

# Report on Weekly Deaths

## Week 30

### 1 January – 28 July 2020

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# Terminology

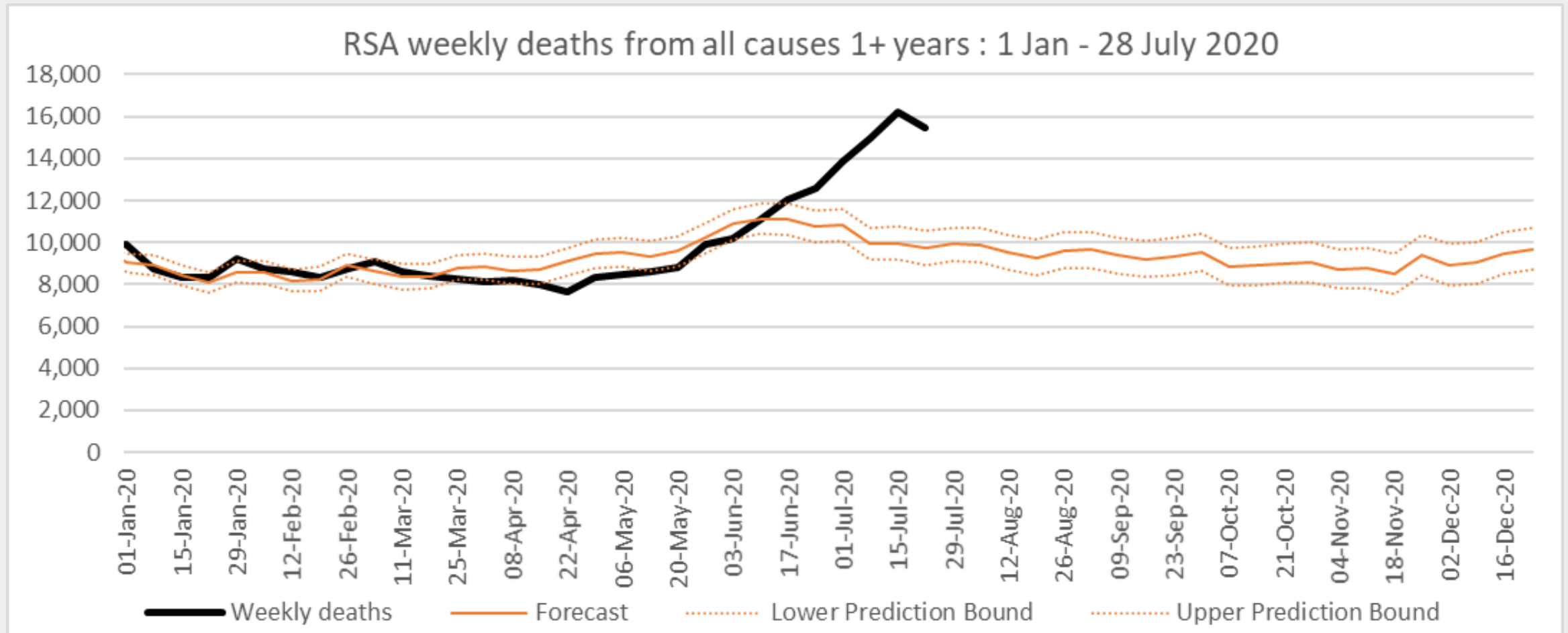
- **Natural causes** of death includes deaths due to diseases and ageing
- **Unnatural causes** of death includes deaths due to road traffic injuries, homicides, suicides etc
- **All causes** of death includes both natural and unnatural
- **Excess deaths** are the number of observed deaths higher than what would be expected – a public health measure of the impact of a crisis

