

# Report on Weekly Deaths

Week 33

1 January – 18 August 2020

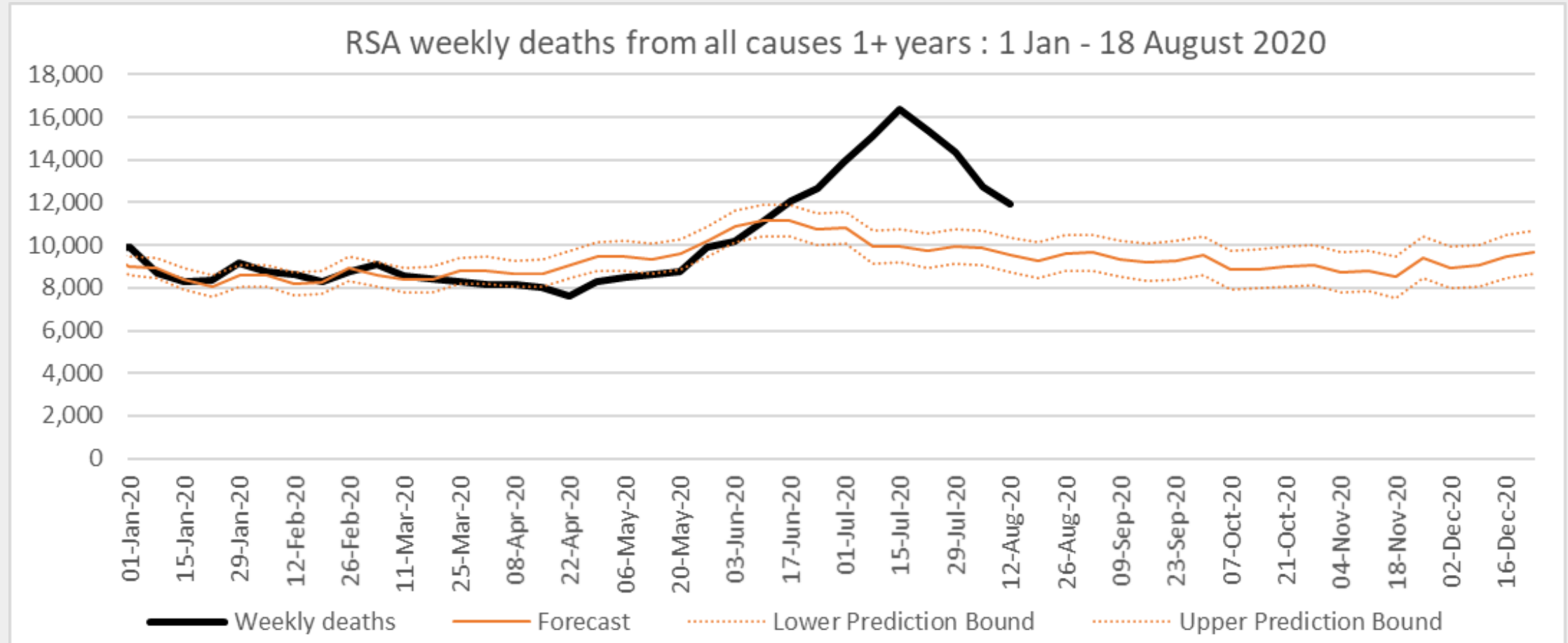
*Debbie Bradshaw, Ria Laubscher, Rob Dorrington,  
Pam Groenewald, Tom Moultrie*

# Data source

- Data on deaths on the National Population Register are obtained from the Department of Home Affairs on a weekly basis.
- Number of deaths are weighted upward to account for incomplete registration of deaths and those that do not have a South African ID number.
- Estimated number is compared with forecast numbers based on historical data from 2018 and 2019 to allow for the trend in the numbers and seasonal variations.
- Babies under 1-years are excluded from analysis.

