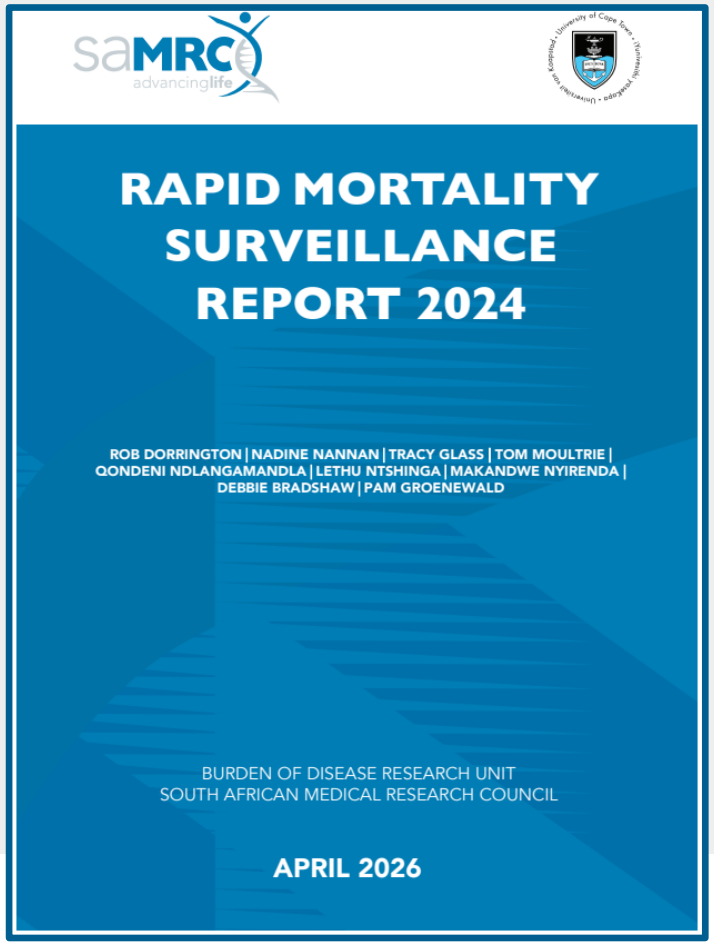
Rapid Mortality Surveillance Key Findings 2024



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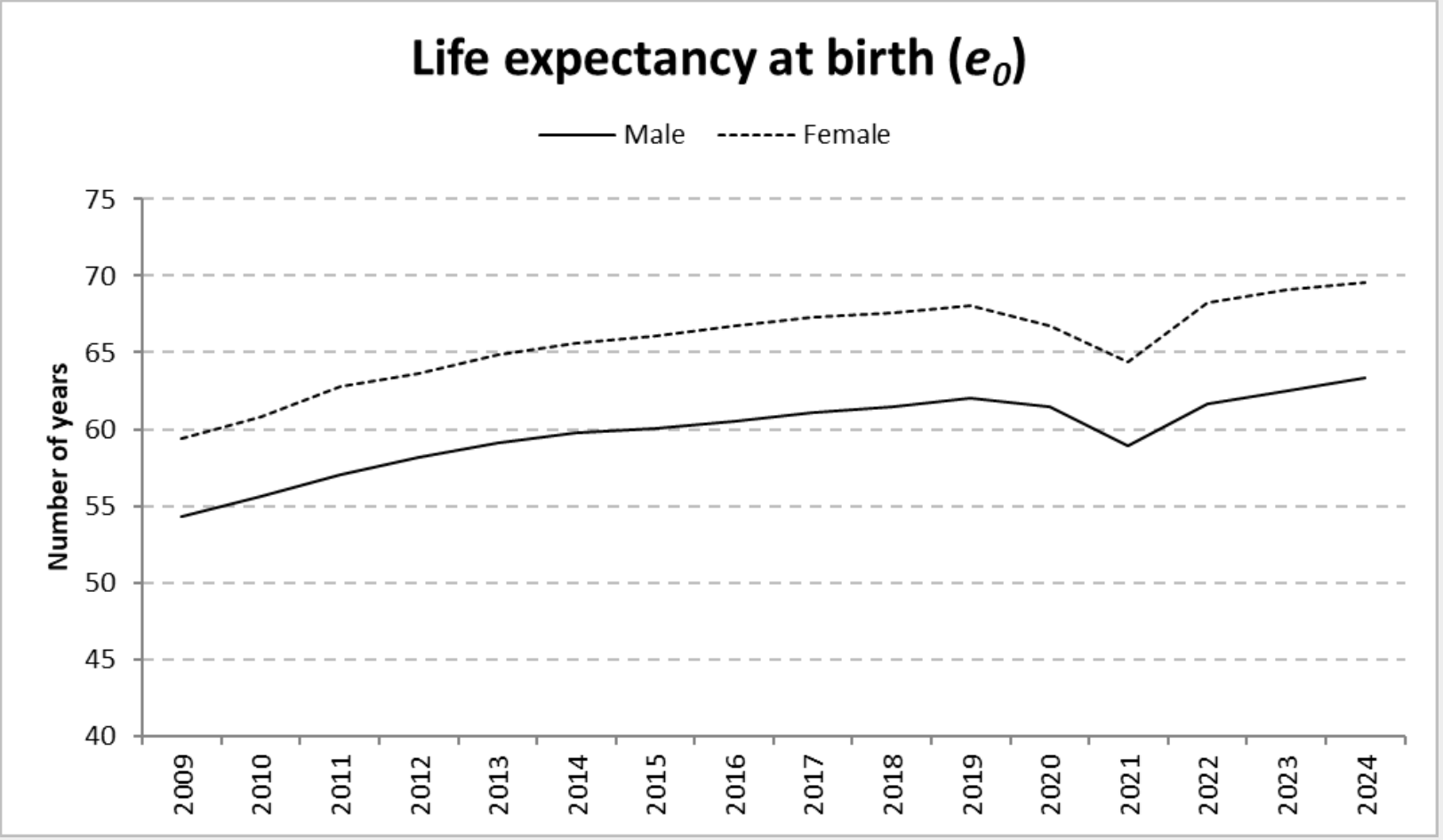
https://www.samrc.ac.za/reports/rapid-mortality-surveillance-report-2024

Data sources

- National Population Register from Department of Home Affairs, adjusted for under-registration and supplemented by:
  - Cause of death information from Stats SA (up to 2022), and
  - District Health Information System from NDOH
- Empirical estimates of high-level mortality indicators

Increased demographic uncertainty

- 30% undercount in 2022 census
- Fertility and mortality data from census 2022 not released
- Disruption in routine data systems
- Birth registration not done during first COVID lock-down

