triennial reports – for example, the importance of conducting morbidity and mortality reviews and taking action has been a constant recommendation, and the establishment of onsite midwife-run birthing units was made in the 2014 - 2016 triennial report. While there have been some improvements as reflected in the data above, in order for SA to reach the SDG target of <70 maternal deaths per 100 000 live births, greater efforts will be needed at all levels of the public health system.

The inclusion of 'community issues' in the recommendations requires the health sector to look beyond health facilities and into ecosystem issues that affect maternal health and wellbeing. Maternal health and wellbeing are a result of a complex set of circumstances related to the social and economic determinants of health.^[14] It is not accidental that poor women (often black women) in most countries have the worst health outcomes. This means that merely tackling the biomedical causes of maternal mortality – as important as these are – are not sufficient: the material conditions of women, especially those of reproductive age – including their empowerment – also need to be improved.^[15]

While direct service provision is the mandate of provincial departments of health, it is critical for the NDoH to provide both leadership and stewardship. The type of leadership required was

noted by President Cyril Ramaphosa at the High-Level Partnership for Maternal, Newborn and Child Health (PMNCH) event at the UN in September 2023, where he called on heads of state and other leaders to ‘work together to champion the women, children and adolescent health agenda’. He also noted that ‘political leadership means both action and accountability’ and that ‘effective leadership champions collaboration to strengthen health and related sectors and to engage women and girls meaningfully in health systems and their reform.’^[16] It is time for leaders at all levels of the SA health sector to heed these words to ensure that the country meets and surpasses the SDG target for maternal mortality.

Conclusion

There is a short 6 years for SA and the global community to reach the SDG targets for maternal mortality. For avoidable deaths in health facilities in SA, the reports from the NCCEMD provide both causes of mortality as well as recommendations for what the health sector can do to reduce mortality. While these reports show that the national iMMR has declined, the variation by province is a cause for concern. Provincial departments of health can learn much by sharing and learning from each other as we suggest using the latest report. The National Department of Health need to strengthen its leadership role to ensure that the country meets the SDG target for maternal mortality, taking its lead from the pronouncements of President Ramaphosa at the PMNCH event at the UN.

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1. United Nations. Sustainable Development Goals 2023: Special Report – towards a rescue plan for people and planet. New York: UN, 2023. <https://unstats.un.org/sdgs/report/2023/> (accessed 8 December 2023).
2. Bill and Melinda Gates Foundation. Goalkeepers 2023 report: Imagine a world where innovations could save the lives of 2 million more mothers and babies. Bill and Melinda Gates Foundation, 2023. https://www.gatesfoundation.org/goalkeepers/downloads/2023-report/2023-goalkeepers-report_en.pdf (accessed 8 December 2023).
3. National Department of Health, Statistics South Africa, South African Medical Research Council, and ICF South Africa Demographic and Health Survey 2016 Key Findings. Pretoria and Rockville, 2018. <https://dhsprogram.com/pubs/pdf/SR248/SR248.pdf> (accessed 8 December 2023).
4. Statistics South Africa. Maternal Mortality Ratio on the Decline in SA. Pretoria: Stats SA, 2022. <https://www.statssa.gov.za/?p=15321#:-:text=Nationally%2C%20the%20ratio%20decreased%20from,experiencing%20a%20decrease%20in%20MMFR> (accessed 8 December 2023).
5. Statistics South Africa. Maternal Health Indicators. Pretoria: Stats SA, 2020. [https://www.statssa.gov.za/?p=13100#:-:text=The%20Maternal%20health%20indicator%20report,nearly%20all%20deliveries%20\(97%25\)](https://www.statssa.gov.za/?p=13100#:-:text=The%20Maternal%20health%20indicator%20report,nearly%20all%20deliveries%20(97%25)) (accessed 8 December 2023).
6. Dorrington RE, Bradshaw D, Laubscher R, Nannan N. Rapid mortality surveillance report 2019 & 2020. Cape Town: South African Medical Research Council, 2021. <https://www.samrc.ac.za/sites/default/files/attachments/2022-08/Rapid%20Mortality%20Surveillance%20Report%202019%262020.pdf> (accessed 8 December 2023).
7. Moodley J, Pattinson R. Improvements in maternal mortality in South Africa. *S Afr Med J* 2018;108(3 Suppl 1):S4-S8. <https://doi.org/10.7196/SAMJ.2018.v108i3.12770>
8. National Department of Health. Saving Mothers: Executive Summary 2020 - 2022: Includes data for COVID-19 pandemic. Pretoria: NDoH, 2023. <https://www.health.gov.za/annual-reports/> (accessed 29 November 2023).
9. National Committee on the Confidential Enquiries into Maternal Deaths. Saving Mothers 2011-2013: Fifth report on the Confidential Enquiries into Maternal Deaths in South Africa. Pretoria: NCCEMD, 2014. https://www.westerncape.gov.za/assets/departments/health/saving_mothers_2011-13_-_comprehensive_report.pdf (accessed 29 November 2023).
10. National Committee on the Confidential Enquiries into Maternal Deaths. Saving Mothers 2014 - 2016: Seventh triennial report on confidential enquiries into maternal deaths in South Africa: Short report. Pretoria: NCCEMD, 2018. https://www.westerncape.gov.za/assets/departments/health/saving_mothers_2014-16_-_short_report.pdf (accessed 29 November 2023).
11. National Department of Health. Saving Mothers: Annual report 2020. Pretoria: NDoH, 2020. <https://www.health.gov.za/wp-content/uploads/2023/06/13-10-22-Saving-Mothers-Annual-Report-2020.pdf> (accessed 29 November 2023).
12. Asghar KA, Nkabile TZ, Naidoo M. An analysis of obstetric practices and outcomes in a deep rural district hospital in South Africa. *PLoS ONE* 2022;17(1):e0262269. <https://doi.org/10.1371/journal.pone.0262269>
13. Bishop D. Approaches to district anaesthesia: Safe and simple. YouTube, 23 February 2022. <https://www.youtube.com/watch?v=Zi8yGgezZHQ> (accessed 29 November 2023).
14. Souza JP, Day LT, Rezende-Gomes AC, et al. A global analysis of the determinants of maternal health and transitions in maternal mortality. *Lancet Glob Health* 2023. [https://doi.org/10.1016/S2214-109X\(23\)00468-0](https://doi.org/10.1016/S2214-109X(23)00468-0)
15. Ralli M, Urbano S, Gobbi E, et al. Health and social inequalities in women living in disadvantaged conditions: A focus on gynecologic and obstetric health and intimate partner violence. *Health Equity* 2021;5(1):408-413. <https://doi.org/10.1089%2Fheq.2020.0133>
16. Ramaphosa C. Remarks by President Cyril Ramaphosa at the High-Level Partnership for Maternal, Newborn and Child Health (PMNCH) Event, UN General Assembly, New York, USA, 2023. <https://www.gov.za/news/speeches/president-cyril-ramaphosa-high-level-partnership-maternal-newborn-and-child-health> (accessed 9 December 2023).

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