# 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.

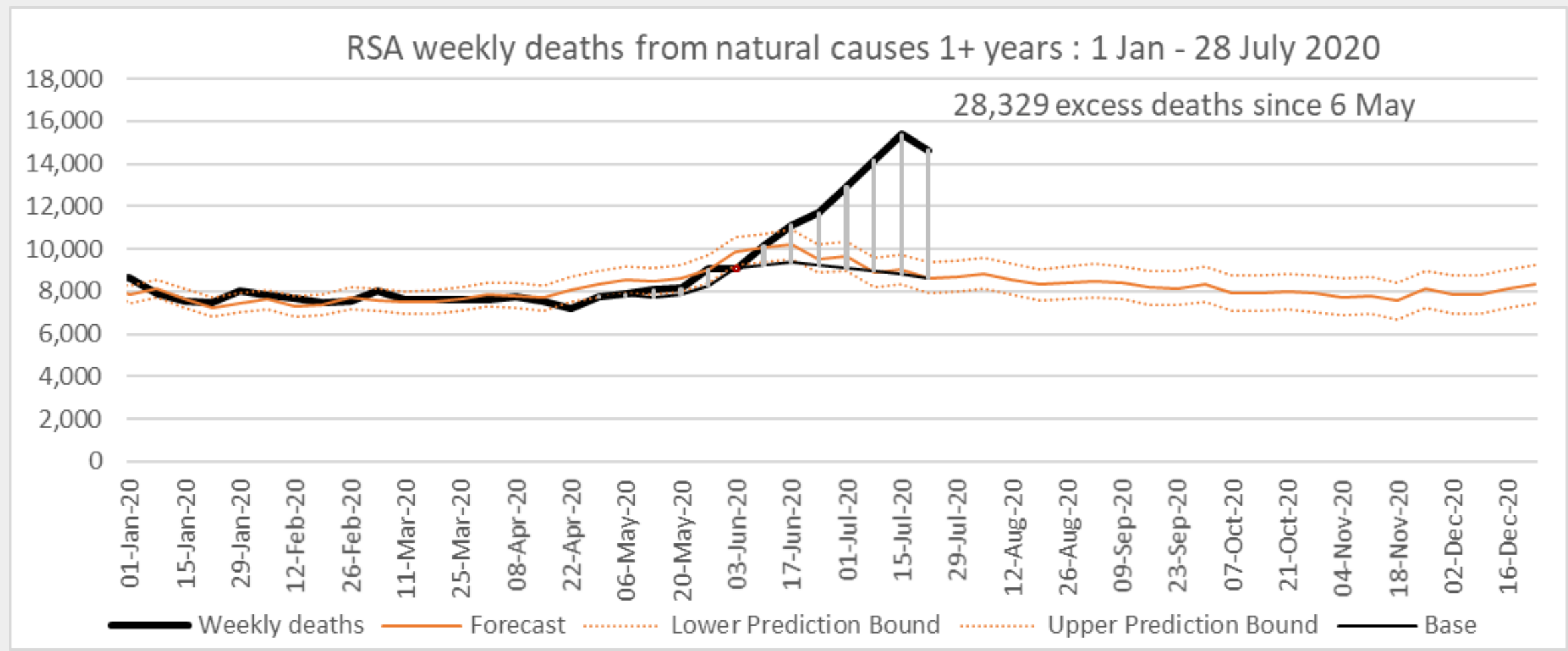
# The number of deaths in week 21-28 July shows a decrease