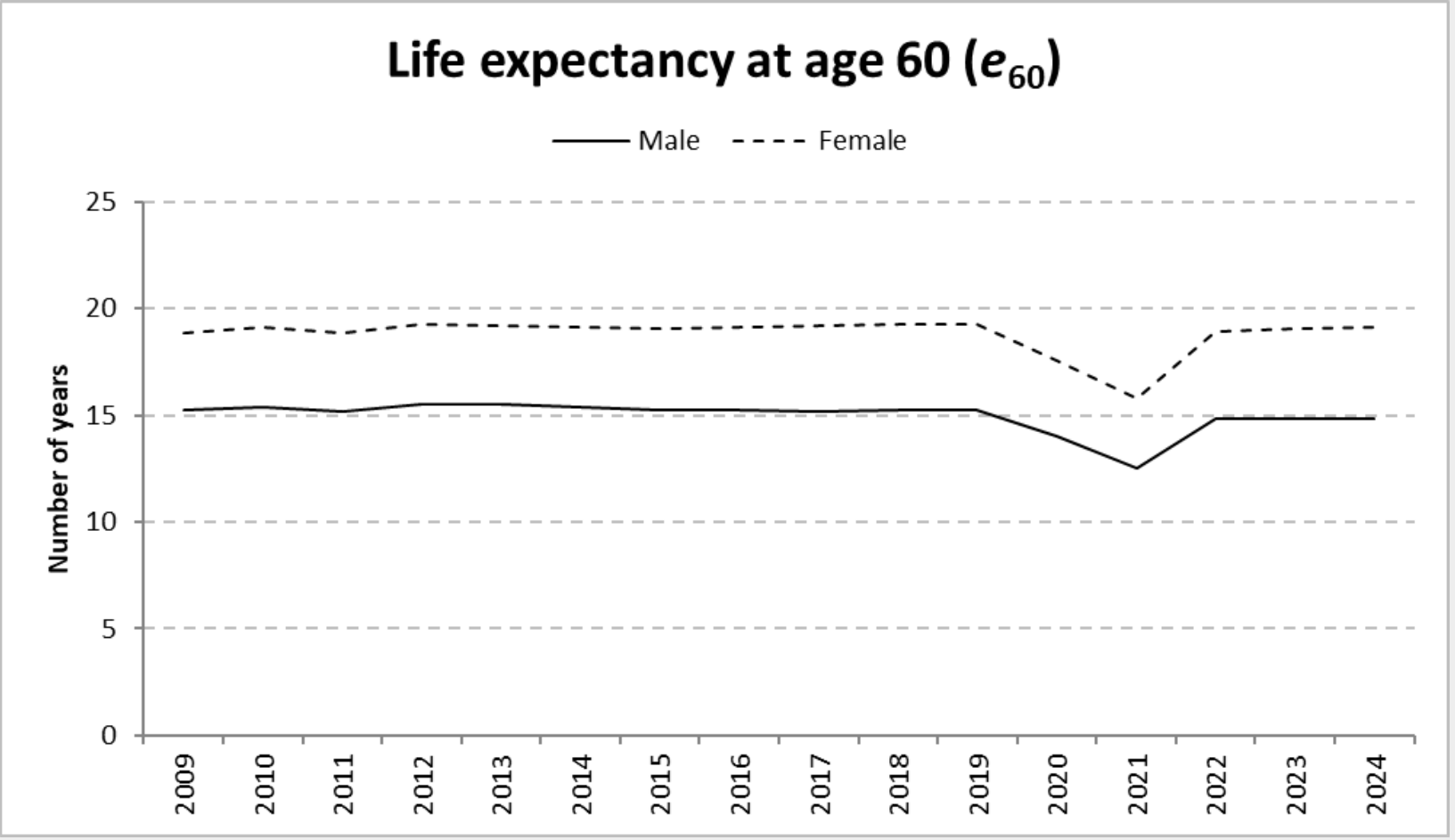


Trend in life expectancy at birth:
Life expectancy had been increasing since a low in 2005, dropped in 2020 and 2021, mostly recovered in 2022 and has continued to increase thereafter.

2024 life expectancy:

- Total: 66.4 years (↑4.8 yrs since 2021)
- Male: 63.4 years (↑4.4 yrs since 2021)
- Female: 69.6 years (↑5.2 yrs since 2021)

INDICATOR		2018	2019	2020	2021	2022	2023	2024
Life expectancy at birth (e_0)	Total	64.5	65.1	64.1	61.6	64.9	65.8	66.4
	Males	61.5	62.1	61.5	59.0	61.6	62.5	63.4
	Females	67.6	68.1	66.8	64.4	68.3	69.1	69.6



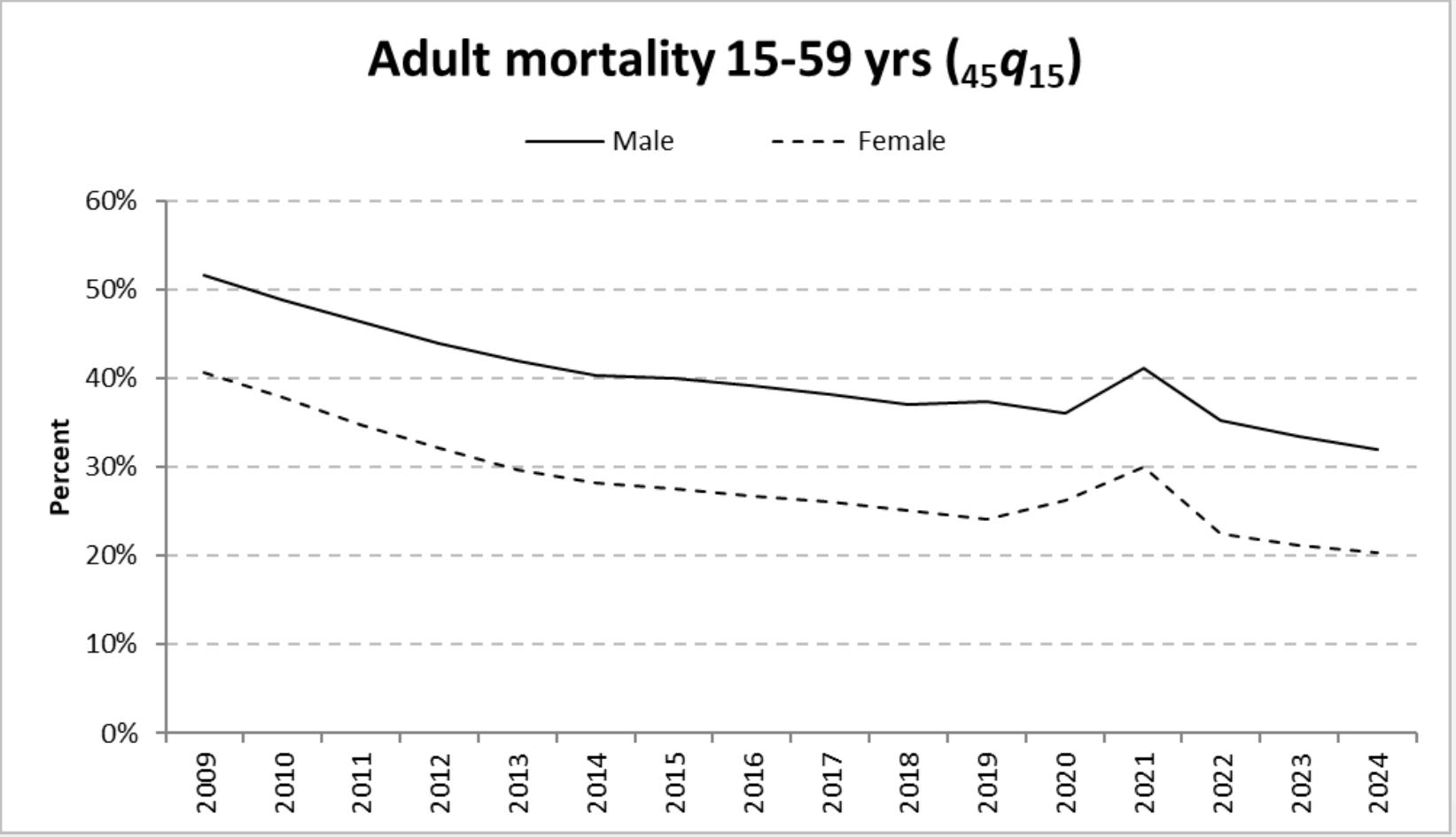
Trend in life expectancy at age 60:

Life expectancy at age 60 years, a measure of older age mortality, decreased by 2.7 years for males and 3.5 years for females between 2019 and 2021 and almost recovered in 2022. Remaining relatively stable until 2024

2024 life expectancy at 60

- Total : 17.2 years
- Male : 14.9 years
- Female : 19.2 years

INDICATOR		2018	2019	2020	2021	2022	2023	2024
Life expectancy at age 60 (e_{60})	Total	17.4	17.4	15.9	14.3	17.1	17.1	17.2
	Male	15.2	15.2	14.0	12.5	14.8	14.8	14.9
	Female	19.3	19.3	17.6	15.8	18.9	19.1	19.2



Trend in adult mortality:

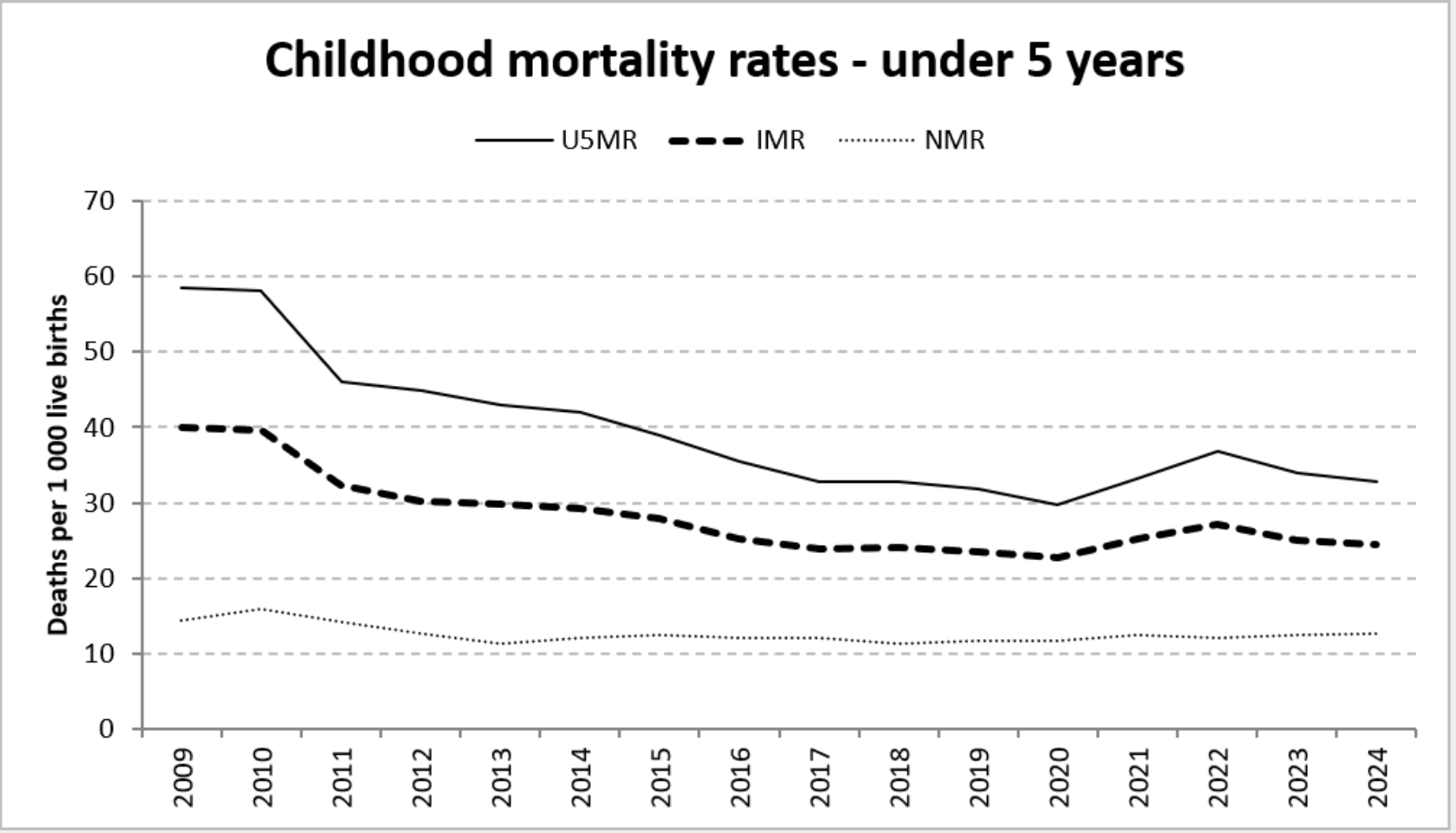
Adult mortality between ages 15-59 years increased between 2019 and 2021, reversing the downward trend – and recovered by 2022 and continued downward trend.

The increase during COVID was smaller for males due to reductions of injury deaths during lock down.