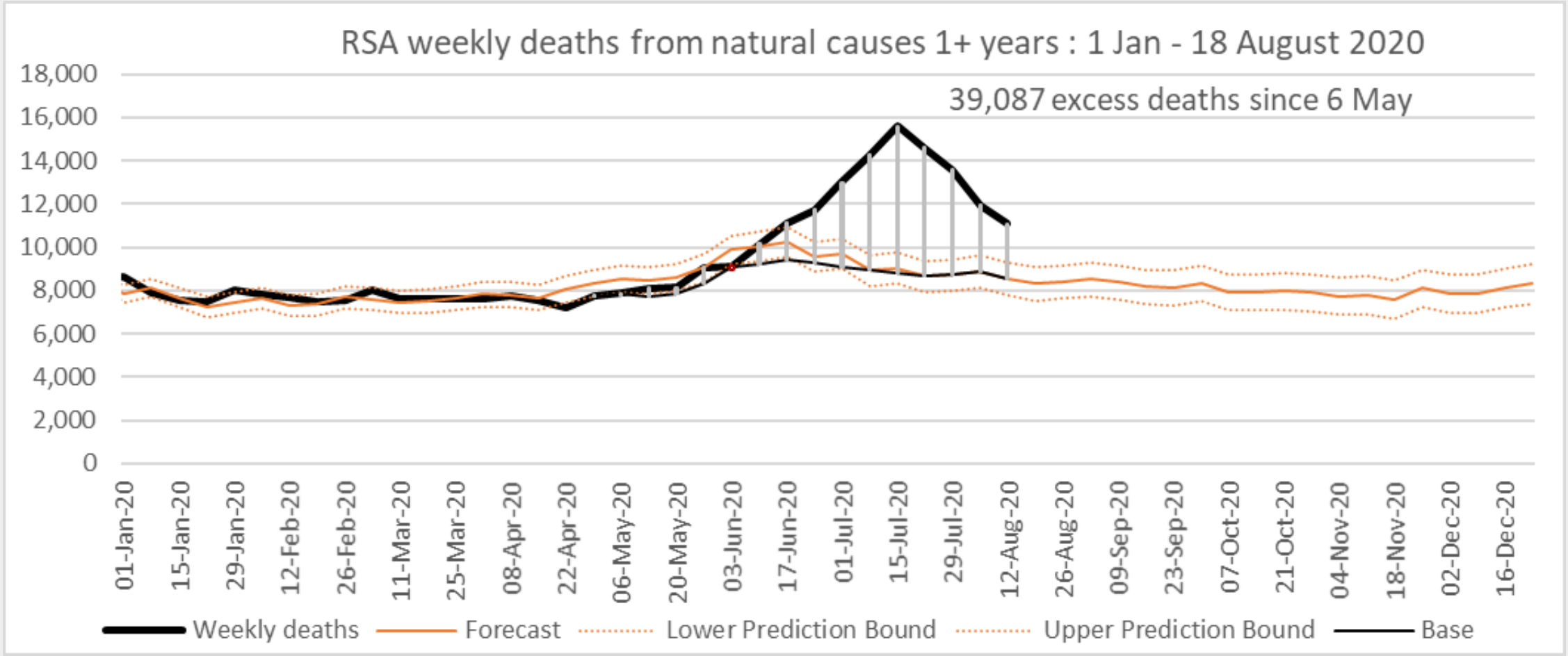
# The number of deaths has continued decreasing since week starting 15 July 2020

- Black line shows the weekly number of deaths in 2020
- Orange line shows the number predicted from historical data with bounds of uncertainty – a lower bound and upper bound