- 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

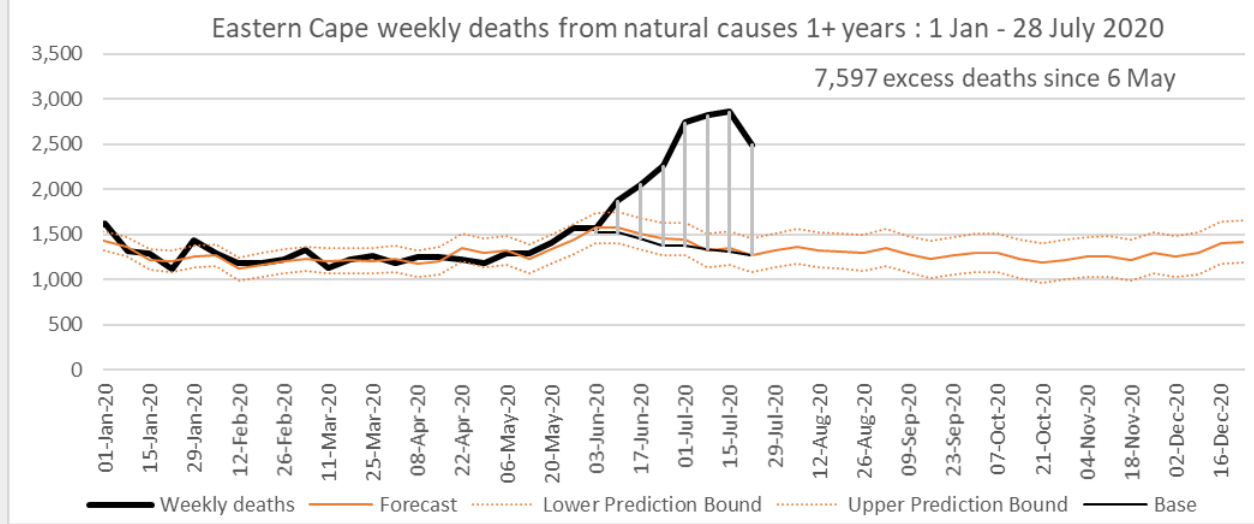
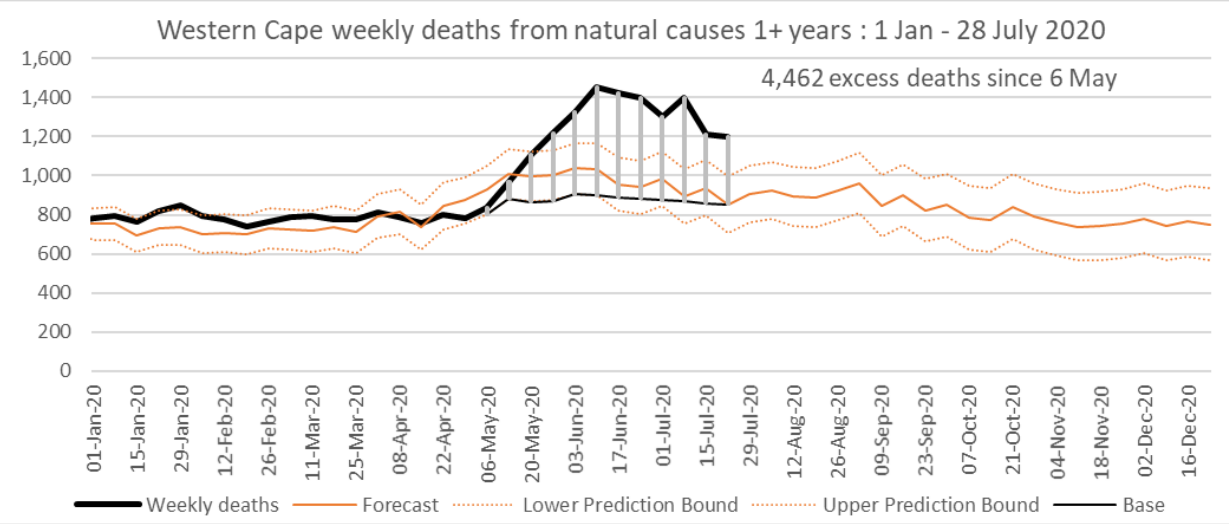