2024 adult mortality

- Total: 26%
- Male: 31%
- Female: 20%

INDICATOR		2018	2019	2020	2021	2022	2023	2024
Adult mortality ($_{45}q_{15}$)	Total	31%	30%	31%	36%	29%	27%	26%
	Males	37%	37%	36%	41%	35%	34%	32%
	Females	25%	24%	26%	30%	22%	21%	20%



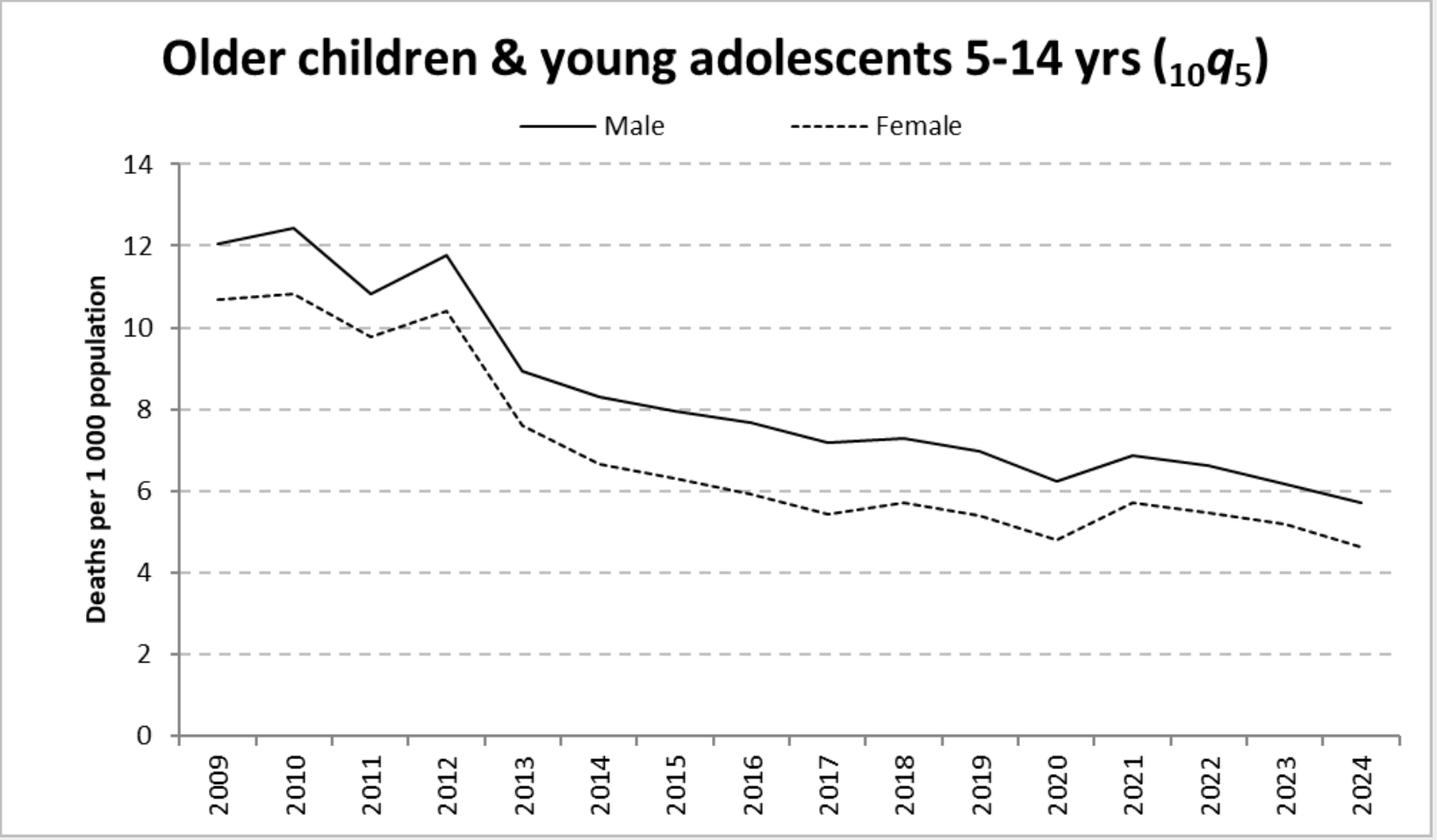
Trend in under 5 and infants:

Childhood mortality decreased rapidly from 2003 until 2011 and then more gradually until 2020. Rates increased in 2021 and 2022, then decreased thereafter. Neonatal mortality rate (NMR) shows no improvement since 2003.

2024 childhood mortality

- U5MR: 33 per 1,000 livebirths
- IMR: 24 per 1,000 livebirths
- NMR: 13 per 1,000 livebirths

INDICATOR	2018	2019	2020	2021	2022	2023	2024
Under-5 mortality rate (U5MR) per 1 000 live births	33	32	30	33	37	34	33
Infant mortality rate (IMR) per 1 000 live births	24	23	23	25	27	25	24
Neonatal mortality rate (<28 days) per 1 000 live births	11	12	12	12	12	12	13