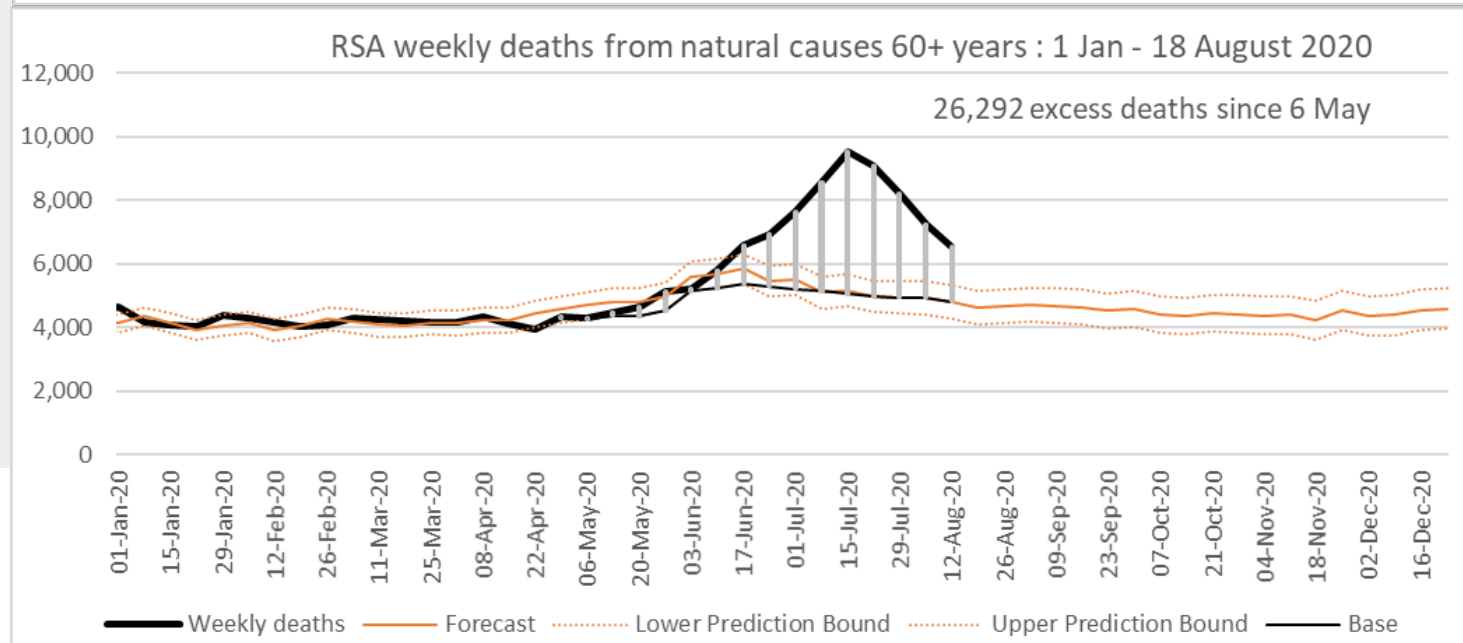
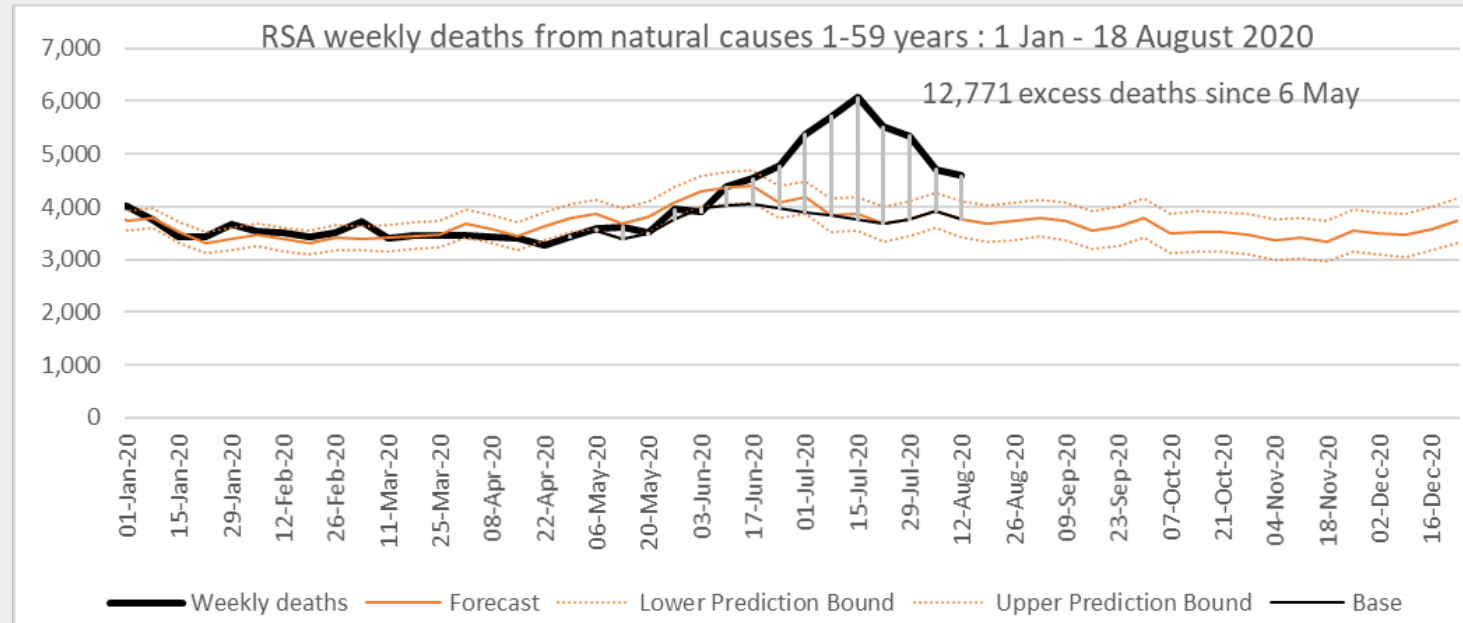