# Deaths from natural causes turned during week 21 -28 July

- 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

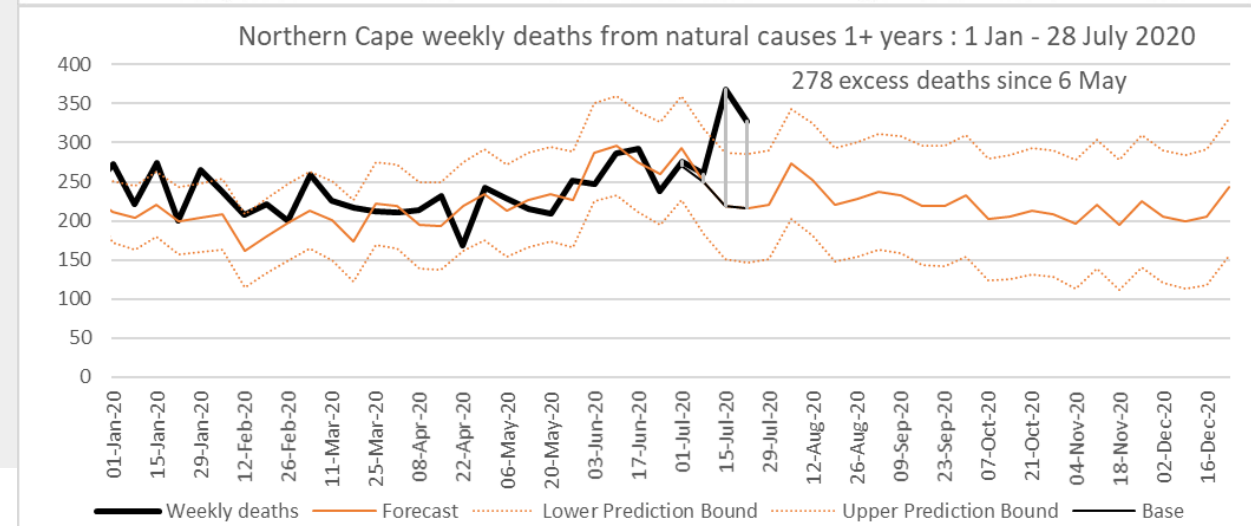