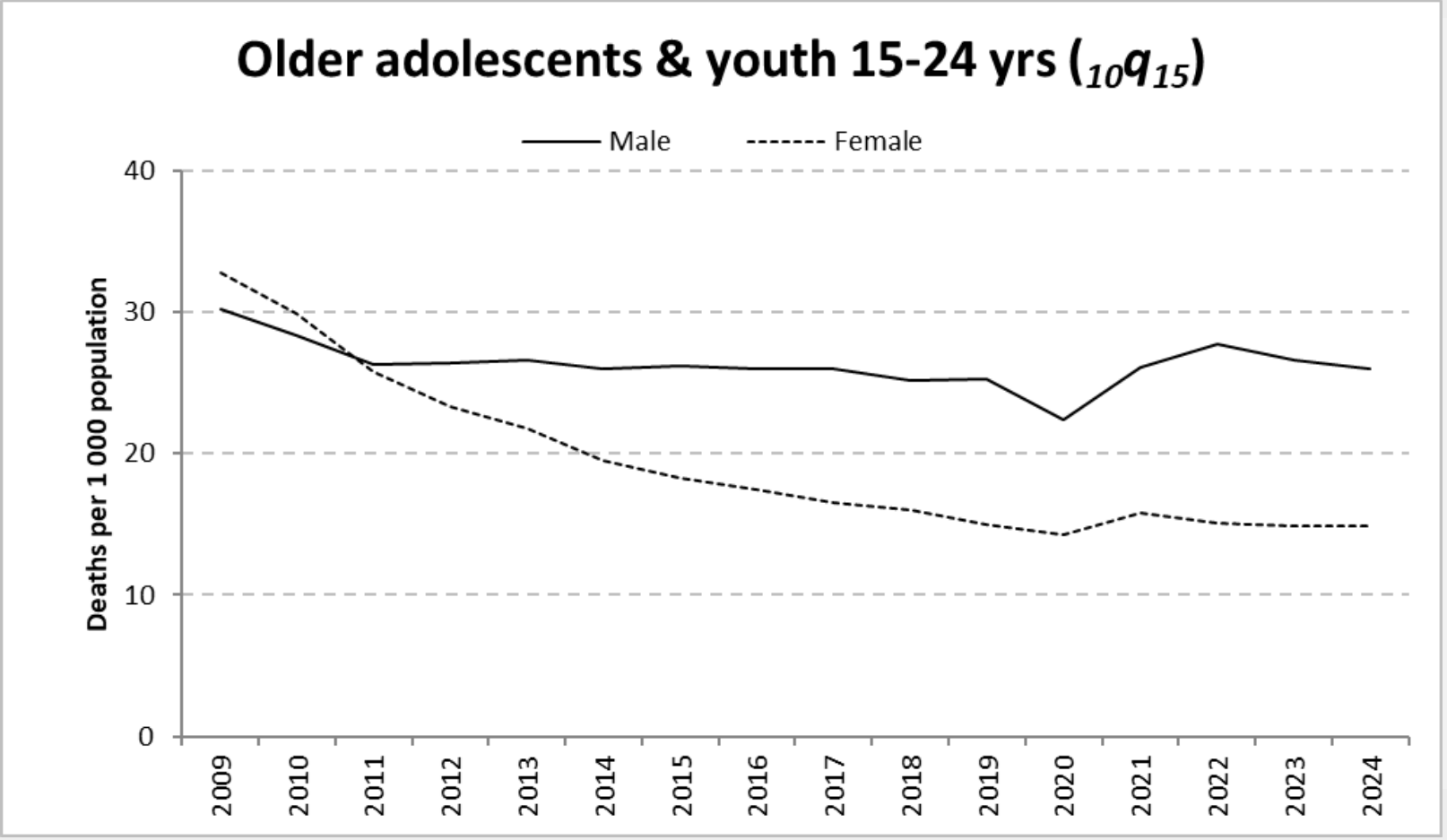
Trend in older children:

Declines in mortality of older children and young adolescents were accelerated in 2020 – lockdown, social distancing, and handwashing appear to have improved child mortality in 2020, but mortality in this age group reverted to higher rates in 2021 before resuming the decline.

2024 older children & young adolescents

- Overall: 5.2 per 1,000 population
- Male: 5.7 per 1,000 population
- Female: 4.6 per 1,000 population

INDICATOR		2018	2019	2020	2021	2022	2023	2024
Older children & young adolescents ($_{10}q_5$ per 1 000)	Total	6.5	6.2	5.5	6.3	6.0	5.7	5.2
	Male	7.3	7.0	6.2	6.9	6.6	6.2	5.7
	Female	5.7	5.4	4.8	5.7	5.5	5.2	4.6



Trend in adolescent & youth:

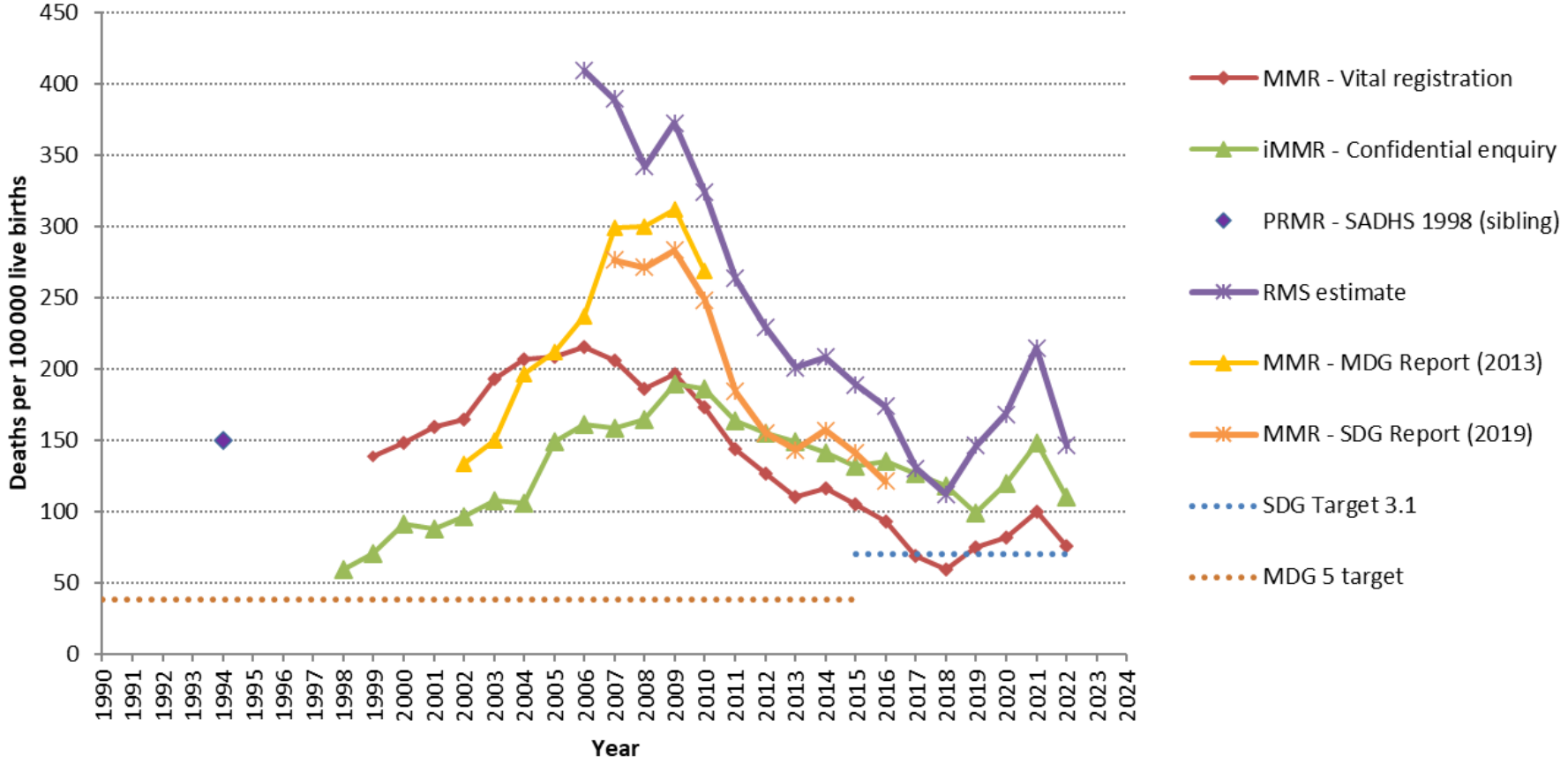
Older adolescent and youth mortality decreased in 2020 and increased to a higher level in 2021. Male mortality continued to increase in 2022 before dropping, while female mortality dropped slightly.