# Estimated 39,087 excess natural deaths since 6 May

- Black line shows the weekly number of deaths
- Orange line shows the number predicted from historical data with bounds of uncertainty – a lower bound and upper bound

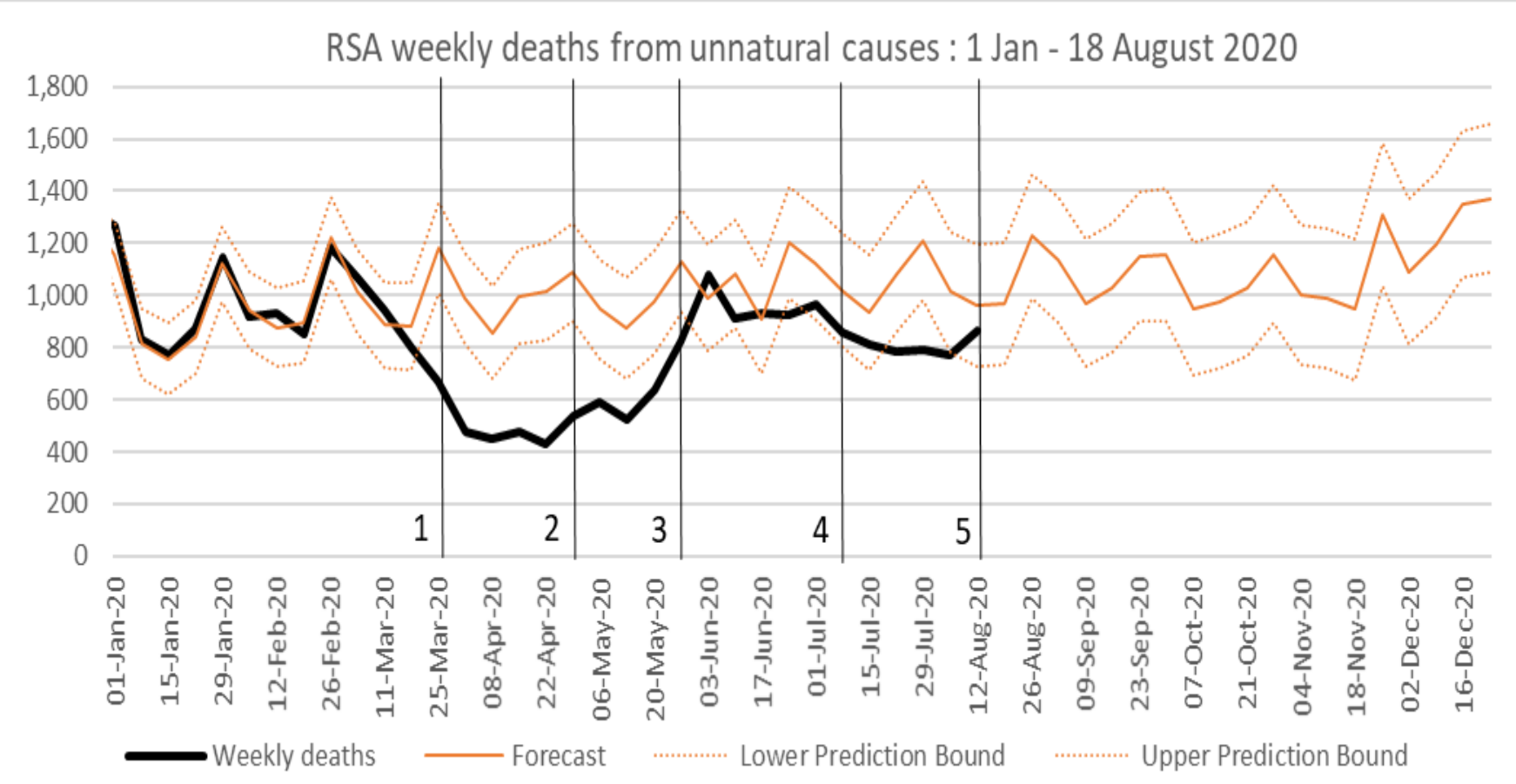


# Excess natural deaths in persons 60+ years more than double the number 1-59 years



# Deaths from unnatural causes track at lower prediction bound since beginning of July and did not have the typical end of month increase

Historical data shows that weekly numbers of death from unnatural causes vary considerably depending on the time of month



**Vertical time lines:**

1. Week lockdown level 5 introduced
2. Week lockdown changed to level 4 with curfew
3. Week lockdown changed to level 3 including unbanning sale of alcohol
4. Week sale of alcohol re-banned and curfew re-introduced
5. Week lockdown changed to level 2 including unbanning sale of alcohol



UCT  
Centre for  
Actuarial  
Research

# Excess mortality

Used in epidemiology and public health to measure the mortality impact of a crisis when not all causes of death are known.

The World Health Organization defines 'excess mortality' as:

*“Mortality above what would be expected based on the non-crisis mortality rate in the population of interest. Excess mortality is thus mortality that is attributable to the crisis conditions. It can be expressed as a rate (the difference between observed and non-crisis mortality rates), or as a total number of excess deaths.”*

Measure of Excess Deaths	Purpose of measure
<b>Excess All Cause Deaths</b>	This provides an overall measure of the difference between the number of death that have occurred in the period compared with earlier years – but is a combination of several competing effects that cancel each other.