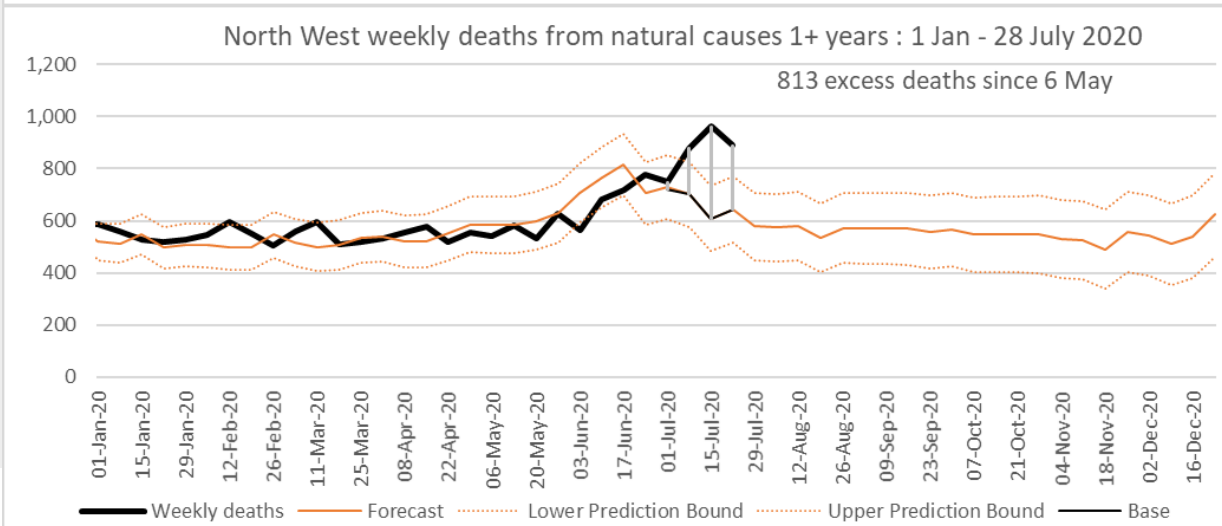
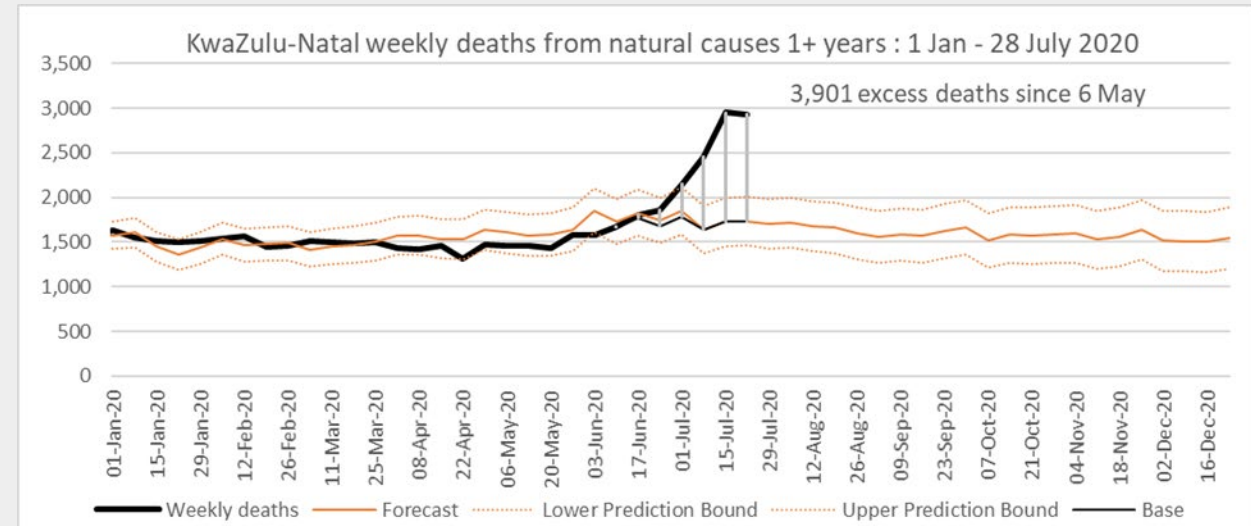
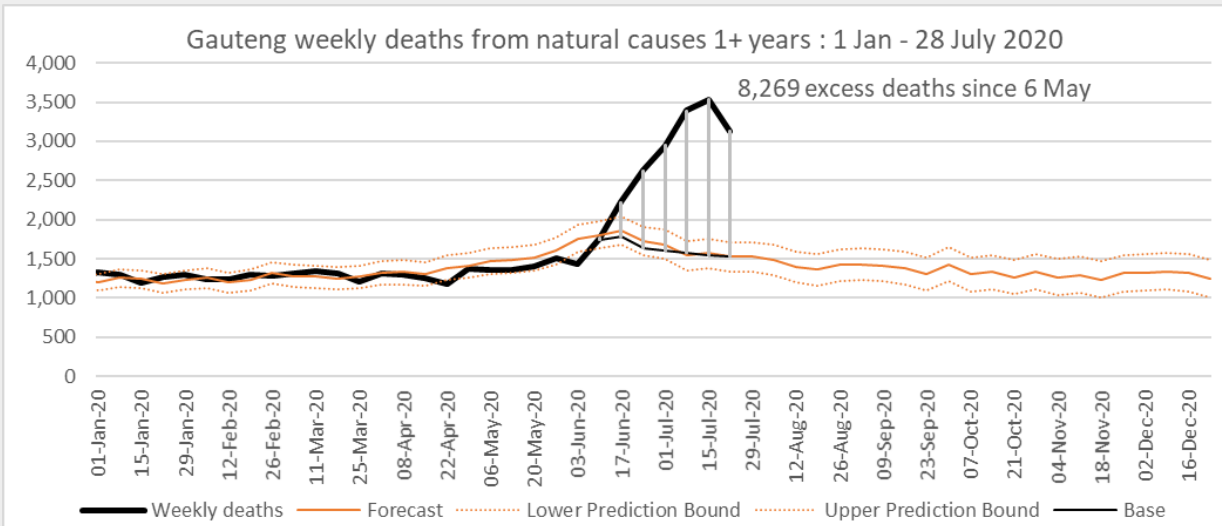