2024 older adolescent & youth

- Total: 20.4 per 1,000 population
- Male: 26.0 per 1,000 population
- Female: 14.8 per 1,000 population

INDICATOR		2018	2019	2020	2021	2022	2023	2024
Older adolescents & youth ($_{10}q_{15}$ per 1 000)	Total	20.6	20.2	18.3	21.0	21.4	20.7	20.4
	Male	25.2	25.3	22.4	26.1	27.7	26.6	26.0
	Female	16.0	15.0	14.3	15.8	15.0	14.9	14.8

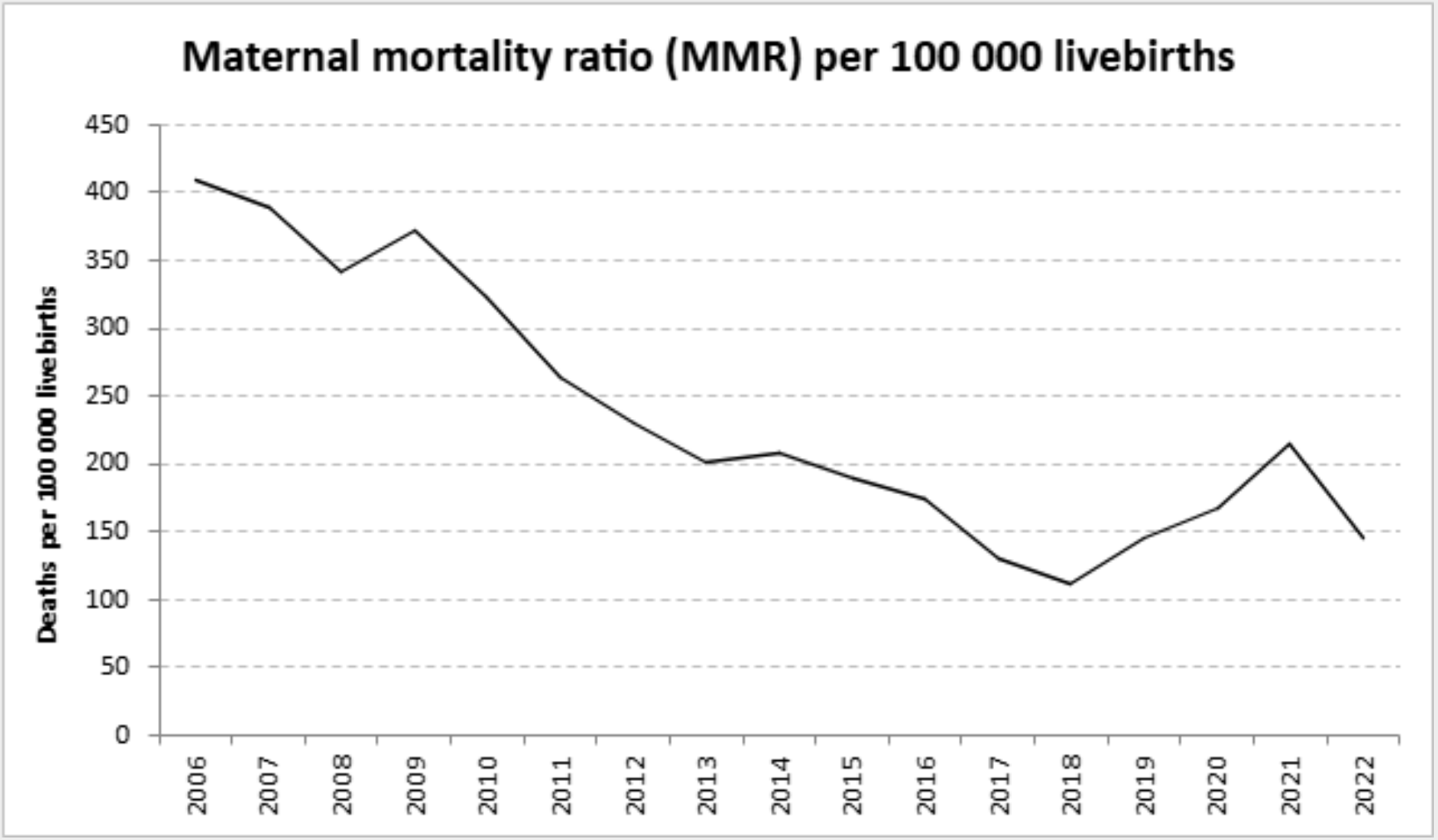
Revised method to estimate MMR



In order to align with the ICD guidance for classifying maternal deaths,[1] a methodological change was introduced in the 2024 RMS: in addition to deaths due to obstetric causes, the standalone question about pregnancy status within 42 days of death of a female has been taken into consideration.

1. World Health Organization. The WHO application of ICD-10 to deaths during pregnancy, childbirth and puerperium: ICD MM. 2012.