<b>Excess Naturals vs adjusted base</b>	This measure aims to identify the excess number of natural deaths that might have resulted from the direct and indirect effects of COVID-19, by taking into account that lockdown had reduced the number of deaths from natural causes.



# What does this week's report show?

- The weekly number of deaths of persons 1+ years of age from all causes has continued to drop since the week starting 15 July 2020.
- Excess natural deaths increased to 39,087 (vs confirmed COVID-19 deaths of 12,264) and suggests
  - some COVID-19 deaths that occur in the community are not reported
  - there may be collateral impact of the COVID-19 epidemic.
- The rapid rise and then decline in excess deaths in many provinces in recent weeks is entirely consistent with an epidemic peak.

# WEEK 33 ENDING 18 AUGUST 2020

Region	Excess deaths vs revised base	DoH confirmed deaths
South Africa	39,087	12,264
Province		
Eastern Cape	9,354	2,633
Free State	2,664	536
Gauteng	10,860	3,017
KwaZulu-Natal	6,396	1,699
Limpopo	1,349	159
Mpumalanga	1,982	214
Northern Cape	596	38
North West	1,546	100
Western Cape	4,933	3,646

# What can be done to investigate the causes of death in recent weeks?

- Statistics South Africa and the Department of Home Affairs are encouraged to fast-track processing the death notification forms completed by doctors.
- National Department of Health and the National Institute for Communicable Diseases to work with the South African Medical Research Council to consolidate supplementary information using
  - Data linkage to consolidate health information about the deaths,
  - Conducting verbal autopsy interviews with next of kin.