# Deaths from natural causes continued decreasing



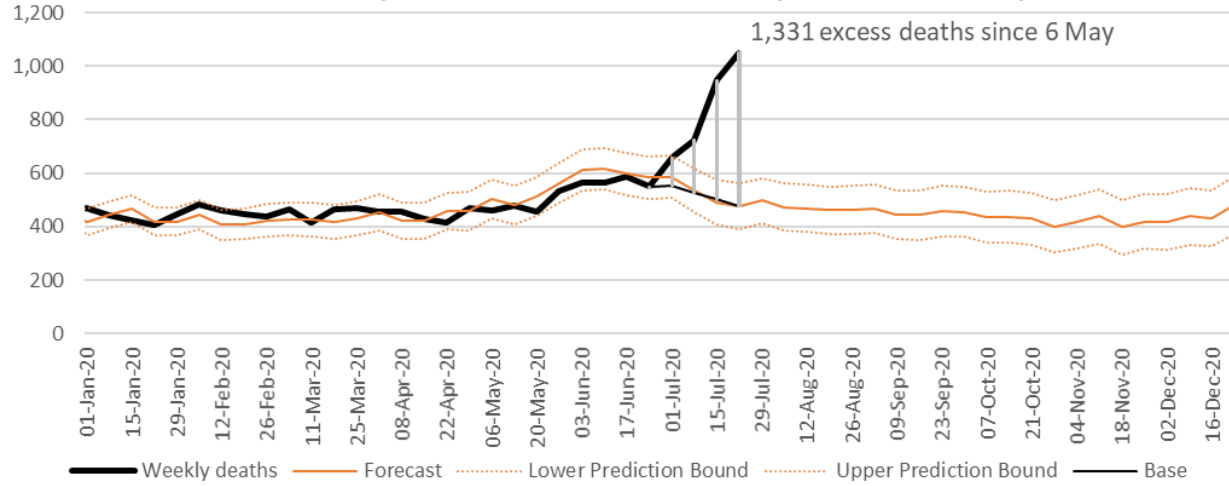
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# Deaths from natural causes start to decrease