UCT Centre for Actuarial Research

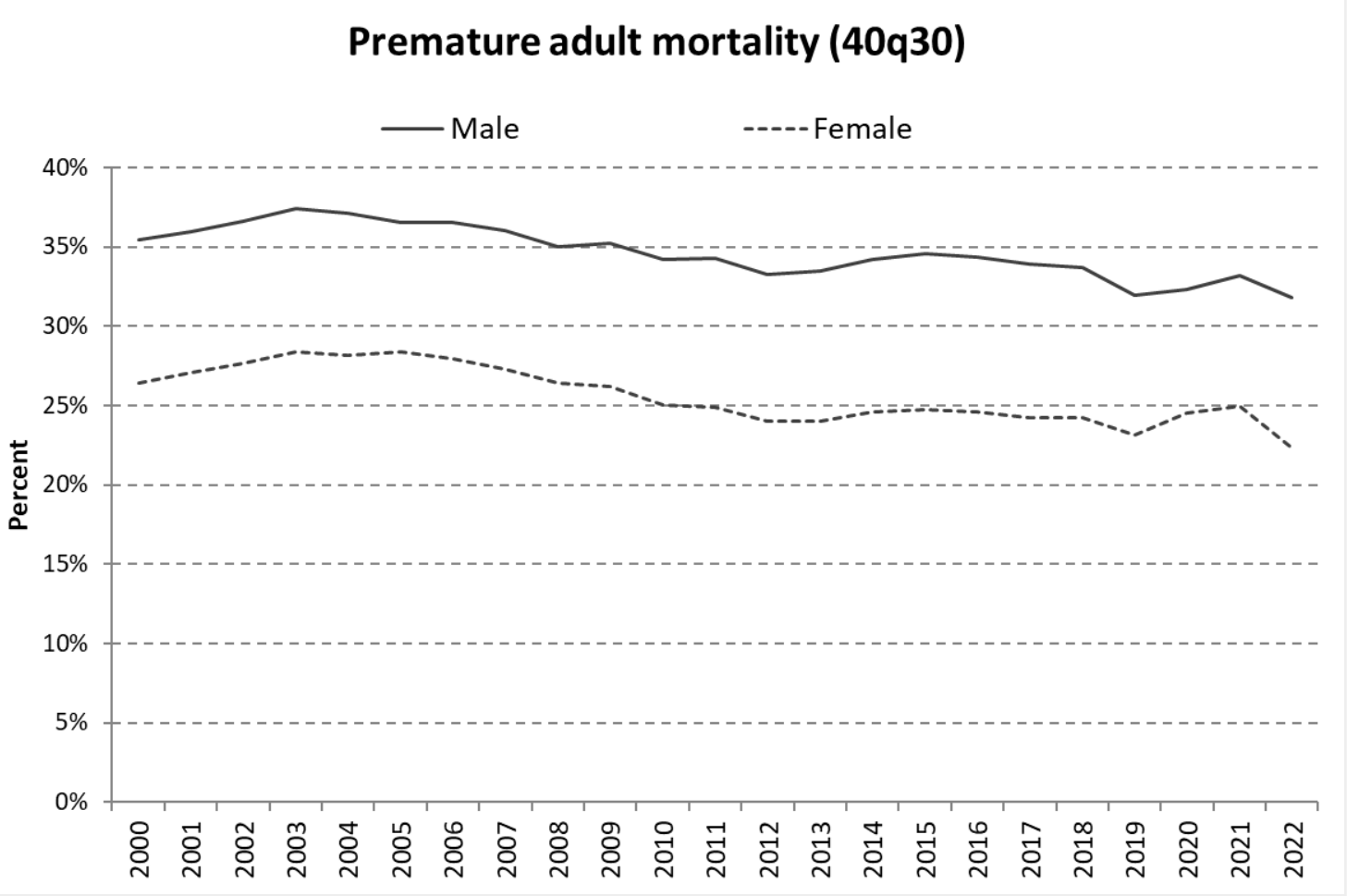


Trend in MMR:

Estimates of maternal mortality ratios based on adjusted cause-of-death data from Stats SA up to most recent year data have been released, show MMR peaked at over 400 deaths per 100 000 in 2006.

Downward trend in MMR continued until 2018, then increased to a high of 214 in 2021 before declining to 146 in 2022 (still higher than lowest point in 2018).

INDICATOR	2016	2017	2018	2019	2020	2021	2022
Maternal mortality ratio per 100 000)	173	130	112	146	168	214	146



Trend in pre-mature mortality:

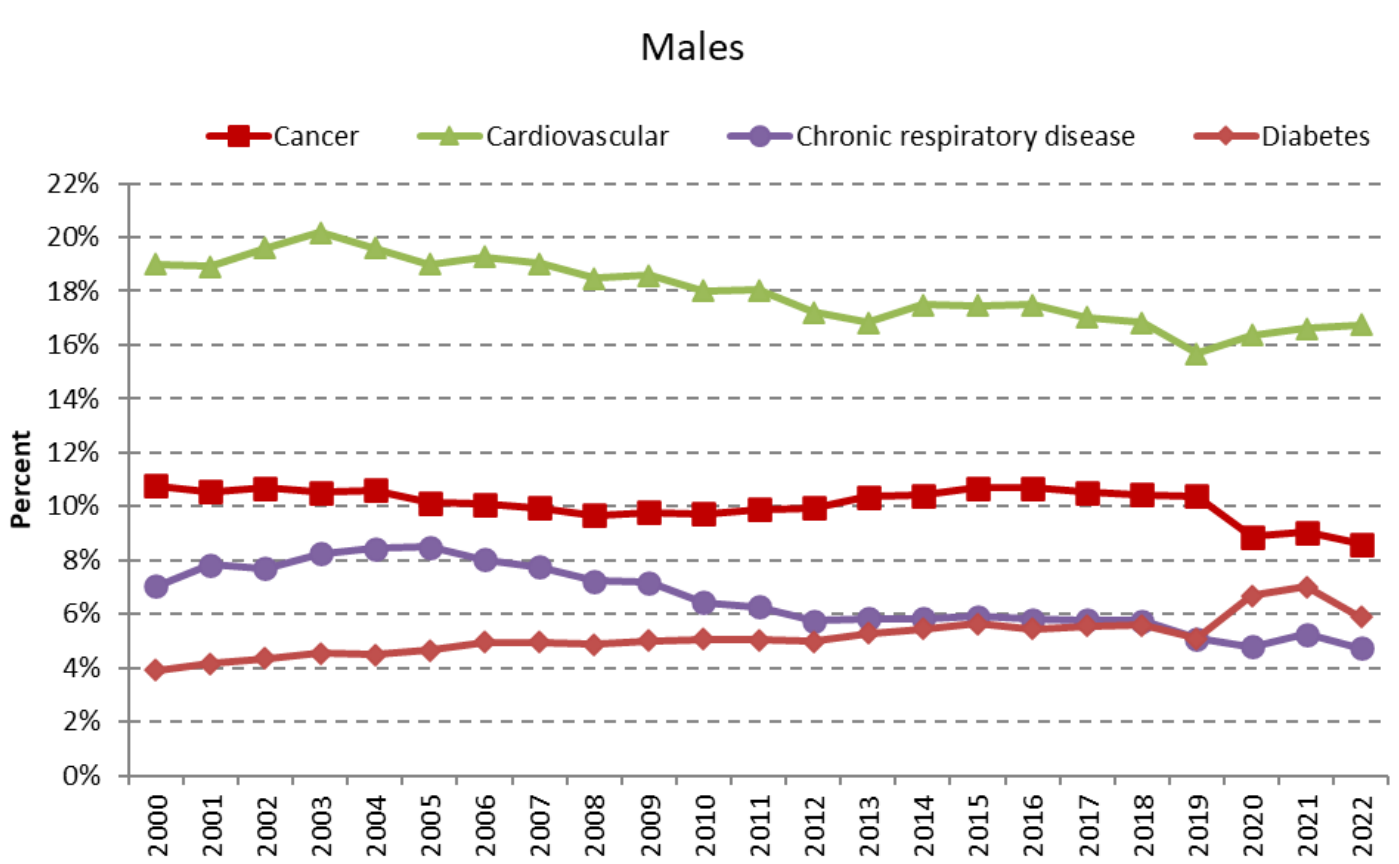
Rates in premature mortality, the probability of a 30-year-old dying before age 70, show little change between 2016 and 2022. Rates increased during COVID in 2020 and 2021, then declined in 2022. Female rates are about 70% of males.