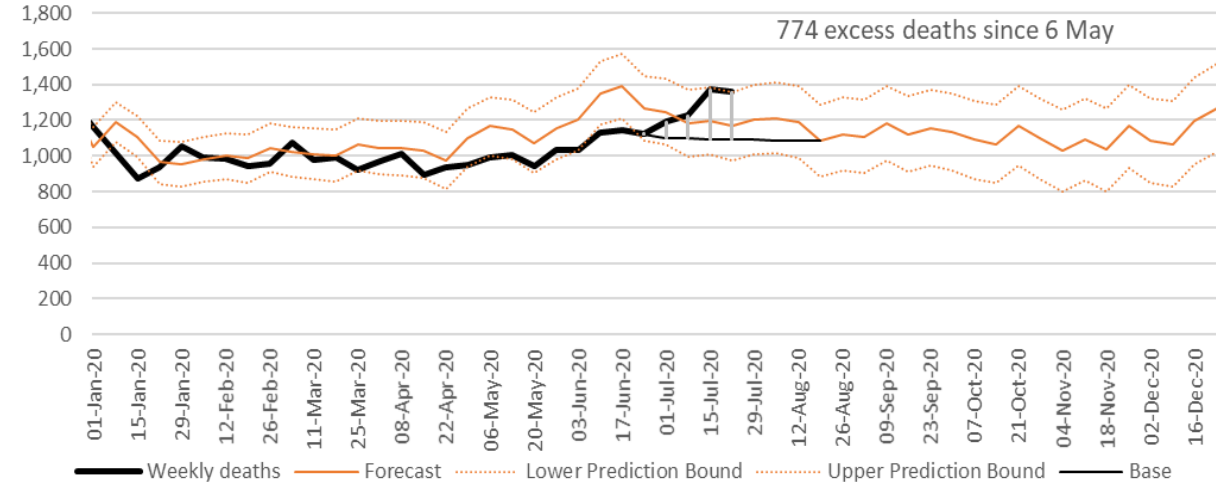


# Deaths from natural causes flatten or increase during week 21 -28 July

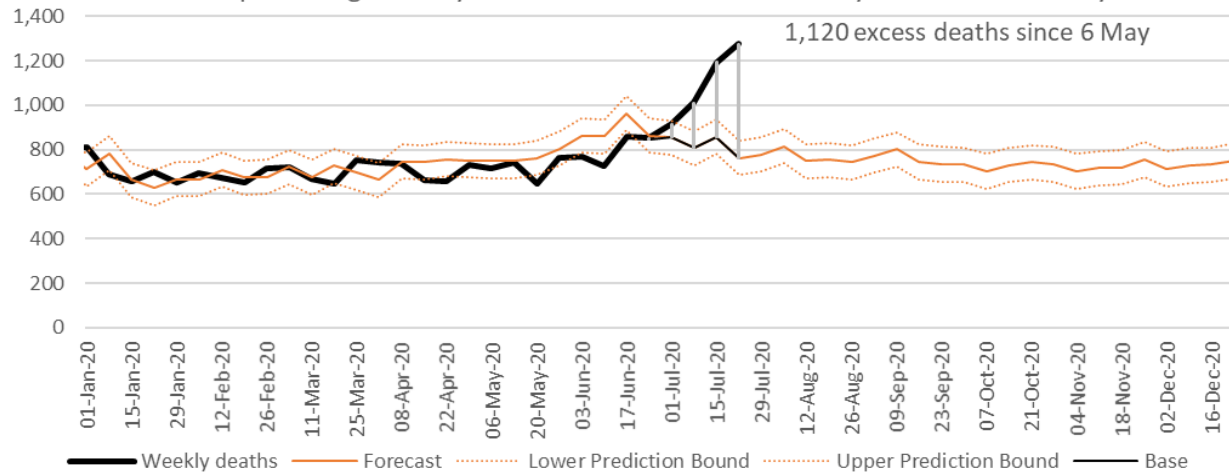
Free State weekly deaths from natural causes 1+ years : 1 Jan - 28 July 2020



Limpopo weekly deaths from natural causes 1+ years : 1 Jan - 28 July 2020



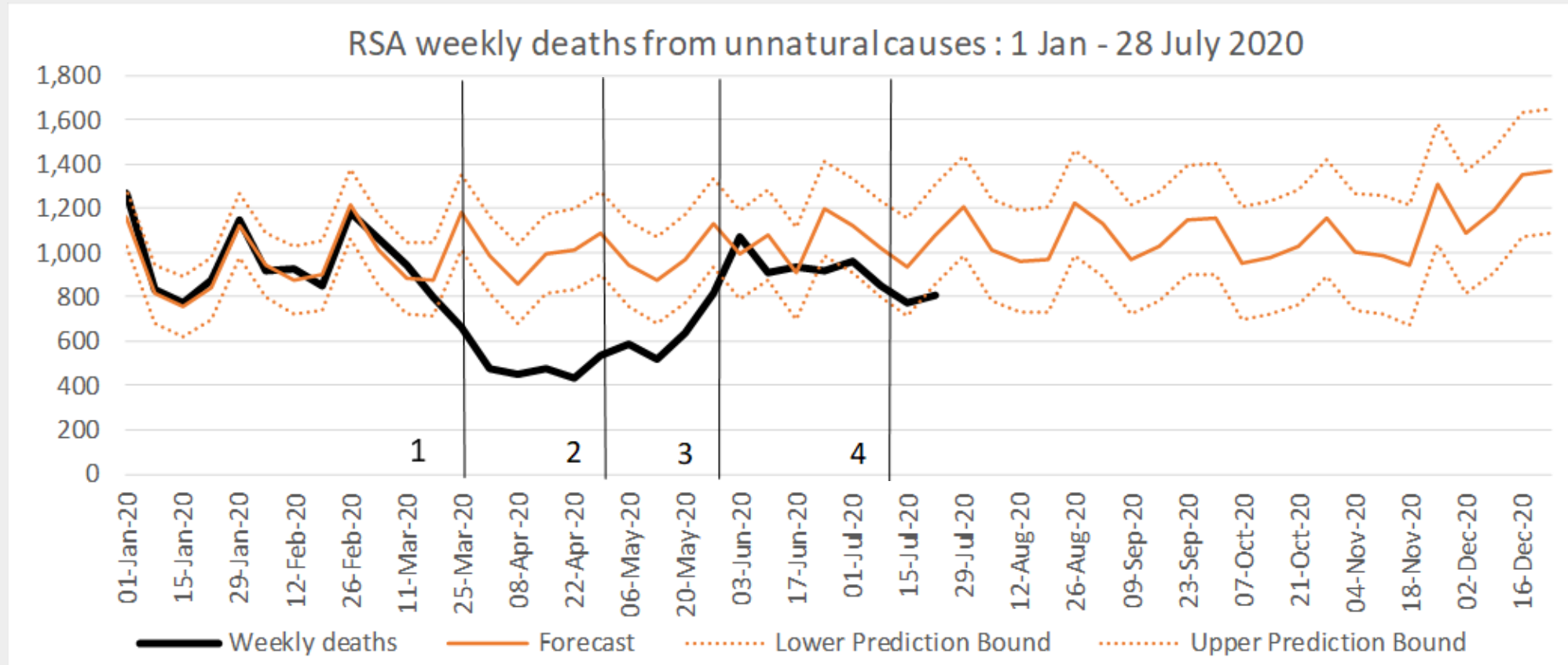
Mpumalanga weekly deaths from natural causes 1+ years : 1 Jan - 28 July 2020





# Deaths from unnatural causes track at lower prediction bound since beginning of July

- 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

# 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?

- For the first week in the past 12, the weekly number of deaths of persons 1+ years of age from all causes has dropped from the previous week.
- This has resulted from a drop in the natural causes of death. Except for Free State and Limpopo, the trends in all provinces have plateaued or declined during the week ending on 28 July 2018.
- Excess natural deaths increased to 28,329 (vs confirmed COVID-19 deaths of 7,257) suggests that there are some COVID-19 deaths that occur in the community and that there may be collateral impact of the COVID-19 epidemic.

# WEEK 30 ENDING 28 JULY 2020

Region	Excess natural deaths vs adjusted base	Confirmed COVID-19 deaths
South Africa	28,329	7,257
<b>Province</b>		
Eastern Cape	7,597	1,545
Free State	1,331	153
Gauteng	8,269	1,679
KwaZulu-Natal	3,901	641
Limpopo	774	67
Mpumalanga	1,120	65
Northern Cape	278	16
North West	813	50
Western Cape	4,462	2,960
<b>Metropolitan Municipality</b>		
Buffalo City	949	
City of Cape Town	3,461	
Ekhuruleni	2,521	
Ethikweni	1,012	
Johannesburg	2,988	
Mangaung	180	
Nelson Mandela Bay	1,481	
City of Tshwane	1,157	

# Factors that may contribute to observed excess deaths include:

1. People dying from COVID-19 before they get to the health care facility. This may be due to lack of transport, delays in transport and/or hospitals being unable to receive them.
2. People dying from COVID-19 but the death not being reported as such. This may be due to test results not being available at the time of death and/or challenges in the provincial COVID-19 reporting systems.
3. People dying from non COVID-19 conditions because the health services have been re-orientated to COVID-19. Examples include people who have not been diagnosed with TB and others with current TB who have defaulted on treatment for fear of attending the health services.

# 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.