Rates in 2022 to be interpreted with caution due to data quality concerns.

2022 NCD pre-mature mortality

- Total: 27%
- Male: 32%
- Female: 22%

INDICATOR		2016	2017	2018	2019	2020	2021	2022
Premature adult mortality ($_{40}q_{30}$)	Total	29%	29%	29%	28%	28%	29%	27%
	Male	34%	34%	32%	32%	33%	32%	32%
	Female	25%	24%	24%	23%	25%	25%	22%



Trend in pre-mature mortality, males:

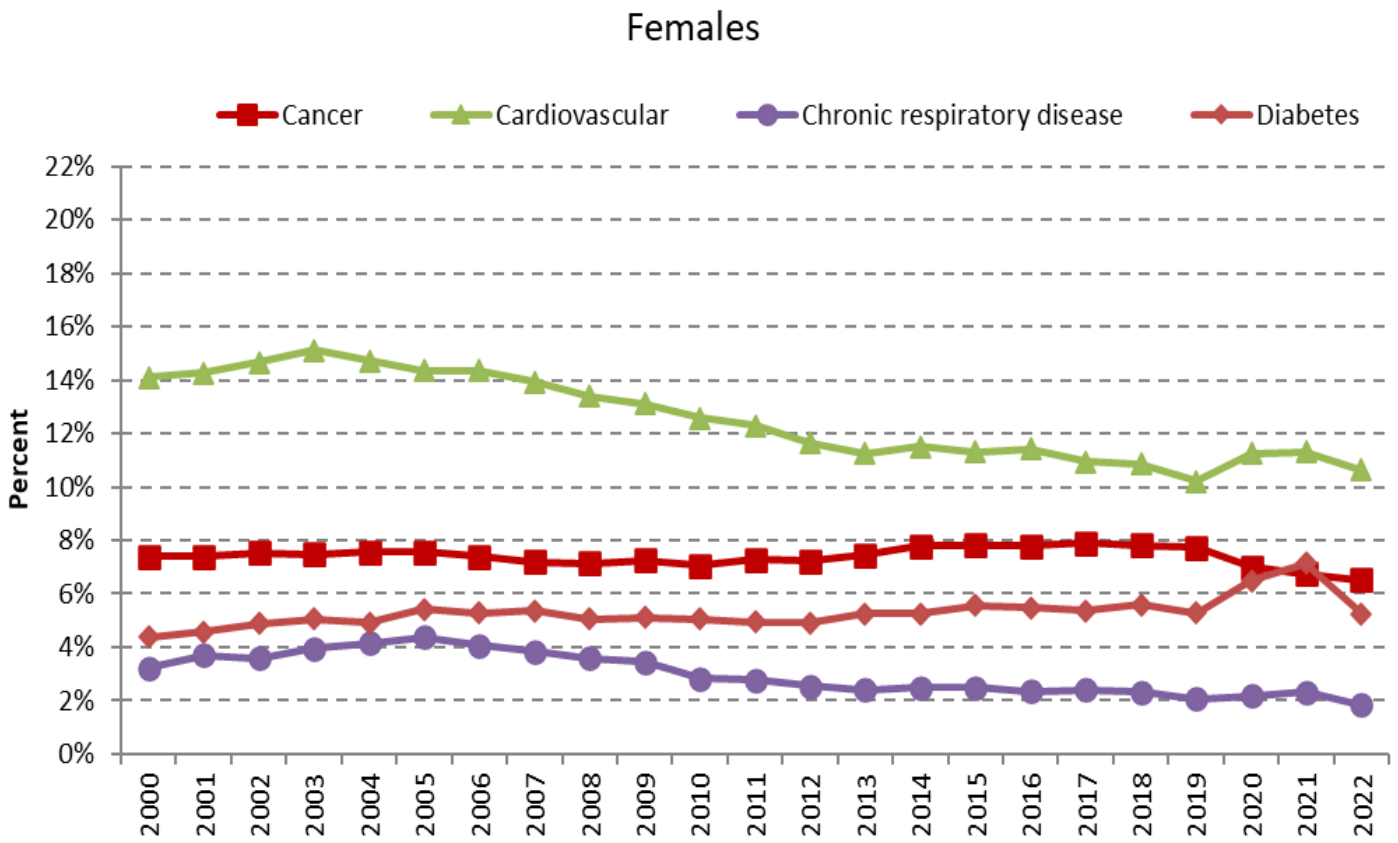
Rates in premature mortality in males due to cancer and diabetes were level between 2016 and 2019, with rates due to cancer falling sharply and rising sharply for diabetes in the COVID period 2020-2022.

Premature mortality due to cardiovascular diseases similarly increased during COVID

2022 NCD pre-mature mortality - males

- Cancer: 9%
- Cardiovascular: 17%
- Chronic respiratory: 5%
- Diabetes: 6%

INDICATOR	2016	2017	2018	2019	2020	2021	2022
Cancer $_{40}q_{30}$	11%	11%	10%	10%	9%	9%	9%
Cardiovascular $_{40}q_{30}$	17%	17%	16%	16%	17%	17%	17%
Chronic respiratory $_{40}q_{30}$	6%	6%	6%	5%	5%	5%	5%
Diabetes $_{40}q_{30}$	5%	6%	6%	5%	7%	7%	6%



Trend in pre-mature mortality, females:

Rates in premature mortality in females due to cancer and diabetes were level between 2016 and 2019.

Rates due to cancer declined sharply from 2019-2022. Premature mortality due to cardiovascular diseases increased from 2019 to 2021, then declined in 2022.

2022 NCD pre-mature mortality - females

- Cancer: 7%
- Cardiovascular: 11%
- Chronic respiratory: 2%
- Diabetes: 5%

INDICATOR	2016	2017	2018	2019	2020	2021	2022
Cancer ${}_{40}q_{30}$	8%	8%	8%	8%	7%	7%	7%
Cardiovascular ${}_{40}q_{30}$	11%	11%	11%	10%	11%	11%	11%
Chronic respiratory ${}_{40}q_{30}$	2%	2%	2%	2%	2%	2%	2%
Diabetes ${}_{40}q_{30}$	5%	5%	6%	5%	7%	7%	5%